# SDDP, SDOLT, SDAN, SDVAH, Everon Технические характеристики

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#### CORNING

#### Part Number: 1LAN-SDDP-24-P2

The SDDP provides high-performance, availability, and network-scaling. It can be deployed as a Top-of-Rack (ToR) switch as well as an Aggregation Switch (AGG) forming a non-blocking data fabric. In addition SDDP options are available supporting PoE and edge access requirements.

#### Features and Benefits

Provides high-performance, availability, and networkscaling demands in today's enterprise

Deployed as a Top-of-Rack switch forming a non-blocking data fabric

Full line forwarding rate of 1.28 Tbps

Port grouping into one 40G port

CORNING

#### Specifications

Standards	
Standards	G.8032, IEC-60825 Class I Laser Safety Standard, IEEE 802.1D Spanning Tree Protocol (STP), IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), IEEE 802.1w Rapid Spanning Tree Protocol (RSTP), IEEE 802.1x Security, IEEE 802.3ad Link Aggregation Control Protocol (LACP), IEEE 802.3af (15.4 W) on each port, IEEE 802.3az, IEEE 802.3at (30W) on each port, IPv4/IPv6 Dual Protocol Stack

Environmental Conditions	
Temperature Range, Operation	0 °C to 40 °C $$ (32 °F to 104 °F $$ )
Temperature Range, Storage	-40 °C to 70 °C (-40 °F to 158 °F )
Altitude	3000 m (9840 ft)
Relative Humidity, Operation	10% to 95% (non-condensing)
Relative Humidity, Storage	10% to 95% (non-condensing)

#### Hardware

Ports

1 x RJ-45 serial console, 24 x RJ-45 10/100/1000 Ports (POE/POE+), 370 W Power budget without extender, 4 x 1G SFP Uplink Ports

#### Physical/Mechanical

Mounting/Installation Options

Rack Mount

#### **SD-LAN Networking**

GPON

Module Temperature

SD-LAN Networking	
Layer 2	BDPU Filter/Guard, BDPU Forward, Cable Diagnostic, Green-Saving: No Link Power-Saving, Green-Saving: Cable Length, IGMP Filtering/Throttling, IGMP Immediate leave, IGMP Queries, IGMP Snooping, IGMP v1/v2/v3 snooping, IP Clustering, Jumbo Frame packet, Link Aggregation: Static Trunk, LLDP/LLDP-MED, Loopback Detection, mDNS, MLD Snooping, Q-in-Q, Root Guard, Memory Flash Log, Port Mirroring (One to One) TX/RX (both), SNMP-SNMP Standard Private Mib, SNMP, SNMP-SNMP V1, V2, V3, SNMP (Simple Network Management Protocol), SNMP over IPv6, Auto Voice VLAN, Guest VLAN, Supports 4K VLANs, Port-Based/MAC-Based/ Protocol-Based VLANs
Layer 3	HTTP over IPv6, IPv4/IPv6 Dual Protocol Stack, IPv6, IPv6 Management, IPv6 Ping/Trace, IPv6 Syslog, IPv6 Telnet, IPv6 TFTP, Static Routing
OAM and Management	Auto Firmware Upgrade, Configuration upload/download (HTTP/TFTP/FTP/SFTP), Dual Image/Configuration, Firmware upload/download (HTTP/TFTP/FTP/SFTP), NTP (Network Time Protocol), Web authentication storm control, System password protection, Event/Error Log/Syslog, Management Access: (Console/ SNMP/Web /Telnet ), DHCP Relay v4 (v6), DHCP Snooping Option82, DHCP v4/v6 Client//DHCP Snooping, Dynamic Provision (via Option 66, 67)
Security	Web authentication storm control, SSL v1/v2/v3, SSL IPv4/ IPv6, SSH v1.5/v2.0, DNS Client without DNS proxy, Sflow (52T/26T trace multiport), Sflow (10T/P/PE/28T/28P/28PP Trace on port -Ingress only), Port Mirror (One to One, One to Many), Port Isolation, DDOS Protection, CPU Guard (CPU Protection), Remote Mirror, Port Security, Port max count per port, MAC Filter, MAC Authentication, IP Source Guard, Dynamic VLAN Assignment, Dynamic ARP Inspection, Broadcast/Multicast/ Unknown Storm Control, ACL entry: 512, ACL:TCP/UDP- Based, MAC-Based ACL, ACL:L2/L3/L4, ACL:IPv4/IPv6, ACL:Ingress Only, AAA (RADIUS/ TACACS+)
Power Management	Auto disable after exceeding power budget, Dynamic Power Allocation

Performance	
Acoustic Noise	79.7 dBa
DRAM	256 MB

Performance	
Flash Memory	32 MBit/s
Forwarding Rate	41.7 Mpps
Heat Dissipation	1680 BTU/h
Jumbo Frames	10К
MAC Address	8К
MTBF (Mean Time Between Failure)	370636 Hours
Packet Buffer Memory	12 MB, 4.1 Megabyte per Second
Switching Capacity	56

Power	
Input Voltage	100-270 VAC, 50-60 Hz
Power Supply	490 W (950 W with optional extender)
Total PoE Power Budget	370 WUp to 740W using extension

Dimensions	
Height	44 mm (1.73 in)
Width	440 mm (17.32 in)
Depth	218 mm (8.58 in)

Ordering Information	
Product Number	1LAN-SDDP-24-P2
Weight	3.1 kg
Units per Delivery	1/1

## Software-Defined Data Plane (SDDP) 48 Port Dual SC PSU, front to back airflow

#### CORNING

#### Part Number: 1LAN-SDDP-48P

The SDDP provides high-performance, availability, and network-scaling. It can be deployed as a Top-of-Rack (ToR) switch as well as an Aggregation Switch (AGG) forming a non-blocking data fabric. In addition SDDP options are available supporting PoE and edge access requirements.

#### Features and Benefits

Provides high-performance, availability, and networkscaling demands in today's enterprise

Deployed as a Top-of-Rack switch forming a non-blocking data fabric

Full line forwarding rate of 1.28 Tbps

Port grouping into one 40G port





## Software-Defined Data Plane (SDDP) 48 Port Dual SC PSU, front to back airflow

#### CORNING

#### Specifications

Standards	
Standards	CB - Emissions, CCC - Emission, FCC - Emission, RoHS6

Temperature Range, Operation Relative Humidity, Operation

**Environmental Conditions** 

0 °C to 45 °C  $\,$  (32 °F to 113 °F  $\,$  )

#### 5% to 95% (non-condensing)

Hardware	
CPU	Rangeley C2558 2.4G 4-Core
Ports	1x 10/100/1000BaseT Out-of-Band-Management Port, 1 x Mini USB serial console port with mini-USB to RJ-45 converter cable, 1 x USB 2.0 host, 48 x 10G SFP+, 6 x 40G QSFP+
Switch ASICS	Broadcom BCM56854 (Trident 2)
System Memory	DDR3 8GB with ECC SODIMM
Transceivers Supported	CR, CR4, SR, SR4

Physical/Mechanical	
Airflow and FAN	Front-to-Back or Back-to-Front, 3+1 redundant FAN FRU
LED Indicators	Power, Status, Fan, PSU, Link status
Mounting/Installation Options	Rack Mount

Optical Characteristics	
Transceiver Type	CR, CR4, SR, SR4

Performance	

Flash Memory

F

## Software-Defined Data Plane (SDDP) 48 Port Dual SC PSU, front to back airflow

Performance	
Latency	< 0.7 microsecond
Packet Buffer Memory	12 MB
Switching Capacity	1440

Power	
Input Voltage	AC: 100V-240V~, 8-4A, 50Hz-60Hz, DC: 180V~310V
Power Supply	1+1 Redundant 550W AC/DC PSU FRU

Dimensions	
Height	44 mm (1.73 in)
Width	440 mm (17.32 in)
Depth	407 mm (16.02 in)

Ordering Information	
Product Number	1LAN-SDDP-48P
Weight	9 kg
Units per Delivery	1/1

#### CORNING

#### Part Number: 1LAN-SDOLT-0587

The Software Defined Optical Line Terminal (SDOLT) is designed to provide broadband access over all Optical Network. Software Defined Access Nodes (SDAN) are used to connect the optical network to the end user. You can connect up to 64 SDAN to each interface. Access to the network is provided through up to two SFP+ high speed uplink interfaces. The SDOLT allows the network engineer to build scalable, fault tolerant point-to-multipoint networks to ensure the highest reliability. The Software Defined Orchestration Platform (SDOP) allows for provisioning of services, port level management, traffic switching and prioritization, and connection to the network.

#### **Features and Benefits**

Broadband access over all

Allows the optical network engineer to build scalable, fault tolerant point-to-multipoint networks to ensure the highest reliability

Connect up to 64 SDANs to each interface

Access to the network is provided through up to two SFP+ high speed uplink interfaces





## CORNING

Standards	
Standards	ANSI/IEEE 802.3 NWay auto-negotiation, FSAN Class B+, G.652 Single-mode (OS) fiber, IEC-60825 Class I Laser Safety Standard, IEEE 802.1ad Double Tagging (Q-in-Q), IEEE 802.1ad Provider Bridges (Q-in-Q), IEEE 802.1d MAC bridges, IEEE 802.1p Protocol for Traffic Prioritization, IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), IEEE 802.1v VLAN Classification by Protocol andPort, IEEE 802.3ab 1000BASE- T Gigabit Ethernet, IEEE 802.3ac VLAN tagging, IEEE 802.3ad Link Aggregation Control Protocol (LACP), IEEE 802.3i 10BASE-T Ethernet, IEEE 802.3u 100BASE-T Fast Ethernet, IEEE 802.3x Full Duplex and flow control, IEEE 802.3z Fiber Gigabit Ethernet, IEEE 802.1q Double Tagging (Q-in-Q), ITU- T G.984 GPON, ITU-T G.984.2 Class B+, ITU-T G.988 GPON, SFF-8472 (Transceiver-enhanced digital diagnostic monitoring interface)

Environmental Conditions	
Temperature Range, Operation	5 °C to 40 °C (41 °F to 104 °F )
Relative Humidity, Operation	Up to 80% (non-condensing)

Hardware	
CPU	Ethernet switcher: Marvell Packet Processor

Physical/Mechanical	
Mounting/Installation Options	Rack Mount

Optical Characteristics	
Max-Link Distance	20 km
Receiver	1310nm APD/TIA Detector/Amplifier
Receiver Optical Overload	-8 dBm

Optical Characteristics	
Receiver Sensitivity	-28 dBm
Spectral Line Width	20 dBm (1.0 mm)
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps

SD-LAN Networking	
GPON	Digital RSSI, Laser Bias Current, Module Temperature, Received Signal Strength Indication (RSSI), Supply Voltage, Support DDM (show parameters in CLI), Tx Optical Power Output, Up to 1:64 splitting radio
Layer 2	Handling multi-address traffic, Handling unknown MAC- address, IGMP fast leave, IGMP Proxy, MAC-address learning/aging, MAC address table limit, MSTP, RSTP, SNMP (Simple Network Management Protocol), IEEE 802.1D Spanning Tree Protocol (STP), Support to 1024 multicast groups
OAM and Management	SDOP (Software Defined Orchestration Platform), CLI (Command Line Interface)

Performance	
Downstream Data Rate	GPON: 2.5 Gbps
MAC Address	16K
Max-Link Distance	20 km
Switching Capacity	128
Upstream Data Rate	GPON: 1.25 Gbps
VLAN	4K

Power	
Max Power	20 W
Power	48 V DC

Dimensions	
Height	44 mm (1.73 in)
Width	430 mm (16.93 in)
Depth	218 mm (8.58 in)

Ordering Information	
Product Number	1LAN-SDOLT-0587
Units per Delivery	1/1

#### CORNING

#### Part Number: 1LAN-SDOLT-0588

The Software Defined Optical Line Terminal (SDOLT) is designed to provide broadband access over all Optical Network. Software Defined Access Nodes (SDAN) are used to connect the optical network to the end user. You can connect up to 64 SDAN to each interface. Access to the network is provided through up to two SFP+ high speed uplink interfaces. The SDOLT allows the network engineer to build scalable, fault tolerant point-to-multipoint networks to ensure the highest reliability. The Software Defined Orchestration Platform (SDOP) allows for provisioning of services, port level management, traffic switching and prioritization, and connection to the network.

#### **Features and Benefits**

Broadband access over all

Allows the optical network engineer to build scalable, fault tolerant point-to-multipoint networks to ensure the highest reliability

Connect up to 64 SDANs to each interface

Access to the network is provided through up to two SFP+ high speed uplink interfaces





## CORNING

Standards	
Standards	ANSI/IEEE 802.3 NWay auto-negotiation, FSAN Class B+, G.652 Single-mode (OS) fiber, IEC-60825 Class I Laser Safety Standard, IEEE 802.1ad Double Tagging (Q-in-Q), IEEE 802.1ad Provider Bridges (Q-in-Q), IEEE 802.1d MAC bridges, IEEE 802.1p Protocol for Traffic Prioritization, IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), IEEE 802.1v VLAN Classification by Protocol andPort, IEEE 802.3ab 1000BASE- T Gigabit Ethernet, IEEE 802.3ac VLAN tagging, IEEE 802.3ad Link Aggregation Control Protocol (LACP), IEEE 802.3i 10BASE-T Ethernet, IEEE 802.3u 100BASE-T Fast Ethernet, IEEE 802.3x Full Duplex and flow control, IEEE 802.3z Fiber Gigabit Ethernet, IEEE 802.1q Double Tagging (Q-in-Q), ITU- T G.984 GPON, ITU-T G.984.2 Class B+, ITU-T G.988 GPON, SFF-8472 (Transceiver-enhanced digital diagnostic monitoring interface)

Environmental Conditions	
Temperature Range, Operation	5 °C to 40 °C (41 °F to 104 °F )
Relative Humidity, Operation	Up to 80% (non-condensing)

Hardware	
CPU	Ethernet switcher: Marvell Packet Processor

Physical/Mechanical	
Mounting/Installation Options	Rack Mount

Optical Characteristics	
Max-Link Distance	20 km
Receiver	1310nm APD/TIA Detector/Amplifier
Receiver Optical Overload	-8 dBm

Optical Characteristics	
Receiver Sensitivity	-28 dBm
Spectral Line Width	20 dBm (1.0 mm)
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps

SD-LAN Networking	
GPON	Digital RSSI, Laser Bias Current, Module Temperature, Received Signal Strength Indication (RSSI), Supply Voltage, Support DDM (show parameters in CLI), Tx Optical Power Output, Up to 1:64 splitting radio
Layer 2	Handling multi-address traffic, Handling unknown MAC- address, IGMP fast leave, IGMP Proxy, MAC-address learning/aging, MAC address table limit, MSTP, RSTP, SNMP (Simple Network Management Protocol), IEEE 802.1D Spanning Tree Protocol (STP), Support to 1024 multicast groups
OAM and Management	SDOP (Software Defined Orchestration Platform), CLI (Command Line Interface)

Performance	
Downstream Data Rate	GPON: 2.5 Gbps
MAC Address	16K
Max-Link Distance	20 km
Switching Capacity	128
Upstream Data Rate	GPON: 1.25 Gbps
VLAN	4K

Power	
Max Power	20 W
Power	48 V DC

Dimensions	
Height	44 mm (1.73 in)
Width	430 mm (16.93 in)
Depth	218 mm (8.58 in)

Ordering Information	
Product Number	1LAN-SDOLT-0588
Units per Delivery	1/1

#### 10G Fiber Media Converter 1x10G RJ-45, 802.3bt HPoE

#### CORNING

#### Part Number: 1LAN-FMC-10G

The Corning 10G HPoE Media Converter is the smallest industrial-grade 10G Ethernet media converter (from 10000Base-X SFP+ to 10G/5G/2.5G/1G/100M Base-T Copper) with 802.3bt Power over Ethernet Plus Plus (PoE++) injector function to deliver up to 90W of power output and high data transmission speed to PDs(powered devices) installed in a remote area where sufficient and reliable power input is required, providing non-blocking wire-speed performance and great flexibility for 10G Ethernet extension in harsh industrial environment. It is equipped with one 10G/5G/2.5G/1G/100M Base-T RJ45 copper interface and one 10GBase-X SFP+ fiber optic interface delivered in an IP30 rugged but compact sized strong case with redundant power system (44~57VDC). It is Ideal for wide range of applications from copper to fiber media conversion wherever 10GE bandwidth is required in climatically demanding environments with wide temperature ranges



#### 10G Fiber Media Converter 1x10G RJ-45, 802.3bt HPoE

#### CORNING

#### Specifications

Environmental Conditions	
Temperature Range, Operation	-40 °C to 65 °C (-40 °F to 149 °F )
Temperature Range, Storage	-40 °C to 85 °C (-40 °F to 185 °F )
Relative Humidity, Operation	5%

Hardware Alarms

Battery Failure

Physical/Mechanical	
Mounting/Installation Options	Wall-Mount, DIN Rail

Dimensions	
Height	4.21 in
Width	3.03 in
Depth	1.48 in

Ordering Information	
Product Number	1LAN-FMC-10G
Weight	270 g

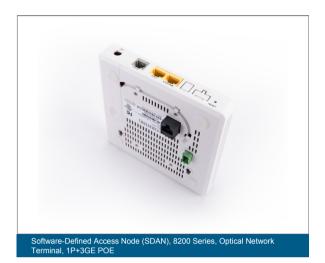
CORNING

Part Number: 1LAN-SDAN-8293





#### CORNING



Environmental Conditions	
Temperature Range, Storage	-40 °C to 60 °C (-40 °F to 140 °F )
Relative Humidity, Operation	5% to 95% (non-condensing)

Hardware	
CATV Interface	RJ-11 Connectors
Ports	Two Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports

Physical/Mechanical	
Design	48V feed: rear facing, Optical connection: rear or bottom facing
LED Indicators	Battery, Power, Fail, LAN Data, Management, Network, POTS
Mounting/Installation Options	Desk-Mount, In-Wall, Wall-Mount

Optical Characteristics	
Receiver Sensitivity	-27 dBm
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
Average Launch Power	-0.5 to +5 dBm

SD-LAN Networking	
Enterprise LAN	IGMP V2/V3 Snooping with Immediate Leave, Up to 1024 MAC address entries, Up to 12 VLAN groups per port, Up to 256 multicast groups
GE PoE Ethernet Port	Two Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports, 2-Point Forced Current, 2-Point Forced Voltage, 30W Total PoE power allocated to any combination of ports Eth2 or ETH3, Advanced Power Management: Fast Shutdown of Preselected Ports, Current/Voltage Monitoring
GPON	Forward Error Correction (FEC)
Layer 2	Automatic MAC address learning, aging and filtering
OAM and Management	ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade, SIP configuration from remote server, Webserver for local management
Voice	Comfort Noise Generation, 5 REN per line, Loop start, Balanced and unbalanced ringing, CLASS service support: Caller ID, Call Waiting, Call Forwarding, Call Transfer etc., Country specific coefficients and tones, DHCP Client or static IP configuration, DTMF dialing and encoding by RELAY or IN- BAND method, Echo Cancellation, Metallic loop testing, Official Metaswitch and BroadSoft Certifications, Proven interoperability with major soft switch and voice gateway vendors, T.38 and IN-BAND Fax, Voice Activity Detection

Performance	
Downstream Data Rate	GPON: 2.5 Gbps, Active Ethernet: 1 Gbps
MAC Address	Up to 1024 MAC address entries
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
VLAN	Up to 12 VLAN groups

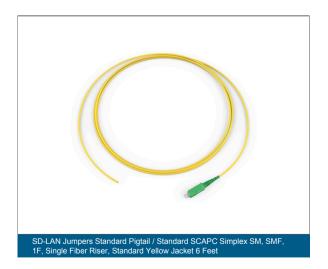
Dimensions	
Height	25.4 mm (1 in)
Width	139 mm (5.47 in)
Depth	139 mm (5.47 in)

Ordering Information	
Product Number	1LAN-SDAN-8293
Weight	0.7 kg
Units per Delivery	1/1

#### SD-LAN Jumpers Standard Pigtail / Standard SCAPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

CORNING

Part Number: 1LAN-004401R213106



#### SD-LAN Jumpers Standard Pigtail / Standard SCAPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

General Specifications	
Flame Rating	Riser (OFNR)
Fiber Category	Single-mode (OS2)
Application	Data Center
Cable Type	Single fiber (250 µm)

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

Design	
Fiber Count	1
Fiber Type	Single-mode
Color	Yellow

Mechanical Specifications	
Nominal Outer Diameter	2 mm (0.08 in)
Cable Length	6 ft

Specifications - Connector A	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	SC APC

#### SD-LAN Jumpers Standard Pigtail / Standard SCAPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

CORNING

Dimensions Length 6 ft

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCUPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

CORNING

Part Number: 1LAN-020201R213106



#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCUPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

General Specifications	
Flame Rating	Riser (OFNR)
Fiber Category	Single-mode (OS2)
Application	Data Center
Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Design	
Fiber Count	1
Fiber Type	Single-mode
Color	Yellow
Mechanical Specifications	
Nominal Outer Diameter	2 mm (0.08 in)
Cable Length	6 ft

Specifications - Connector A	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC UPC

Specifications - Connector B	
Insertion Loss, Typical	0.15 dB

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCUPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

Specifications - Connector B	
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC UPC

Dimensions	
Length	6 ft

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCUPC Simplex SM, SMF Ultra, 2F, Zipcord Riser, Standard Yellow Jacket 6 Feet

CORNING

Part Number: 1LAN-020202G512006



#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCUPC Simplex SM, SMF Ultra, 2F, Zipcord Riser, Standard Yellow Jacket 6 Feet

General Specifications	
Flame Rating	Riser (OFNR)
Fiber Category	Single-mode (OS2)
Application	Data Center
Cable Type	Zipcord

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

Design	
Fiber Count	2
Fiber Type	Single-mode
Color	Yellow

Mechanical Specifications	
Nominal Outer Diameter	2 mm (0.08 in)
Cable Length	6 ft

Specifications - Connector A	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC UPC

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCUPC Simplex SM, SMF Ultra, 2F, Zipcord Riser, Standard Yellow Jacket 6 Feet

#### CORNING

Specifications - Connector B	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC UPC

## Dimensions

Length

6 ft

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCAPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

CORNING

Part Number: 1LAN-022201R213106



#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCAPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

General Specifications	
Flame Rating	Riser (OFNR)
Fiber Category	Single-mode (OS2)
Application	Data Center
Cable Type	Single fiber (250 µm)

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

Design	
Fiber Count	1
Fiber Type	Single-mode
Color	Yellow

Mechanical Specifications	
Nominal Outer Diameter	2 mm (0.08 in)
Cable Length	6 ft

Specifications - Connector A	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC UPC

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard LCAPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

#### CORNING

Specifications - Connector B	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC APC

## Dimensions

Length

6 ft

#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard SCUPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

CORNING

Part Number: 1LAN-025801R213106



#### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard SCUPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

General Specifications	
Flame Rating	Riser (OFNR)
Fiber Category	Single-mode (OS2)
Application	Data Center
Cable Type	Single fiber (250 µm)

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

Design	
Fiber Count	1
Fiber Type	Single-mode
Color	Yellow

Mechanical Specifications	
Nominal Outer Diameter	2 mm (0.08 in)
Cable Length	6 ft

Specifications - Connector A	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	LC UPC

### SD-LAN Jumpers Standard LCUPC Simplex SM / Standard SCUPC Simplex SM, SMF, 1F, Single Fiber Riser, Standard Yellow Jacket 6 Feet

### CORNING

Specifications - Connector B	
Insertion Loss, Typical	0.15 dB
Insertion Loss, Max.	0.25 dB
Keyed (security)	No
Connector Type	SC UPC

# Dimensions

Length

6 ft

#### CORNING

#### Part Number: 1LAN-SDAN-8010

The low-profile single port Software Defined Access Node (SDAN) with Power over Ethernet Plus incorporates a highly scalable integrated networking approach while leveraging the benefits of a fiber deep network architecture. Corning's Micro family of SDAN's are built using the latest generation SoC leveraging the most recent advances in technology, along with unrivaled hardware acceleration, QoS and efficient power management that meet the bandwidth demands of high-performance applications. Corning's SDAN offerings are all technology-neutral supporting both Active Ethernet as well as GPON transport.

SDANs have multiple port configurations and support both GPON and Active Ethernet. They provide easy connections to multiple PoE devices and can be powered by remote or local power.

Applications supported for these 8000 Series products are the following:

1LAN-SDAN-8293: PoE, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-8010: PoE, IPRV, GPON

#### **Features and Benefits**

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

CORNING

Standards	
Standards	RoHS6 Emissions, Safety - IEC 60950, Safety - UL/CSA 60950, WEEE Emissions, CE: Compliant, EMC - EN 55024 Class B, EMC - FCC PART 15, SUBPART B, CLASS B, EMC - EN 300 386, ETSI, FDA - FCC 47 CFR Part 15, Class B, FDA - FDR 21 CFR 1040.10, Class I, FDA - FDR 21 CFR 1040.11, Class I, IEEE 802.1d Ethernet bridging and switching, EMC - EN 55022 Class B, IEEE 802.1p marking/ remarking, DSCP mapping, IEEE 802.1Q including VLAN translation, filtering, tagging, stacking (Q-in-Q)

Environmental Conditions	
Temperature Range, Operation	-30 °C to 60 °C (-22 °F to 140 °F )
Relative Humidity, Operation	10% to 90% (non-condensing)

Hardware	
Optical Network	GPON
Ports	1x RJ-45 10/100/1000 Base-T
Power Supply	1LAN-SDAN-PWRSUP2 SDAN Power Supply (Wall Plug-in)

Physical/Mechanical	
LED Indicators	Fiber, Alarm, Status, Reset
Mounting/Installation Options	Desk-Mount, In-Wall, Wall-Mount

Optical Characteristics	
Receiver	Received Optical Power Monitoring
Receiver Optical Overload	-8 dBm
Receiver Sensitivity	-27 dBm
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx

Optical Characteristics	
Average Launch Power	-0.5 to +5 dBm
SD-LAN Networking	
Enterprise LAN	Downstream Flow and port-based Rate Limiting, Downstream pBit and flow-based queue selection, Firewall and WAN, LAN Security, IGMP V2/V3 Snooping with Immediate Leave, MDI/ MDIX auto-negotiation, MDI/MDIX auto-sensing, Network Address and Port Translation, Up to 1024 MAC address entries, Up to 25 VLAN groups per port, Up to 256 multicast groups, WAN DHCP Client and LAN DHCP Server
GE PoE Ethernet Port	Automatic detection of Power Type and status for Power Priority Management; support legacy power device and LLDP power device
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Forward Error Correction (FEC), IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling, Dying Gasp
Layer 2	Automatic MAC address learning, aging and filtering
OAM and Management	ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade

Performance	
MAC Address	Up to 1024 MAC address entries
Upstream Data Rate	GPON: 1.25 Gbps
VLAN	Up to 25 VLAN groups

Power	
Power	100-240VAC in, 50/60Hz54VDC, 0.74A max54VDC2.78A max1.85A max

# CORNING

Power	
Total PoE Power Budget	PoE + 30w

Dimensions	
Height	30 mm (1.18 in)
Width	85 mm (3.35 in)
Depth	72 mm (2.83 in)

Ordering Information	
Product Number	1LAN-SDAN-8010
Weight	0.174 kg
Units per Delivery	1/1

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#### 1LAN-SDAN-8011

Software-Defined Access Node (SDAN), 8000 Series 1 GE, PoE+, AE + GPON support

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Environmental Conditions	
Temperature Range, Operation	-30 °C to 60 °C $% 100000000000000000000000000000000000$
Relative Humidity, Operation	10% to 90% (non-condensing)
Hardware	
Optical Network	GPON/Active Ethernet Configurable
Ports	1x RJ-45 10/100/1000 Base-T

#### Physical/Mechanical

Color	Grey
LED Indicators	Fiber, Alarm, Status, Reset
Mounting/Installation Options	In-Wall, Wall-Mount

#### **Optical Characteristics**

Receiver	Received Optical Power Monitoring
Receiver Optical Overload	-8 dBm
Receiver Sensitivity	-27 dBm
Transceiver Type	On Board SC APC
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
Average Launch Power	-0.5 to +5 dBm

SD-LAN Networking

Enterprise LAN	Downstream Flow and port-based Rate Limiting, Downstream pBit and flow- based queue selection, Firewall and WAN, LAN Security, MDI/MDIX auto- negotiation, MDI/MDIX auto-sensing, Network Address and Port Translation, Up to 1024 MAC address entries, Up to 25 VLAN groups per port, Up to 256 multicast groups, IGMP V2/V3 Snooping with Immediate Leave, WAN DHCP Client and LAN DHCP Server, 802.1p Marking/Remarking DSCP Mapping, 802.1Q including VLAN Translation, Filtering, Tagging, Stacking (QinQ), IEEE 802.1d Ethernet bridging and switching
GE PoE Ethernet Port	PoE++ Functionality, Powers, IP-Phones, IP-Camera, Access Points, and other equipment that can be powered from the Ethernet port, Provides maximum of 60 W power from the 802.3bt capable ethernet port
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Forward Error Correction (FEC), IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling, Dying Gasp
Layer 2	Automatic MAC address learning, aging and filtering
OAM and Management	ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade, Webserver for local management, TR-101, TR-111, TR-124, TR-143, ITU-T G.984.4/G.988 Management

#### Performance

Downstream Data Rate	GPON: 2.5 Gbps, Active Ethernet: 1 Gbps
MAC Address	Up to 1024 MAC address entries
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
VLAN	Up to 25 VLAN groups

#### Power

Input Voltage	100-240 V AC in, 50/60 Hz Wall Adaptor
Power	PSU-6 / Remote Power 54 V DC, 0.74 A max
Total PoE Power Budget	PoE++ 60w

#### Dimensions

Height	85 mm (3.35 in)
Width	72 mm (2.83 in)
Depth	30 mm (1.18 in)

#### Ordering Information

Weight	0.174 kg
Units per Delivery	1/1

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

### Outdoor Enclosure for SDAN suitable for 8010, 8011, 8201 and 8293 Series SDANs & 1LAN-FMC-10G Fiber Media Converter

CORNING

Part Number: 1LAN-D600-ENC-3



### Outdoor Enclosure for SDAN suitable for 8010, 8011, 8201 and 8293 Series SDANs & 1LAN-FMC-10G Fiber Media Converter

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Design	
Housing Material	Aluminum
Dimensions	
Height	259 mm (10.2 in)
Width	160 mm (6.3 in)
Depth	91 mm (3.58 in)

Ordering Information	
Product Number	1LAN-D600-ENC-3
Weight	1.5 kg
Units per Delivery	1/1

### Outdoor Enclosure for SDAN suitable for 7290, 7291, 7293, 7298 and 7691 Series SDANs & 1LAN-FMC-10G Fiber Media Converter

CORNING

Part Number: 1LAN-D600-ENC-8



### Outdoor Enclosure for SDAN suitable for 7290, 7291, 7293, 7298 and 7691 Series SDANs & 1LAN-FMC-10G Fiber Media Converter

Standards	
RoHS	Free of hazardous substances according to RoHS 2011/65/EU
Design	
Housing Material	Aluminum
Dimensions	
Height	297 mm (11.69 in)
Width	249 mm (9.8 in)
Depth	165 mm (6.5 in)

Ordering Information	
Product Number	1LAN-D600-ENC-8
Weight	4.1 kg/km (2.76 lb/1000 ft)
Units per Delivery	1/1

#### CORNING

#### Part Number: 1LAN-SDAN-7691

Corning's low-profile single port Software Defined Access Node (SDAN) with Power over Ethernet Plus incorporates a highly scalable integrated networking approach while leveraging the benefits of a fiber deep network architecture. Corning's Micro family of SDAN's are built using the latest generation SoC leveraging the most recent advances in technology, along with unrivaled hardware acceleration, QoS and efficient power management that meet the bandwidth demands of high-performance applications. Corning's SDAN offerings are all technology-neutral supporting both Active Ethernet as well as GPON transport..

SDANs have multiple port configurations and support both GPON and Active Ethernet. They provide easy connections to multiple PoE devices and can be powered by remote or local power.

Applications supported for these 7600 Series products are the following:

1LAN-SDAN-7691: PoE, IPTV, Active Ethernet, XGS-GPON

#### Features and Benefits

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

CORNING

Standards	IEEE 802.3at Type 1 and 2, ITU-T G.9801.7 Pluggable SFP+ cage, Plenum-Rated, IEEE 802.1d Ethernet bridging and switching, IEEE 802.3u 100BASE-T Fast Ethernet, TR-69 Communication Bridging, ITU-T G.988 management, IEEE 802.1Q including VLAN translation, filtering, tagging, stacking (Q-in-Q), ITU-T G.9807.1 compliance for XGS-PON, TR-111, IEEE 802.3bt, IEEE 802.1p marking/remarking, DSCP mapping, TR-124, TR-143, IEEE 802.3ab 1000BASE- T Gigabit Ethernet, TR-101

Environmental Conditions	
Temperature Range, Operation	0 °C to 40 °C $$ (32 °F to 104 °F $$ )
Relative Humidity, Operation	10% to 90% (non-condensing)

Hardware	
Optical Network	Pluggable SFP+ cage for 10G Ethernet and XGS-PON
Ports	1 x RJ-45 100/1/2.5/5/10G Base-T interface, 4 x RJ-45 10/ 100/1000 Base-T interfaces, Battery Failure, Battery Low, Battery On, Battery Missing
Alarms	Battery Failure, Battery Low, Battery Missing, Battery On
Power Supply	1 x RJ-45 100/1/2.5/5/10G Base-T interface, 4 x RJ-45 10/ 100/1000 Base-T interfaces

Physical/Mechanical	
Buttons	Power On/Off
LED Indicators	GE1, GE2, GE3, GE4, PON, MG5
Mounting/Installation Options	Desk-Mount, In-Wall, Wall-Mount

Optical Characteristics	
Receiver Sensitivity	-27 dBm
Optical Wavelength	1577 +/- 3 nm Rx, 1270 +/- 10 nm Tx
Average Launch Power	-0.5 to +5 dBm

SD-LAN Networking	
Enterprise LAN	Downstream Flow and port-based Rate Limiting, Downstream pBit and flow-based queue selection, Firewall and WAN, LAN Security, IGMP V2/V3 Snooping with Immediate Leave, MDI/ MDIX Auto Sensing and Auto Negotiation, Network Address and Port Translation, Up to 1024 MAC address entries, Up to 25 VLAN groups per port, Up to 256 multicast groups, WAN DHCP Client and LAN DHCP Server
GE PoE Ethernet Port	Automatic detection of Power Type and status for Power Priority Management; support legacy power device and LLDP power device, 16 independent PSE channels, $25\Omega$ sense resistance per channel, Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports, GE3 and GE4 capable of 60W across both ports, GE1, GE2 and 10GE capable of 60W PoE across all three ports
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Forward Error Correction (FEC), IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Dying Gasp, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling
Layer 2	Automatic MAC address learning, aging and filtering
OAM and Management	Webserver for local management, SIP configuration from remote server, ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade

Performance	
MAC Address	Up to 1024 MAC address entries
VLAN	Up to 25 VLAN groups

Power	
Input Voltage	100-270 VAC, 50-60 Hz
Power	100-240VAC in, 50/60Hz54VDC, 0.74A max54VDC2.78A max1.85A max

Dimensions	
Height	44 mm (1.73 in)
Width	440 mm (17.32 in)
Depth	407 mm (16.02 in)

Ordering Information	
Product Number	1LAN-SDAN-7691
Weight	0.3 kg
Units per Delivery	1/1

#### CORNING

#### Part Number: 1LAN-SDAN-7290

Corning's low-profile single port Software Defined Access Node (SDAN) with Power over Ethernet Plus incorporates a highly scalable integrated networking approach while leveraging the benefits of a fiber deep network architecture. Corning's Micro family of SDAN's are built using the latest generation SoC leveraging the most recent advances in technology, along with unrivaled hardware acceleration, QoS and efficient power management that meet the bandwidth demands of high-performance applications. Corning's SDAN offerings are all technology-neutral supporting both Active Ethernet as well as GPON transport.

SDANs have multiple port configurations and support both GPON and Active Ethernet. They provide easy connections to multiple PoE devices and can be powered by remote or local power.

Applications supported for these 7200 Series products are the following:

1LAN-SDAN-7290: PoE, IPTV, Active Ethernet, GPON

ILAN-SDAN-7291: PoE, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7293: PoE, CATV, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7298: PoE, IPTV, Active Ethernet, GPON



#### **Features and Benefits**

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

CORNING

Standards	
Standards	CE: Compliant, EMC - EN 300 386, EMC - EN 55022 Class B, EMC - EN 55024 Class B, EMC - FCC PART 15, SUBPART B, CLASS B, ETSI, FDA - FCC 47 CFR Part 15, Class B, FDA - FDR 21 CFR 1040.10, Class I, FDA - FDR 21 CFR 1040.11, Class I, G.711 (μ and a law), G.722, G.726-32, G.726-32, G.729, GR-909 Metallic Loop Testing, H.248 (RFC 3525), IEEE 802.1d Ethernet bridging and switching, IEEE 802.1p marking/remarking, DSCP mapping, IEEE 802.1Q including VLAN translation, filtering, tagging, stacking (Q-in-Q), IEEE 802.3at Type 1, 2, and 3 (8GE Port Variant ONLY), ITU-T G.984, ITU-T G.984.4 management, ITU-T G.988 ITU-T G.988 management, Plenum-Rated, RFC 3261 - SIP, RFC 3435 - MGCP, RoHS6 Emissions, Safety - IEC 60950, Safety - UL/CSA 60950, TR-101, TR-111, TR-124, TR-143, WEEE Emissions

Environmental Conditions	
Temperature Range, Operation	-5 °C to 50 °C (23 °F to 122 °F )
Temperature Range, Storage	-5 °C to 50 °C (23 °F to 122 °F )
Relative Humidity, Operation	5% to 95% (non-condensing)
Relative Humidity, Storage	5% to 95% (non-condensing)

Hardware	
Optical Network	GPON/Active Ethernet Configurable
Ports	4 Independent Power Sourcing Equipment PSE 10/100/100 Ethernet Ports
Alarms	Battery Failure, Battery Low, Battery Missing, Battery On

Physical/Mechanical	
Airflow and FAN	Solid State, Passive Airflow
Color	Black

Physical/Mechanical	
LED Indicators	Battery, Power, Fail, LAN Data, Management, Network
Mounting/Installation Options	Desk-Mount, Wall-Mount, Plenum

Optical Characteristics	
Receiver	Received Optical Power Monitoring
Receiver Optical Overload	Input Power Overload: -8 dBm
Receiver Sensitivity	-27 dBm
Transceiver Type	On Board SC APC
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps

SD-LAN Networking	
Enterprise LAN	IGMP V2/V3 Snooping with Immediate Leave, Up to 256 multicast groups, MDI/MDIX Auto Sensing and Auto Negotiation, RJ-45 IEEE 802.1 10/100/1000 Base-T Interfaces, IEEE 802.1d Ethernet bridging and switching, 802.1p Marking/Remarking DSCP Mapping, 802.1Q including VLAN Translation, Filtering, Tagging, Stacking (QinQ), Downstream pBit and Flow-Based LAN Port Queue Selectioni, WAN DHCP Client and LAN DHCP Server, Network Address and Port Translation, Downstream Flow and port-based Rate Limiting, Automatic MAC address learning, aging and filtering
GE PoE Ethernet Port	Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports, 2-Point Forced Current, 2-Point Forced Voltage, 60W Total PoE power allocated to any combination of ports, Advanced Power Management: Fast Shutdown of Preselected Ports, Current/Voltage Monitoring, Very High Reliability 4-Point PD Detection, Regulate port power up to 15.4W for Type 1 Power, IEEE 802.3 AF/AT Type-1, -2

SD-LAN Networking	
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Downstream Advanced Encryption Standard (AES) support, IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling, Dying Gasp, ITU-T G.984.4/ G.988 Compliance
Layer 2	Automatic MAC address learning, aging and filtering
OAM and Management	ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade
Security	Remote Mirror
Voice	Comfort Noise Generation, 5 REN per line, Loop start, Balanced and unbalanced ringing, CLASS service support: Caller ID, Call Waiting, Call Forwarding, Call Transfer etc., Country specific coefficients and tones, DHCP Client or static IP configuration, DTMF dialing and encoding by RELAY or IN- BAND method, Echo Cancellation, Metallic loop testing, Official Metaswitch and BroadSoft Certifications, Proven interoperability with major soft switch and voice gateway vendors, T.38 and IN-BAND Fax, Voice Activity Detection
Power Management	Advanced Power Management, Fast Shutdown of Preselected Ports, Current/Volate Monitoring

Performance	
Downstream Data Rate	GPON: 2.5 Gbps, Active Ethernet: 1 Gbps
MAC Address	Up to 1024 MAC address entries
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
VLAN	GPON up to 25 VLAN Groups, Active Ethernet up to 4095 VLAN Groups

Power	
Input Voltage	48-57 VDC
Max Power	1.5A@48V



Power	
Total PoE Power Budget   6	60W

Dimensions	
Height	260 mm (10.24 in)
Width	152 mm (5.98 in)
Depth	45 mm (1.77 in)

Ordering Information	
Product Number	1LAN-SDAN-7290
Weight	0.9 kg
Units per Delivery	1/1

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#### CORNING

#### Part Number: 1LAN-SDAN-7291

Corning's low-profile single port Software Defined Access Node (SDAN) with Power over Ethernet Plus incorporates a highly scalable integrated networking approach while leveraging the benefits of a fiber deep network architecture. Corning's Micro family of SDAN's are built using the latest generation SoC leveraging the most recent advances in technology, along with unrivaled hardware acceleration, QoS and efficient power management that meet the bandwidth demands of high-performance applications. Corning's SDAN offerings are all technology-neutral supporting both Active Ethernet as well as GPON transport.

SDANs have multiple port configurations and support both GPON and Active Ethernet. They provide easy connections to multiple PoE devices and can be powered by remote or local power.

Applications supported for these 7200 Series products are the following:

1LAN-SDAN-7290: PoE, IPTV, Active Ethernet, GPON

ILAN-SDAN-7291: PoE, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7293: PoE, CATV, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7298: PoE, IPTV, Active Ethernet, GPON



#### **Features and Benefits**

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

CORNING

Standards	
Standards	CE: Compliant, EMC - EN 300 386, EMC - EN 55022 Class B, EMC - EN 55024 Class B, EMC - FCC PART 15, SUBPART B, CLASS B, ETSI, FDA - FCC 47 CFR Part 15, Class B, FDA - FDR 21 CFR 1040.10, Class I, FDA - FDR 21 CFR 1040.11, Class I, G.711 (μ and a law), G.722, G.726-32, G.726-32, G.729, GR-909 Metallic Loop Testing, H.248 (RFC 3525), IEEE 802.1d Ethernet bridging and switching, IEEE 802.1p marking/remarking, DSCP mapping, IEEE 802.1Q including VLAN translation, filtering, tagging, stacking (Q-in-Q), IEEE 802.3at Type 1, 2, and 3 (8GE Port Variant ONLY), ITU-T G.984, ITU-T G.984.4 management, ITU-T G.988 ITU-T G.988 management, Plenum-Rated, RFC 3261 - SIP, RFC 3435 - MGCP, RoHS6 Emissions, Safety - IEC 60950, Safety - UL/CSA 60950, TR-101, TR-111, TR-124, TR-143, WEEE Emissions

Environmental Conditions	
Temperature Range, Operation	-5 °C to 50 °C (23 °F to 122 °F )
Temperature Range, Storage	-5 °C to 50 °C (23 °F to 122 °F )
Relative Humidity, Operation	5% to 95% (non-condensing)
Relative Humidity, Storage	5% to 90% (non-condensing)

Hardware	
Optical Network	GPON/Active Ethernet Configurable
Ports	Four independent power sourcing equipment PSE gigabit ethernet port, 2 POTS ports

Physical/Mechanical	
LED Indicators	Battery, Power, Fail, LAN Data, Management, Network, POTS
Mounting/Installation Options	Desk-Mount, In-Wall, Wall-Mount

Optical Characteristics	
Receiver Sensitivity	-27 dBm
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
Average Launch Power	-0.5 to +5 dBm

SD-LAN Networking	
Enterprise LAN	IGMP V2/V3 Snooping with Immediate Leave, Up to 1024 MAC address entries, Up to 12 VLAN groups per port, Up to 256 multicast groups, MDI/MDIX Auto Sensing and Auto Negotiation
GE PoE Ethernet Port	Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports, 2-Point Forced Current, 2-Point Forced Voltage, 60W Total PoE power allocated to any combination of ports, Advanced Power Management: Fast Shutdown of Preselected Ports, Current/Voltage Monitoring, Very High Reliability 4-Point PD Detection, Regulate port power up to 15.4W for Type 1 Power, Four independent power sourcing equipment PSE gigabit ethernet port
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Downstream Advanced Encryption Standard (AES) support, Forward Error Correction (FEC), IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling, Dying Gasp
Layer 2	Automatic MAC address learning, aging and filtering
OAM and Management	ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade
Security	Remote Mirror

# CORNING

# SD-LAN Networking

Activity Detection	Voice	Comfort Noise Generation, 5 REN per line, Loop start, Balanced and unbalanced ringing, CLASS service support: Caller ID, Call Waiting, Call Forwarding, Call Transfer etc., Country specific coefficients and tones, DHCP Client or static IP configuration, DTMF dialing and encoding by RELAY or IN- BAND method, Echo Cancellation, Metallic loop testing, Official Metaswitch and BroadSoft Certifications, Proven interoperability with major soft switch and voice gateway vendors, T.38 and IN-BAND Fax, Voice Activity Detection
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Performance	
Downstream Data Rate	GPON: 2.5 Gbps, Active Ethernet: 1 Gbps
MAC Address	Up to 1024 MAC address entries
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
VLAN	Up to 12 VLAN groups

Dimensions	
Height	25 mm (0.98 in)
Width	222 mm (8.74 in)
Depth	152 mm (5.98 in)

Ordering Information	
Product Number	1LAN-SDAN-7291
Weight	0.9 kg
Units per Delivery	1/1

#### CORNING

#### Part Number: 1LAN-SDAN-7293

Corning's low-profile single port Software Defined Access Node (SDAN) with Power over Ethernet Plus incorporates a highly scalable integrated networking approach while leveraging the benefits of a fiber deep network architecture. Corning's Micro family of SDAN's are built using the latest generation SoC leveraging the most recent advances in technology, along with unrivaled hardware acceleration, QoS and efficient power management that meet the bandwidth demands of high-performance applications. Corning's SDAN offerings are all technology-neutral supporting both Active Ethernet as well as GPON transport.

SDANs have multiple port configurations and support both GPON and Active Ethernet. They provide easy connections to multiple PoE devices and can be powered by remote or local power.

Applications supported for these 7200 Series products are the following:

1LAN-SDAN-7290: PoE, IPTV, Active Ethernet, GPON

ILAN-SDAN-7291: PoE, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7293: PoE, CATV, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7298: PoE, IPTV, Active Ethernet, GPON

#### **Features and Benefits**

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

CORNING

Standards	
Standards	CE: Compliant, EMC - EN 300 386, EMC - EN 55022 Class B, EMC - EN 55024 Class B, EMC - FCC PART 15, SUBPART B, CLASS B, ETSI, FDA - FCC 47 CFR Part 15, Class B, FDA - FDR 21 CFR 1040.10, Class I, FDA - FDR 21 CFR 1040.11, Class I, G.711 (µ and a law), G.722, G.726-32, G.726-32, G.729, GR-909 Metallic Loop Testing, H.248 (RFC 3525), IEEE 802.1d Ethernet bridging and switching, IEEE 802.1p marking/remarking, DSCP mapping, IEEE 802.1Q including VLAN translation, filtering, tagging, stacking (Q-in-Q), IEEE 802.3at Type 1, 2, and 3 (8GE Port Variant ONLY), ITU-T G.984, ITU-T G.984.4 management, ITU-T G.988, ITU-T G.988 management, Plenum-Rated, RFC 3261 - SIP, RFC 3435 - MGCP, RoHS6 Emissions, Safety - IEC 60950, Safety - UL/CSA 60950, TR-101, TR-111, TR-124, TR-143, WEEE Emissions

Environmental Conditions	
Temperature Range, Operation	-5 °C to 50 °C (23 °F to 122 °F )
Temperature Range, Storage	-5 °C to 50 °C (23 °F to 122 °F )
Relative Humidity, Operation	5% to 95% (non-condensing)
Relative Humidity, Storage	5% to 90% (non-condensing)

Hardware	
CATV Interface	RJ-11 Connectors, RF Frequency range 54 MHz to 870 MHz, RF Output Impedance: 75 Ohms, RF Output level: 18 dB, RF-Video: 1550 to 1560 nm, Single F-Type CATV connector, Total RF Output Power: 36 dBmV
Optical Network	GPON/Active Ethernet Configurable
Ports	Four independent power sourcing equipment PSE gigabit ethernet port, 2 POTS ports

Physical/Mechanical	
LED Indicators	Battery, Power, Fail, LAN Data, Management, Network, POTS
Mounting/Installation Options	Desk-Mount, In-Wall, Wall-Mount

Optical Characteristics	
Receiver Sensitivity	-27 dBm
Optical Wavelength	1490 +/- 10 nm Rx, 1310 +/- 20 nm Tx
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
Average Launch Power	-0.5 to +5 dBm

SD-LAN Networking	
CATV	RF Frequency range 54 MHz to 870 MHz, RF Output Impedance: 75 Ohms, RF Output level: 18 dB, Total RF Output Power: 36 dBmV
Enterprise LAN	IGMP V2/V3 Snooping with Immediate Leave, Up to 1024 MAC address entries, Up to 12 VLAN groups per port, Up to 256 multicast groups, MDI/MDIX Auto Sensing and Auto Negotiation
GE PoE Ethernet Port	Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports, 2-Point Forced Current, 2-Point Forced Voltage, 60W Total PoE power allocated to any combination of ports, Advanced Power Management: Fast Shutdown of Preselected Ports, Current/Voltage Monitoring, Four independent power sourcing equipment PSE gigabit ethernet port, Regulate port power up to 15.4W for Type 1 Power, Very High Reliability 4-Point PD Detection
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Downstream Advanced Encryption Standard (AES) support, Forward Error Correction (FEC), IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling, Dying Gasp
Layer 2	Automatic MAC address learning, aging and filtering

SD-LAN Networking	
OAM and Management	ACS - CWMP configuration, performance monitoring, diagnostics and software download, automatic rollback, Remote firmware upgrade
Security	Remote Mirror
Voice	Comfort Noise Generation, 5 REN per line, Loop start, Balanced and unbalanced ringing, CLASS service support: Caller ID, Call Waiting, Call Forwarding, Call Transfer etc., Country specific coefficients and tones, DHCP Client or static IP configuration, DTMF dialing and encoding by RELAY or IN- BAND method, Echo Cancellation, Metallic loop testing, Official Metaswitch and BroadSoft Certifications, Proven interoperability with major soft switch and voice gateway vendors, T.38 and IN-BAND Fax, Voice Activity Detection

Performance	
Downstream Data Rate	GPON: 2.5 Gbps, Active Ethernet: 1 Gbps
MAC Address	Up to 1024 MAC address entries
Upstream Data Rate	GPON: 1.25 Gbps, Active Ethernet: 1 Gbps
VLAN	Up to 12 VLAN groups

Dimensions	
Height	25 mm (0.98 in)
Width	222 mm (8.74 in)
Depth	152 mm (5.98 in)

Ordering Information	
Product Number	1LAN-SDAN-7293
Weight	0.9 kg
Units per Delivery	1/1

#### CORNING

#### Part Number: 1LAN-SDAN-7298

Corning's low-profile single port Software Defined Access Node (SDAN) with Power over Ethernet Plus incorporates a highly scalable integrated networking approach while leveraging the benefits of a fiber deep network architecture. Corning's Micro family of SDAN's are built using the latest generation SoC leveraging the most recent advances in technology, along with unrivaled hardware acceleration, QoS and efficient power management that meet the bandwidth demands of high-performance applications. Corning's SDAN offerings are all technology-neutral supporting both Active Ethernet as well as GPON transport.

SDANs have multiple port configurations and support both GPON and Active Ethernet. They provide easy connections to multiple PoE devices and can be powered by remote or local power.

Applications supported for these 7200 Series products are the following:

1LAN-SDAN-7290: PoE, IPTV, Active Ethernet, GPON

ILAN-SDAN-7291: PoE, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7293: PoE, CATV, POTS, IPTV, Active Ethernet, GPON

1LAN-SDAN-7298: PoE, IPTV, Active Ethernet, GPON

#### **Features and Benefits**

Multiple port configurations

Supports both GPON and Active ethernet

Easy connections to PoE devices

Remote or local power options available

Supports multiple PoE types

CORNING

Standards	
Standards	CE: Compliant, EMC - EN 300 386, EMC - EN 55022 Class B, EMC - EN 55024 Class B, EMC - FCC PART 15, SUBPART B, CLASS B, ETSI, FDA - FCC 47 CFR Part 15, Class B, FDA - FDR 21 CFR 1040.10, Class I, FDA - FDR 21 CFR 1040.11, Class I, G.711 (μ and a law), G.722, G.726-32, G.726-32, G.729, GR-909 Metallic Loop Testing, H.248 (RFC 3525), IEEE 802.1d Ethernet bridging and switching, IEEE 802.1p marking/remarking, DSCP mapping, IEEE 802.1Q including VLAN translation, filtering, tagging, stacking (Q-in-Q), IEEE 802.3at Type 1, 2, and 3 (8GE Port Variant ONLY), ITU-T G.984, ITU-T G.984.4 management, ITU-T G.988 ITU-T G.988 management, Plenum-Rated, RFC 3261 - SIP, RFC 3435 - MGCP, RoHS6 Emissions, Safety - IEC 60950, Safety - UL/CSA 60950, TR-101, TR-111, TR-124, TR-143, WEEE Emissions

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Temperature Range, Operation	-5 °C to 50 °C (23 °F to 122 °F )
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Optical Network GPON/Active Etherne	et Configurable

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LED Indicators	Battery, Power, Fail, LAN Data, Management, Network
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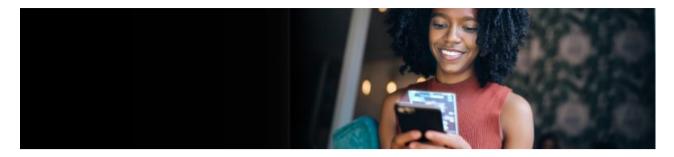
SD-LAN Networking	
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GE PoE Ethernet Port	Independent Power Sourcing Equipment (PSE) Gigabit Ethernet Ports, 140W Total PoE power allocated to any combination of ports for 8GE port units, 2-Point Forced Current, 2-Point Forced Voltage, Advanced Power Management: Fast Shutdown of Preselected Ports, Current/ Voltage Monitoring, Regulate port power up to 15.4W for Type 1 Power, Very High Reliability 4-Point PD Detection, Device (PD), 30W for Type 2 PD, and 60W for Type 3 PD (8GE Port Variant only), Eight independent power sourcing equipment PSE gigabit ethernet port
GPON	DBA support via mode-0 DBRu (piggy-back) reporting, Downstream Advanced Encryption Standard (AES) support, Forward Error Correction (FEC), IPTV traffic filtering (Multicast GEM port), Multiple GEM ports with flexible mapping between TCONTs and Priority queues, pBit based GEM port and upstream Priority queue selection, Registration ID provisioning, Serial number discovery, Support for up to 8 T-CONTS with multiple priority queues per T-CONT, Upstream Traffic Management using priority-based or rate-controlled scheduling, Dying Gasp
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#### **Small Cell Networks**

Improve indoor cellular coverage with 5G small cell nodes.

### Corning Everon<sup>™</sup> 5G small cell network solutions are enterprise-ready, easy to scale, and fourth utility crucial

#### What is a small cell network?

Small cells are low-powered radio access nodes used in densely populated urban areas to increase range and capacity for the next evolution of cellular standards. The indoor advantages of a small cell node networks include improved coverage, very small footprint, lower cost and higher flexibility than picocells or **distributed antenna systems**.

Corning Everon™ solutions include the world's first scalable indoor small cell system, Spidercloud. One system, comprised of one services node, can manage up to 125 dual-carrier LTE radio nodes, providing reliable coverage and capacity for sites up to one million square feet. Our small cell network architecture enables mobile operators to deliver reliable mobile services to enterprises and venues. Corning's 5G small cell nodes offer a smooth path to adding 5G to the thousands of LTE Enterprise Radio Access Network (E-RAN) systems available today.

#### Corning Everon<sup>™</sup> Small Cell

#### SpiderCloud Enterprise RAN (E-RAN) – Enterprise Friendly Deployment

Corning's SpiderCloud LTE E-RAN is easy to deploy. It is deployed over an Ethernet LAN, just like Wi-Fi. In many enterprise installations, E-RAN is paired with our Software Defined LAN (SD-LAN) to meet physical separation policies, deliver PoE+ service at the edge, and enable power protection. E-RAN can also share the enterprise LAN via private VLAN. E-RAN's power-efficient small cells work over POE+ and Cat5e. There is no need to pull cumbersome co-ax cables. The Self-Organizing Network (SON) software resident on SpiderCloud's services node automatically configures the radio nodes, so technicians don't have to.

#### **High Capacity**

Every network has capacity hotspots. E-RAN offers massive capacity where you need it. A SpiderCloud system deployed in a large building can offer as many as 250 sectors of capacity, delighting customers and offloading all the mobile devices inside the building from burdening the outdoor macro network.

#### Deployment

E-RAN is deployed like a Wi-Fi network throughout a commercial structure (see drawing to the right) and uses an SD-LAN based Ethernet VLAN for secure indoor transport. When throughput per sq. ft. matters, E-RAN shines. The E-RAN can use existing internet capacity or a new Internet access to connect to the operator core network. There is no need for expensive private network solutions like Metro Ethernet or MPLS to connect an E-RAN's services node to the mobile core

#### **Radio Node Family**

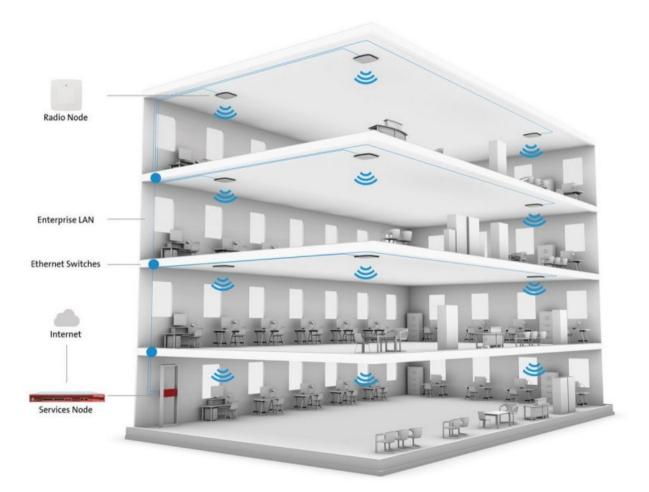
Radio nodes are small and low profile with a similar profile to Wi-Fi Access Points. The E-RAN platform offers a wide range of radio nodes for many different applications and mobile operator configurations. All models are powered by PoE+ (802.11at) Ethernet switch ports.

#### Grow your Business with E-RAN

Corning SpiderCloud helps mobile operators acquire and retain high-value enterprise subscribers, as well as win the loyalty of datahungry smartphone users. Dependable coverage and massive in-building capacity makes it possible to offer new, cloud-based, enterprise applications, and future innovations. 5G cellular services are easily layered onto the LTE E-RAN with a simple software update and installation of our 5G E-RAN system in the building.

#### **Solution Selected by Leading Operators**

SpiderCloud Wireless's customers include two of the three major mobile operators in the United States along with two of the largest mobile operator groups globally.



#### Typical Commercial Real Estate Installation



# E-RAN Introduction Capabilities, Technology, and Deployment

#### Simple Installation. Quick Deployment. Unmatched Capabilities.

Reliable wireless coverage has evolved from a want to a need for most governments, enterprises, and venues, with service demands increasing every day. Now, the connectivity needs of employees, contractors, guests, and first responders in buildings of all sizes can be cost-efficiently addressed.

The Corning<sup>®</sup> SpiderCloud<sup>®</sup> enterprise radio access network (E-RAN), with a broad family of radios, flexible deployment topology, and IP/Ethernet transport, is the key to servicing more locations than ever before. The radio nodes enable unprecedented cellular coverage and capacity through secure IP/IPSec data connections over readily available Ethernet and internet services.

Optimize your network. Learn more about the Corning SpiderCloud solution.

#### What is an enterprise radio access network (E-RAN)?

An E-RAN system is made up of one services node that manages a group of radio nodes (access points) that are attached to it. All of the radio nodes are powered by Ethernet, which makes them quick and easy to install.

#### How does E-RAN work?



PoE+-powered radio nodes install on ceiling or wall



Radio nodes connect to services node over Ethernet LAN and internet



Services node connects to operator network over internet



Reliable cellular coverage and capacity inside buildings

### **F-RAN Platform**

An E-RAN system is made up of one rack-unit-sized services node that manages multiple single-carrier or dual-carrier radio nodes operating in 3G, LTE, and unlicensed spectrum.

### Services Node

The services node lies at the heart of the SpiderCloud<sup>®</sup> E-RAN solution. It ensures that the E-RAN system is easy to deploy and manage and that it delivers the performance mobile operators expect. The services node is access technology agnostic, supporting UMTS, LTE, and LTE-LAA. It orchestrates the self-organizing network (SON) process, controls the operation of different radio nodes during neighbor discovery, gathers information from different radio nodes, and creates optimized neighbor lists based on information received from the neighbor scans.

SON capabilities include:

- Discovering the macro cells in the area along with the internal small cell and Wi-Fi topology.
- Assigning UMTS primary scrambling codes, LTE physical cell identifier, and LAA unlicensed channels.
- Setting maximum transmit power levels.
- Automatically configuring cell neighbor lists to make the system operational.



Like Wi-Fi access points, radio nodes are small with low profiles. An E-RAN platform offers a wide range of radio nodes for many different applications and mobile operator configurations. All models are powered by PoE+ (802.11at) Ethernet switch ports.

Installation is quick and easy using commonly available PoE+.

- 1. Pull a structured cable (CAT 5e or greater).
- 2. Attach the radio to wall or ceiling.
- 3. Connect Ethernet patch cords at both ends.

### **Radio Node Family**

	TRANSPORT				
Capabilities	SCRN-310	SCRN-220	SCRN-320	SCRN-330	SCRN-340
Available models	Band 4 & 13 (model -0413) Band 4 & 2 (model -04L2)	Band 4 (66) or Band 2(25) or Band 13	Band 4 + 5 GHz Band 2 + 5 GHz Band 4(66) + 5 GHz	Band 41 (Sprint) or 48 (CBRS)	Band 2(25)/4(66) & 14
Carrier aggregation	Licensed spectrum Up to 40 MHz (2CC CA)	No	Licensed and unlicensed up to 60 MHz (3 CC CA)	No	No
Peak speed (Mbps)	225 Mbps (-0413) 300 Mbps (-04L2)	150	270 Mbps (Chan 32 only) 400 Mbps (3 CCA)	Peak DL rate of 100 Mbps with FC2	150 Mbps
Number of active users	128/band (256 for dual-band)	128	128 (with LAA)	128/band (256 for dual-band)	128/band (256 for dual-band)
Number of VoLTE users (subset of number active)	64 with CA 128 (64/band), without CA	64	64 (with LAA)	64	128 (64/band)
Support for CAT-M1	Not planned	Yes	Yes	Not planned	Yes
Transmit power	250 mW	500 mW	500 mW	500 mW	500 mW
Coverage	8,000-10,000	10,000 - 13,000	10,000 - 13,000	10,000 - 13,000	10,000 - 13,000
Antennas	Internal External as option	Internal External as option	Internal	Internal External as option	Internal External as option



### **Deployment Process**

Corning Enterprise Services offers systems integrators full facilitation for E-RAN installations. Our well-documented, structured, repeatable processes can make installations faster and easier.

### Typical small cell deployment



#### Where is the services node hosted?

The services node is hosted in a local data center or telecom equipment room. It requires two Ethernet ports for internet backhaul to the core network and fronthaul to the radio nodes.

#### Is there a minimum number of radio nodes required in a building?

As few as one radio node can be deployed for a small public or commercial space. Generally, about one radio node per 12,000 square feet is recommended. For a typical small cell deployment, iBwave predictive designs based on a site walk should be done to determine final radio node quantities.

#### Should all the radio nodes in an E-RAN system be the same model?

No. Any radio node that has been qualified for an operator's network can be mixed and matched in an E-RAN system. For example, E-RAN can manage RN-310 (dual carrier LTE), RN-220 (frequency agile LTE), RN-320 (LTE-LAA), and RN-340 (dual carrier LTE, including FirstNet) radio nodes across multiple buildings.



### Distributed Antenna Systems (5G DAS)

Let us help you design the right DAS system for your application.

### Corning<sup>®</sup> Everon<sup>™</sup> Distributed Antenna Systems (DAS)

80% of cellular demand is inside of buildings, fast-and-reliable cellular coverage is a basic expectation of people in every property. Corning<sup>®</sup> Everon <sup>™</sup> Distributed Antenna Systems (DAS) offer exceptional value for a variety of wireless enterprise applications.



#### Future Ready

5G capable today, FCC certified with NR 5G signal. Our DAS system built with scalability and future flexibility in mind.



#### Lower Upgrade Cost – Less Disruption

Avoid disruption and costly upgrades with Everon Network Solutions. Built on an optical fiber core network, our DAS solutions can help you stay ahead of technology and evolving user requirements.



#### Streamlined Deployment

Many of our Everon DAS solutions are approved by the major U.S. cellular operators to be used by their Network Engineers, greatly reducing the time and effort to commission Everon DAS.



#### Expert Support

Backed by our expert team deeply committed to customer service, rooted in our 170+ year history of technology leadership.

#### Upgrade your network with C-Band

We cover the full C-band spectrum and can help you upgrade any DAS platform with an easy to install overlay.



### Everon<sup>™</sup> 3000 DAS

Proven DAS Technology — Reliable Indoor Cellular Coverage

### Corning<sup>®</sup> Everon<sup>™</sup> 3000 Distributed Antenna System (DAS)

#### (formerly Corning ONE<sup>™</sup> DAS)

Uninterrupted, fast, and clear cellular coverage that reaches even the most remote corner of an enterprise is essential to every organization and property today. Corning<sup>®</sup> Everon<sup>™</sup> DAS 3000 (formerly ONE<sup>™</sup> DAS) is a multi-operator platform that offers exceptional value and 5G-ready service to meet significant mobile traffic demands in medium-large building footprints now and in the future.

#### **Benefits of Everon 3000 DAS**

Technology-agnostic approach to LTE and 5G, allowing for applications like 5G mmWave and C-band.

Reduced headend complexity means faster installation.

Flexible family of remotes lets engineers design a system that meets each site's unique needs.

Tomorrow's technology, today. Fiber-tothe-Edge (FTTE) network infrastructure reduces complexity and enables future wideband mobility applications.

Scalable, high-capacity solution built on proven technology.



#### **Proven Solution**

Optimized for multi-operator solutions



#### Scalable

Modular remote architecture for adding additional bands when you need them



**Expandable and Upgradeable** 5G ccapable across extensive installed base

·



Fiber to the Edge (FTTE) Optical backbone reduces total cost with better performance and room to grow

 Expert Support

 Backed by Corning technical experts deeply committed to service

#### Is Everon 3000 DAS right for my application?

Everon 3000 is the Corning's flagship DAS offering (formerly Corning ONE DAS). The Everon 3000 is ideally suited for the enterprise offering specifically designed to overcome the complexity of providing multi-carrier 5G service, offering a scalable solution for buildings from 100,000 to 500,000 square feet.

If your structure is larger than 500,000 square feet, you may consider the Everon 6000.

If your application requires only 1 or 2 carrier coverage, our Everon Small Cell offering may be right for you.

#### **Overview of Corning Everon 3000 DAS**



#### Better Cellular Coverage for Better In-building Experiences

Corning Everon DAS 3000 (formerly Corning ONE DAS) is a 5G-capable, end-to-end solution scalable for a variety of enterprise applications, from a single hospital to a business campus. This cost-optimized, multiband coverage with capacity to support multiple operators via a single, simplified fiber optic infrastructure ensures a strong, clear user experience today, with adaptability for migration to new technologies, primarily through software upgrades, tomorrow.

#### System Components

Integrated Headend Unit (IHU)

Simplified unit that connects each mobile operator base station to DAS signal distribution

#### Connecting Fiber-to-the-Edge Remotes

RAU uses ActiFi<sup>®</sup> composite cable for both power and data

MRU uses optical cable for data plus a local power source

#### RAU Interconnection Technology Remote Power

Inserts power into the copper conductors of composite cables for all attached RAUs

Remote power shelf installs either adjacent to IHU or in the telecommunication room of each floor that has RAUs

#### Future ready, now, with fiber-to-the-edge

Optical infrastructure is easily deployable via a wide range of off-the-shelf or field-terminated all-optical or composite cables. Easy to design, plug-and-play connectors significantly reduce installation cost and deployment time. Composite cabling, composed of both copper conductors for power and optical fibers for data traffic replaces PoE infrastructure while bringing the promise of huge future bandwidth.



### **Corning ONE DAS Technology**

#### **Corning ONE DAS Technology**

The Corning<sup>®</sup> Optical Network Evolution (ONE<sup>™</sup>) Solutions fiber optic infrastructure technology allows various combinations of SISO and MIMO services to be routed from the headend to specified remote locations of each floor, according to the user-defined configurations via the web management graphical user interface (GUI). This allows optimizing service coverage and provides equipment savings. While the fiber optics infrastructure is common, the services can be routed via service provider shared or dedicated equipment. By default, the system is configured to support a single-service group: all services are transferred to all remote locations. This default configuration of Corning ONE DAS can be easily modified according to site requirements.

The essential components of the Corning ONE solution all-fiber distributed antenna system (DAS) consist of the following:

Headend Unit (HEU): Chassis that can house up to 12 RF interface modules (RIMs) used to condition RF signals from multiple cellular RF sources. It also houses the headend control module (HCM). The HCM is the main GUI interface for control and management for the system. The same slot is utilized for other chassis in the same system to house the ACM (auxiliary control module). The HEU chassis holds two slots for PSM (power supply modules, the second is redundant). In addition, the two outside slots (1 and 14) hold RIX cards which are RF expanders modules that are used to connect to other chassis like the OIU.

#### Optical Interface Unit (OIU): This

chassis resembles the HEU but it is used to house 12 optical interface modules (OIMs). The OIM is a wideband RF to F/O (and vice versa) media conversion module. Each OIM can support up to three remote access unit (RAU) connections. The OIU also contains positions for the ACM, two PSM modules, and two optical expander module cards (OIX).

Fiber Management: Fiber harness cables from the OIMs are connected to a fiber management unit. Each OIM connects to six fibers via an MTP<sup>®</sup>-LC 6-fiber harness cable. The fiber management unit can come from different product families. The Corning CCH or EDGE<sup>™</sup> products both work well. The CCH family works well for some converged solutions.

Trunk and/or Composite Fiber: Corning provides multiple single-mode fiber cabling solutions for the Corning ONE platform. The type of trunk and horizontal fiber cabling utilized in the solution depends on the solution requirements.

#### ICU or PSU (Interconnect Unit or Power Supply Unit Chassis): The main function

of the ICU/PSU in the Corning<sup>®</sup> ONE<sup>™</sup> solutions is to provide DC power to the end remote access units and other devices in the zone such as the Corning Gigabit Ethernet module, PON optical network terminals, or remote switches. The ICU/PSU chassis holds either four or six power supply modules (PSM-I). Each PSM-I contain two 100 W ports. The ICU is designed to hold two fiber edge cassettes for fiber management and four PSM-I units. The PSU-6 is designed to hold six PSM-I units and no EDGE<sup>™</sup> cassettes.

Remote Access Unit (RAU): The RAU distributes up to five services via internal antennas (external antennas are optional). The RF services received over optic cables and converted for distribution over internal (or via the external option). An RXU (RF expansion unit) can be added to the modular RAU to add two more frequencies as needed.



**Corning ONE DAS Headend Technology** 

### **Corning ONE DAS Headend Technology**

#### Head End Unit

The optical interface unit (OIU) is a modular, chassis based, active RF to optic converter designed to operate with the HEU. It converts the RF signals received from up to four connected HEUs to optic signals for routing over up to 36 optical links, towards the intermediate and remote end elements. The OIU is managed via the HEU (or IHU), designated as the management unit for the site.



The IFB is a combiner/splitter interface box that combines RF services from two headend units (HEU/IHU), routes them through optical central hub (OCH) modules and forwards then for distribution to the high-power GX remotes. The IFB enables comprehensive high-power band coverage in a Corning ONE solution by supporting the deployment of the GX WCS/2.5 GHz TDD (dual-band) remote alongside GX quad-band remote.



#### **Integrated Head End Unit**

The integrated headend unit (IHU) is a compact, flexible, chassis-based system that performs two functions: it conditions RF signals from up to eight bands and provides RF to optic signal conversion for the RF signals.

The IHU supports 12 slots:

Four slots are dedicated to RF conditioning modules

Four slots are dedicated to optic conversion modules





Four slots are dual-slots, that can house either a conditioning module or an optic conversion module.

This provides configuration flexibility as to the number of supported services (one per module) and the number of optical links (three per module).

The IHU can serve as the site management unit (if the appropriate control module is installed), or it can be managed via the designated HEU.

#### **Optical Interface Unit**

The optical interface unit (OIU) is a modular, chassis based, active RF to optic converter designed to operate with the HEU. It converts the RF signals received from up to four connected HEUs to optic signals for routing over up to 36 optical links, towards the intermediate and remote end elements. The OIU is managed via the HEU (or IHU), designated as the management unit for the site.



# CORNING

### features and benefits |

Multi- frequency/ multiservice platform	Support for up to five SISO services or seven with RF expansion module (RxU2325): CELL/ESMR, PCS, LTE 700, AWS+AWS-3, 2.5 GHz TDD, and WCS.
Multioperator- optimized platform	Services from a number of operators can be distributed by the same unit
Operator-grade performance	Advanced signal handling, radio frequency (RF) filtering, and management ensures operator- grade performance
Fiber optic savings	All services routed to an RAU5x unit are routed over a single fiber optic pair
Ethernet support	Supports "plug in" Gigabit Ethernet module (GEM) providing support for connected IP devices (Wi-Fi APs, IP Phones etc.) with Ethernet pass- through and PoE
Simple installation and maintenance	All connections and status LEDs located on front panel Easy-to-install mounting bracket
Array of mounting options	Wall/ceiling mount Back-to-back wall mount (supports two RAU5x units) Ceiling mid-mount
Management and control	Alarm forward to NOC or standard EMS via single-network management protocol (SNMP), software-controlled output power, and optical link auto gain control

The five-band remote access unit (RAU5x) is a compact, fiber-fed, indoor coverage remote for the Corning<sup>®</sup> optical network evolution (ONE<sup>m</sup>) solutions.

RAU5x is a multiservice remote that distributes up to seven single-input, single-output (SISO) services. The RF services are received over optic cables and converted for distribution over external vertical, directional, omnidirectional antennas via external QMA antenna ports.

In addition, the RAU5x enclosure can host the Gigabit Ethernet module (GEM) enabling offload, expansion, and effective use of Wi-Fi resources.

Management and configuration options are provided for each RAU5x service via a web session to the headend control module (HCM) installed at the headend site.

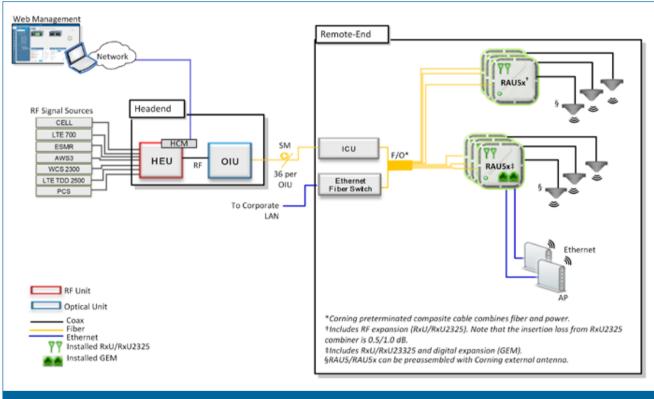


RAU5x | Figure 1

# system description

RAU5x distributes the wireless and Ethernet services received over the fiber optic infrastructure from the Corning<sup>®</sup> optical network evolution (ONE<sup>™</sup>) solutions headend.

The RAU5x is a service-specific module supporting five SISO services that performs optical to RF conversion of signals received from the optical interface unit (OIU). Signals are automatically filtered, amplified, and distributed via external antennas. Uplink (UL) signals are then converted to optical signals before being transmitted back to the OIU.



Example of Corning Optical Network Evolution (ONE ) Solutions RAU5x Deployment | Figure 2

# specifications |

### **Supported Services**

Technology	Frequency Range (MHz)			
recimology	Service/Band	Uplink (UL)	Downlink (DL)	
LTE	700 MHz	698-716 777-787	728-746 746-756	
CDMA/WCDMA*/ TDMA/GSM/LTE	ESMR 800/CELL 850	817-824/824-849	862-869/869-894	
WCDMA*/LTE	AWS 3 1700	1710-1780	2110-2180	
CDMA/WCDMA*/TDMA/GSM/LTE	PCS 1900	1850-1915	1930-1995	
LTE	WCS 2300	2305-2315	2350-2360	
LTE	2500 TDD	2496	-2690	

\*WCDMA service is based on 3GPP2 CDMA 2000 standards. LTE service may be deployed in the future due to frequency refarming planned by the carriers.

### System Level RF Parameters per Service

#### **Low-Band Services**

Service/Band	LTE 700 MHz		ESMR800/ CELL 850 MHz	
RF Parameter	DL	UL	DL	UL
Frequency Range (MHz)	728-746 746-756	698-716 777-787	862-869/ 869-894	817-824/ 824-849
Maximum Output Power Per Antenna Port (dBm)*	15		15	
Insertion Loss from RxU2325 Combiner (if installed)	0.5/1	0 dB	0.5/1	.0 dB
Maximum Input Power (dBm)	0 to 37		-10 to 37/ 0 to 37	
Typical Antenna Gain (dBi)	0		0.5	
Horizontal Polarization Omni @ 34-45 degrees	-2 to 0		-2 to 0	
UL Gain (dB)		-19 to 15		-19 to 15
Input IP3 (dBm) AGC OFF Typical		-5		-5
Input IP3 (dBm) AGC ON Typical		5		5
SFDR <sup>+</sup> (dB)		60		64
Maximum Intermod Distortion (dBm)	-13		-13	
UL NF <sup>‡</sup> (dB)		12		12
Gain Flatness/Ripple (dB)	±2	2.0	±2	.0

\*Insertion loss from RxU2325 combiner (if installed) = 0.5/1.0 dB.

<sup>†</sup>SFDR calculated with bandwidth of 1.23 MHz for the CELL and PCS and with 5 MHz for the LTE and AWS

*‡Typical for single-remote access unit* 

### specifications | (continued)

### System Level RF Parameters per Service (continued)

### **High-Band Services**

Service/Band	AWS+AWS3 1700 MHz		PCS 1900 MHz	
RF Parameter	DL	UL	DL	UL
Frequency Range (MHz)	2110-2180	1710-1780	1930-1995	1850-1915
Maximum Output Power Per Antenna Port (dBm)	20		20	
Insertion Loss from RxU2325 Combiner (if installed)	0.5/1	0 dB	0.5/1	.0 dB
Maximum Input Power (dBm)	0 to 37		0 to 37	
Typical Antenna Gain (dBi)	2.5		3	
Horizontal Polarization Omni @ 34-45 degrees	-1 to 1		-1 to 1	
UL Gain (dB)		-19 to 15		-19 to 15
Input IP3 (dBm) AGC OFF Typical		-5		-5
Input IP3 (dBm) AGC ON Typical		5		5
SFDR* (dB)		60		64
Maximum Intermod Distortion (dBm)	-13		-13	
UL NF <sup>†</sup> (dB)		12		12
Gain Flatness/Ripple (dB)	±2	2.0	±2	0

### **RxU2325 Add-On Module Services**

Service/Band	WCS 2300 MHz		LTE 2500 MHz	
RF Parameter	DL	UL	DL	UL
Frequency Range (MHz)	2350-2360	2305-2315	2496-2690 (DL/UL combined)	
Maximum Output Power Per Antenna Port (dBm)	18‡ (minimum)		18‡ (minimum)	
Maximum Input Power (dBm)	0 to 37		0 to 37	
Typical Antenna Gain (dBi)	2.5		2.5	
Horizontal Polarization Omni @ 34-45 degrees	-1 to 1		-1 to 1	
UL Gain (dB)		-19 to 15		-19 to 15
Input IP3 (dBm) AGC OFF Typical		-6		-6
Input IP3 (dBm) AGC ON Typical		5		5
SFDR* (dB)		60		60
Maximum Intermod Distortion (dBm)	-13		-13	
UL NF <sup>†</sup> (dB)		12		12
Gain Flatness/Ripple (dB)	±2	2.0	±2	.0

\*SFDR calculated with bandwidth of 1.23 MHz for the CELL and PCS and with 5 MHz for the LTE and AWS.

<sup>†</sup>Typical for single remote access unit

*‡20 dBm if only one of the services is operating* 

# specifications | (continued)

Environmental		
Operating Temperature	-5° to +50°C (23° to 122°F)	
Storage Temperature	-20° to 85°C (-4° to 185°F)	
Standards and Approvals		
Laser Safety	FDA/CE 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50 and IEC 60825-1	
EMC	CE EN 301 489, EN 55022, EN 61000 FCC 47 CFR Part 15, 22, 24, 27	
Safety	UL 60950 IEC 60825-1:2007 IEC 60825-2:2010 CAN/CSA-C22.2 No.60950-1-03 Fire Safety UL 2043	
Optical		
Optical Output Power	< 9 dBm	
Maximum Optical Budget	5 dB	
Back Reflectance	-60 dB	
Optical Connector	LC APC SM	
Fiber Type	Corning <sup>®</sup> SMF-28 <sup>®</sup> fiber or compatible	
Wavelength	1310 ± 10 nm (@ 25°C)	

# specifications | (continued)

### Physical Specifications

Supported Services	SISO: CELL/ESMR, PCS, AWS+AWS-3, 700 LTE With RxU2325: 2.3 GHz WCS and 2.5 GHz TDD bands	
Interface Connections	Two LC APC single-mode fiber connectors; UL and DL Two DC power inputs ports; main and secondary in case of PoE clients Two QMA RF ports; for External cavity filter (In/Out) use LTE and CELL filters One broadband external antenna QMA connector (connected antenna must have a return loss of 12 dB) One RJ45 MGMT (local) connection GEM interface – power and digital	
Antenna	Omnidirectional (15-degrees down from horizon)	
Power Consumption	For Main Power Input:           Input Range: 37-57 VDC           RAU5x: 44.5 V; 50 W           RAU5x + RxU2325: 44.5; 76 W           RAU5x + RxU + GEM: 44.5 V; 78 W	
Management	Managed via the headend control module (HCM)	
Physical Characteristics (Enclosure and Modules)	<b>Mounting:</b> Wall/ceiling (horizontal mount) Mounting bracket included in the installation kit Mid-mount (acoustic ceiling) – separately ordered kit	
	<b>Dimensions (H x W x D):</b> Without external antenna: 3.6* x 12.9 x 10.4 in (90 x 327 x 264 mm) *3.6-in (90 mm) without standard mounting bracket; 4.4-in (111 mm) with standard mounting bracket With external antenna and skirt: 6.1 x 13.1 x 13.1 in (154 x 338 x 338 mm)	
	<b>Weight :</b> RAU5x only (no external antenna or plug-in modules): 10 lbs (4.5 kg) RAU5x and GEM: 11.1 lbs (5.03 kg) RxU2325: 3.08 lbs (1.4 kg) External antenna: 3.7 lbs (1.7 kg)	
Environment	<b>Ambient Temperature:</b> Wall-mountable installations: 45°C (113°F) Ceiling-mountable installations: 50°C (122°F)	

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# Mounting Options |

### Wall-Mountable Installation



### **Mid-Mountable Installation**



RAU5x (including external antenna) Mid-Mountable Installation | Figure 4



RAU5x (including external antenna) Mid-Mountable Installation – Lowered View | Figure 5

# ordering information |

### **RAU5x Remotes**

Part Number	Description
RAU5XUS	Remote Access Unit, five-band remote supporting: ESMR 800/CELL 850, LTE 700, AWS+AWS3 1700, and PCS 1900
RAU5XUS-A	Remote Access Unit, supporting five bands and broadband antenna. ESMR 800/CELL 850, LTE 700, AWS+AWS3 1700, and PCS 1900 With antenna assembled (P/N: RAU5US-ANT)

### **RAU5x Accessories**

Part Number	Description
RAU5US-ANT	Broadband Antenna Module for RAU5x
BR-RAU5US-Wall	Remote Bracket for wall-mountable installation; supports up to two RAU5x units back-to-back
BR-RAU5US-TOP	RAU5x Bracket for floating ceilings tile, mid-mountable installation
BR-RAU5US-CAP	Cover Plate for "Top ceiling" RAU5x bracket (BR-RAU5US-TOP) – for installations including RAU5x without Corning external antenna



### Everon<sup>™</sup> 6000 DAS

Robust Cellular Coverage for Large Campuses and Venues

### Corning<sup>®</sup> Everon<sup>™</sup> 6000 Distributed Antenna System (DAS)

Whether an airport, stadium, campus, or convention center, venues face unique challenges to stay in front of the exploding demand for robust, reliable cellular service. Corning is the leader in this space, spearheading the next generation of DAS technology that supports all LTE bands, 5G and 5G-NR services, and more.

The Everon 6000 DAS is designed to meet the business and technical requirements of large campuses and structures that have significant mobile traffic demands in both normal daily use and when major events occur.

#### Upgrade your network with C-Band

We cover the full C-band spectrum and can help you upgrade any DAS platform with an easy to install overlay.

#### **Benefits of Everon 6000 DAS**

High-performance technology solution next-generation cellular platform.

Corning cellular digital signal distribution systems and visual design expertise.

Low- and medium-powered remotes, with outdoor options available. Mix and match to deliver the best service based on your specific needs.

Software features that improve installation speed, ensure system stability, and adapt to changing requirements.

Fiber to the Edge (FTTE) network with remote powering: Less risk of obsolescence. Tomorrow's technology, today.



#### Robust Capability Optimized for dense, high-capacity venues. MIMO, all-band, indoor/outdoor rated

4

Exceptional Performance

Powerful all-digital architecture. Simple to optimize and install in complex applications

۲.

**Power Efficient and Compact** Low power consumption & footprint



Fiber to the Edge (FTTE) Optical backbone reduces total cost with better performance and room to grow



Expert Support

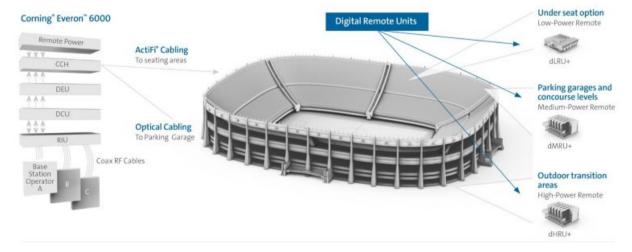
Backed by Corning technical experts deeply committed to service

### Is Everon 6000 DAS right for my application?

Everon 6000 DAS is specifically designed to accommodate environments with high population density and capacity. This solution is idea for larger venues (over 500,000 sq. ft.) and where robust capability and performance are required.

If your structure is less than 500,000 square feet you may consider the Everon 6200 or 3000. Additionally, if your application requires only 1 to 2 carrier coverage, we recommend our Everon Small Cell offering.

### **Overview of Corning Everon 6000 DAS**





### Everon<sup>™</sup> 6200 DAS

Reliable Future-Ready In-Building Enterprise DAS Coverage

### Corning<sup>®</sup> Everon<sup>™</sup> 6200 Distributed Antenna System (DAS)

#### (formerly Corning ONE<sup>™</sup> DAS)

In today's environment, your enterprise has to support countless devices of all kinds with flawless performance, limitless capacity and speed in every corner of your facility. Now, Corning is proud to present a best-in-class in-building cellular solution for enterprise applications. Enjoy optimal service for less cost, deployed in less time, on the most-flexible fiber-based platform that ensures a simple upgrade path to the next generation of service.

#### Upgrade your network with C-Band

We cover the full C-band spectrum and can help you upgrade any DAS platform with an easy to install overlay.

#### **Benefits of Everon 6200 DAS**

5G performance for a better experience

Lower initial and operating costs

Better coverage, more devices, more capacity

Less complexity, simpler to deploy and manage

Corning technical expertise deeply committed to service

Fiber to the Edge (FTTE) network with remote powering: Less risk of obsolescence. Tomorrow's technology, today.



#### Lower Total Cost Optimized to cost effectively scale up or down for a range of enterprise applications



#### Flexible

Configurable remotes, SISO or MIMO, Overlay existing DAS, add C-band or 2.5 GHz



#### Future-Ready

All Digital Solution. Multi-operator signal distribution, 5G, C-band, CBRS ready



Fiber to the Edge (FTTE) Optical backbone reduces total cost with better performance and room to grow



#### Expert Support

Backed by Corning technical experts deeply committed to service

#### Is Everon 6200 DAS right for my application?

Everon 6200 is the first DAS Solution specifically designed for the enterprise that delivers flexibility, reduced installation and ongoing costs for buildings from 150,000 to 500,000 square feet.

If your structure is larger than 500,000 square feet, you may consider the Everon 6000. If your application requires only 1 to 2 carrier coverage, our Everon Small Cell offering may be right for you.

**Overview of Corning Everon 6200 DAS** 



#### Better Cellular Coverage for Better Enterprise In-building Experiences

Everon 6200 DAS is a groundbreaking solution for enterprises, providing a platform for reliable coverage with all major U.S. carriers using less remotes, with lower costs, and simpler architecture. All with the future flexibility of fiber to adapt to the massive changes expected for in-building cellular demands.

EVERON 6200 DAS utilizes a fiber-fed, low-power distribution network that is OEM agnostic and 5G NR ready, reducing deployment time by up to 25% and installation and services costs between 10%-25% while offering selectable frequencies ranging from 600 to 3500 MHz.

#### **Everon 6200 Access Unit**

#### Overview

Multi-operator and multi-technology

One RU (1.75 inches) of rack space per required AU

Available for 48 VDC or 120-200 VAC power sources

RF modules interface with mobile operator Base Stations

Up to four full-band RF modules per AU

Up to two additional AUs can be attached to support up to 12 RF modules/48 x inputs

CPRI optical connection to one or more Expansion Unit (EU)

Up to eight EUs can be directly connected to an AU (112 remotes)

#### Headend Unit Cellular Details

RF modules are available for these U.S. bands:

600 MHz (71), 700L (12), 700U (13), FirstNet (14), 800/850 (5), PCS (25), AWS (66), WCS (30), 2.5 GHz (41), CBRS (48)

Supported Modulation types are 3G, 4G



(LTE), and 5G (5G-NR)

Support for SISO and MIMO configurations

Digital fronthaul network to DAS Remotes uses Common Public Radio Interface (CPRI)

#### **Everon 6200 Expansion Unit**

#### Neutral host

Routes AU CPRI traffic to/from all remotes (N2RU, M2RU, and H2RU)

Up to 5 EUs can be cascaded to an AU port to support large sector designs

One RU (1.75 inches) of rack space per required EU

Available for 48 VDC or 120-200 VAC power sources

#### Interconnects

10 Gbps CPRI optical to AU

10 Gbps CPRI optical for up to 14 attached remotes

Remote power shelf (CIP) adjacent to EU injects power for remotes into ActiFi® composite cables

#### **Cellular Details**

Distributes downlink cell signals from AU CPRI stream and routes to remotes

Collects uplink cell signals from remote CPRI streams, combines them, and routes to the AU

Operator agnostic and independent of individual Mobile Devices

### **Everon 6200 Digital Remote Options**

Low-Power Remote (N2RU)

Medium-Power Remote (M2RU)

Mediium-Power Remote (M2RU)



	Carros	1 1929 · · · ·	
Best Usage	Indoor/outdoor high capacity	Outdoor coverage	Indoor/outdoor coverage
Installation	Pole, wall, ceiling	Wall or pole	Pole, wall, rack
Antenna Requiirement	Internal/External (SISO or MIMO)	External (SISO or MIMO)	External (2T2R or 4T4R)
RF Power Output	17 dBm (< 1 GHz) & 20 dBm (> 1 GHz) total	43 dBm per carrier	37 dBm per carrier
Outdoor Installation	NO (IP30 rated)	YES (IP65-rated enclosure)	YES (IP67-rated enclosure)
LTE/5G-NR Frequency Bands	600 MHz (71), 700L (12), 700U (13), FirstNet (14), 800/850 (26), PCS (25), AWS (66), WCS (30), 2.5 GHz (41), 3600 (48)	600 MHz (71), 800/850 (26), PCS (25), AWS (66), WCS (30), 2.5 GHz (41)	PCS (25), AWS (66), WCS (30), 2.5 GHz (41)
Corning Remote Power//Composite Cable	YES	NO (uses local AC or 48 VDC)	YES (or uses local AC or 48 VDC)

# Everon<sup>™</sup> Copper Datacom V250 Shielded VOLOCK6SHV, V250S, RJ45 Vol, Cat6, BP480, White

### CORNING

# Part Number: XF500006028

Our Cat.6 copper interconnect products work together to provide an easy-to-use solution for deploying high-speed connections throughout a building. The RJ45 jack is a key component in this system. These RJ45 jacks have been certified by an independent test laboratory to hardware certification. Each jack component is able to terminate to any certified Cat.6 TIA, ISO/IEC and EN standards for hardware performance, confirmed by independent laboratory certifications. The jack's unique three cable entry points help make installation simple. The traditional one-click design enables an easy, tool-less termination on Cat. 6 shielded twisted pair cables, meeting industry performance standards.

### Features and Benefits

#### Tool-less jack

Easy and quick to install - reliable connection The conductors are wired in a single operation

#### Three cable entry points

Less cable bending required - better compliance with minimum bend radius

#### No untwisting of pairs before termination

Minimized stripping length - limited pair untwist - pairs kept together, no wire guide required

#### Accepts solid and stranded conductors

Enables "jack-to-plug" cables to be manufactured using stranded conductors

#### Integral shutter

No additional shuttering required on faceplates

#### Hardware Performance

Can be mixed and matched with other Hardware certified copper cable and patchcords

#### 360° Metallic shielding

Immunity to alien crosstalk No need to test ANEXT on the field, dramatic reduction in testing time

Tested and approved for Power over Ethernet applications (PoE/PoE+/4PPoE) according to IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt up to 90W



# Everon<sup>™</sup> Copper Datacom V250 Shielded VOLOCK6SHV, V250S, RJ45 Vol, Cat6, BP480, White

CORNING

# Specifications

General Specifications	
Category	6
Standards	
Approvals and Listings	ISO/ IEC 11801 Edition 2. Arm 1-2, EN 50173-1, ANSI/ TIA/ EIA-568-C.2-2009, IEC 60512-99-001, ISO/IEC 60603-7-5
Design and Test Criteria	IEEE 802.3 1GBASE-T, IEEE 802.3at

Environmental Conditions	
Temperature Range, Operation	-10 $^\circ\text{C}$ to 60 $^\circ\text{C}$ (14 $^\circ\text{F}$ to 140 $^\circ\text{F}$ )

Design	
Housing Material	Metal
Color	White
Conductor	24 - 22 AWG
Jack Type	RJ45 - 8/8
Insulation diameter max.	1.6 mm (0.06 in)
Number of Stranded Wires	7

Mechanical Specifications	
Contact surface	Gold, 1.27 µm
Reproducibility	Several times reusable
Solid Wire Diameter	0.5 mm to 0.65 mm (0.02 in to 0.03 in )
Stranded Wire Diameter	0.15 mm to 0.2 mm (0.01 in to 0.01 in )

# Everon<sup>™</sup> Copper Datacom V250 Shielded VOLOCK6SHV, V250S, RJ45 Vol, Cat6, BP480, White

# CORNING

Electrical Specifications	
Lead Through Resistance	< 200 MΩ
Insulation Resistance	> 500 MΩ
Voltage Rating (Maximum)	<75 VDC

Dimensions	
Length	38 mm (1.5 in)
Height	25 mm (0.98 in)
Width	18 mm (0.71 in)

Ordering Information	
Product Number	XF500006028
Packaging Method	Bulk / 1 big Box
Packing Weight	12.5 kg
Units per Delivery	480/1

# Everon<sup>™</sup> Copper Datacom V500S Shielded VOLOCK6ASNV, V500S, RJ45 Vol, Cat6A, BP480, White

### CORNING

# Part Number: XF500003546

The Everon™ Copper Datacom V500s module offers high system margins

for transmission of digital data signals for future applications in systems up to 10GbE according to the new class EA (ISO/IEC 11801 respectively Cat.6A (ANSI/TIA/ EIA 568B.2-10), EN 50173 and IEC 60603-7-51 (IEC 48B/1977/CDV). The module is also suitable for Power over Ethernet (PoE) applications in compliance with IEEE 802.3af and the new PoE Plus applications.

No special tools are required for either the termination of modules onto cables or the installation of the modules into outlets. The individual single shielding of the modules (in compliance to EN 50174) is absolutely necessary for these high-bit-rate applications.

### Features and Benefits

Fulfils the requirements for the 2 and 3 connector model according to E Class

3-Connector Permanent Link / Channel, unabhängig bestätigt

Suitable for EA Class applications according to ISO/IEC 11801 and EN 50173

Universal application in all modular VOL components

Quick and easy to install (compact design, only 3 individual components, no specific tools required)

Individual jack shielding by stable diecast housing

360° shield contact and cable strain-relief without cable tie

Captive dust cover

All components are certified as Category 6A according to ISO/IEC 11801

Certified by a vendor-independent and impartial test lab (GHMT AG); PVP Certificate

Tested and approved for Power over Ethernet applications (PoE/PoE+/4PPoE) according to IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt up to 90W



# Everon<sup>™</sup> Copper Datacom V500S Shielded VOLOCK6ASNV, V500S, RJ45 Vol, Cat6A, BP480, White

# CORNING

### Specifications

General Specifications	
Category	6A
Standards	
Approvals and Listings	ISO/ IEC 11801 Edition 2.2, EN 50173-1 ,ANSI/ TIA/ EIA-568-C.2-2009,ISO/IEC 60512-99-01
Design and Test Criteria	IEEE 802.3 10GBASE-T, IEEE 802.3at - PoE+

Environmental Conditions			
Temperature Range, Operation	-10 °C to 60 °C	(14 °F to 140 °F	)

Design	
Housing Material	Metal
Color	White
Conductor	24 - 22 AWG
Jack Type	RJ45 - 8/8
Insulation diameter max.	1.6 mm (0.06 in)
Number of Stranded Wires	7

Mechanical Specifications	
Contact surface	Gold, 1.27 µm
Reproducibility	Several times reusable
Solid Wire Diameter	0.5 mm to 0.65 mm (0.02 in to 0.03 in )
Stranded Wire Diameter	0.15 mm to 0.2 mm (0.01 in to 0.01 in )

# Everon<sup>™</sup> Copper Datacom V500S Shielded VOLOCK6ASNV, V500S, RJ45 Vol, Cat6A, BP480, White

# CORNING

Electrical Specifications	
Lead Through Resistance	< 200 MΩ
Insulation Resistance	> 500 MΩ
Voltage Rating (Maximum)	<75 VDC

Dimensions	
Length	34 mm (1.34 in)
Height	23 mm (0.91 in)
Width	18 mm (0.71 in)

Ordering Information	
Product Number	XF500003546
Packaging Method	Bulk / 1 big Box
Packing Weight	17.5 kg
Units per Delivery	480/1

# Everon<sup>™</sup> Copper Datacom V500S Shielded VOLOCK6ASN8, V500S, RJ45 Vol, Cat6A, Bag / 8, White

### CORNING

# Part Number: XF500003553

The Everon™ Copper Datacom V500s module offers high system margins

for transmission of digital data signals for future applications in systems up to 10GbE according to the new class EA (ISO/IEC 11801 respectively Cat.6A (ANSI/TIA/ EIA 568B.2-10), EN 50173 and IEC 60603-7-51 (IEC 48B/1977/CDV). The module is also suitable for Power over Ethernet (PoE) applications in compliance with IEEE 802.3af and the new PoE Plus applications.

No special tools are required for either the termination of modules onto cables or the installation of the modules into outlets. The individual single shielding of the modules (in compliance to EN 50174) is absolutely necessary for these high-bit-rate applications.

### Features and Benefits

Fulfils the requirements for the 2 and 3 connector model according to E Class

3-Connector Permanent Link / Channel, unabhängig bestätigt

Suitable for EA Class applications according to ISO/IEC 11801 and EN 50173

Universal application in all modular VOL components

Quick and easy to install (compact design, only 3 individual components, no specific tools required)

Individual jack shielding by stable diecast housing

360° shield contact and cable strain-relief without cable tie

Captive dust cover

All components are certified as Category 6A according to ISO/IEC 11801

Certified by a vendor-independent and impartial test lab (GHMT AG); PVP Certificate

Tested and approved for Power over Ethernet applications (PoE/PoE+/4PPoE) according to IEEE 802.3af, IEEE 802.3at and IEEE 802.3bt up to 90W



# Everon<sup>™</sup> Copper Datacom V500S Shielded VOLOCK6ASN8, V500S, RJ45 Vol, Cat6A, Bag / 8, White

CORNING

# Specifications

General Specifications	
Category	6A
Standards	
Approvals and Listings	ISO/ IEC 11801 Edition 2.2, EN 50173-1 ,ANSI/ TIA/ EIA-568-C.2-2009,ISO/IEC 60512-99-01
Design and Test Criteria	IEEE 802.3 10GBASE-T, IEEE 802.3at - PoE+

Environmental Conditions			
Temperature Range, Operation	-10 °C to 60 °C	(14 °F to 140 °F	)

Design	
Housing Material	Metal
Color	White
Conductor	24 - 22 AWG
Jack Type	RJ45 - 8/8
Insulation diameter max.	1.6 mm (0.06 in)
Number of Stranded Wires	7

Mechanical Specifications	
Contact surface	Gold, 1.27 µm
Reproducibility	Several times reusable
Solid Wire Diameter	0.5 mm to 0.65 mm (0.02 in to 0.03 in )
Stranded Wire Diameter	0.15 mm to 0.2 mm (0.01 in to 0.01 in )

# Everon<sup>™</sup> Copper Datacom V500S Shielded VOLOCK6ASN8, V500S, RJ45 Vol, Cat6A, Bag / 8, White

# CORNING

Electrical Specifications	
Lead Through Resistance	< 200 MΩ
Insulation Resistance	> 500 MΩ
Voltage Rating (Maximum)	<75 VDC

Dimensions	
Length	34 mm (1.34 in)
Height	23 mm (0.91 in)
Width	18 mm (0.71 in)

Ordering Information	
Product Number	XF500003553
Packaging Method	Bag of 8 / 1 Box
Packing Weight	1.35 kg
Units per Delivery	48/1

# Sealed IDC Station Protectors Sealed, IDC, gas tube protection

### CORNING

#### Part Number: USP-123-1

The Corning USP <sup>™</sup> 123 series insulation displacement connection (IDC) station protector is designed to provide superior surge protection in any customer premises application. Utilizing a state-of-the-art, heavy duty threeelement gas tube with an innovative "no backup air gap" design, the USP 123 offers longer service life and reduced maintenance costs. Using the latest in environmentallysealed insulation displacement connection (IDC) technology, the USP 123 is available in two versions: TandAction<sup>™</sup> hybrid station protector for VDSL-rated applications, and stand alone gas tube (no backup air gap) for standard category 5 compliance.

The robust wire guide easily directs standard 22-24 AWG wiring to each tip and ring channel assuring straight through insertion and a solid connection. The wire guide can be removed for terminating larger gauge wires up to 18.5 AWG (F-drop). Highly visible, gel-sealed test contacts allow easy testing and troubleshooting using standard test clips. Two ground clips provide multiple mounting orientations for maximum flexibility in any application.

### **Features and Benefits**

# Heavy-duty 3-element gas tube

High-energy capability with balanced operation

### High-speed broadband compatible

Ideal for broadband applications (ADSL/VDSL)

#### Complies with multiple industry standards

Ensures compatibility across multiple xDSL operating platforms

#### **Gel-sealed IDC terminals**

Provides maximum corrosion protection and allows multiple re-terminations of subscriber lead wires

#### Robust wire guide

Facilitates straight-through insertion of 22-24 AWG drop wire

#### Clear terminal cap

Highly visible wire ports for ease of wire insertion and visible wire insertion depth assures proper connection



# Sealed IDC Station Protectors Sealed, IDC, gas tube protection

# CORNING

# Specifications

Standards	
Approvals and Listings	RUS PE-80
Category 5	Meets Category 5 Transmission Requirements
UL-Listed	Listed to UL 497

Electrical Characteristics	
Capacitance	3 pF typical at 1 Vrms (1 MHz) 0 VDC bias, 1 pF typical line to line

Dimensions	
Height	3.96 cm
Width	3.96 cm
Depth	1.78 cm

Shipping Dimensions	
Height	358.9 cm
Width	251 cm
Depth	130.3 cm

Ordering Information	
Product Number	USP-123-1
EAN Code	4056418189055
Units per Delivery	100/1

### Sealed IDC Station Protectors Sealed, IDC, TandAction™ Hybrid protection

### CORNING

### Part Number: USP-123-3

The Corning USP <sup>™</sup> 123 series insulation displacement connection (IDC) station protector is designed to provide superior surge protection in any customer premises application. Utilizing a state-of-the-art, heavy duty threeelement gas tube with an innovative "no backup air gap" design, the USP 123 offers longer service life and reduced maintenance costs. Using the latest in environmentallysealed insulation displacement connection (IDC) technology, the USP 123 is available in two versions: TandAction<sup>™</sup> hybrid station protector for VDSL-rated applications, and stand alone gas tube (no backup air gap) for standard category 5 compliance.

The robust wire guide easily directs standard 22-24 AWG wiring to each tip and ring channel assuring straight through insertion and a solid connection. The wire guide can be removed for terminating larger gauge wires up to 18.5 AWG (F-drop). Highly visible, gel-sealed test contacts allow easy testing and troubleshooting using standard test clips. Two ground clips provide multiple mounting orientations for maximum flexibility in any application.

### **Features and Benefits**

### Heavy-duty 3-element gas tube

High-energy capability with balanced operation

### High-speed broadband compatible

Ideal for broadband applications (ADSL/VDSL)

### Complies with multiple industry standards

Ensures compatibility across multiple xDSL operating platforms

### **Gel-sealed IDC terminals**

Provides maximum corrosion protection and allows multiple re-terminations of subscriber lead wires

### Robust wire guide

Facilitates straight-through insertion of 22-24 AWG drop wire

### Clear terminal cap

Highly visible wire ports for ease of wire insertion and visible wire insertion depth assures proper connection



# Sealed IDC Station Protectors Sealed, IDC, TandAction™ Hybrid protection

# CORNING

Standards	
Approvals and Listings	RUS PE-80
Category 5	Meets Category 5 Transmission Requirements
UL-Listed	Listed to UL 497

Electrical Characteristics	
Capacitance	3 pF typical at 1 Vrms (1 MHz) 0 VDC bias, 14 pF typical line to line $% \left( 1 + \frac{1}{2} \right) = 0$

Dimensions	
Height	3.96 cm
Width	3.96 cm
Depth	1.78 cm

Shipping Dimensions	
Height	358.9 cm
Width	251 cm
Depth	130.3 cm

Ordering Information	
Product Number	USP-123-3
EAN Code	4056418189048
Units per Delivery	100/1

### Station Protector Housings 12-line housing, 12 USP-123-3 Sealed IDC TandAction™ hybrid protectors

### CORNING

### Part Number: CP-12-00ZG12

The CP series is a family of station protector housings designed for one- to 12-line outdoor installations. The CP series enclosures provide superior protection against ultraviolet (UV) degradation and extreme temperature fluctuations, while minimizing moisture penetration for overall weatherability enhancement.

The CP series station protector housings feature Corning USP-123-3 Sealed Insulation Displacement Connection (IDC) TandAction™ hybrid protectors.

The CP-200 station protector housings can accommodate up to two station protectors; the CP-600 accommodates up to six station protectors, and the CP-12 will hold up to 12 Sealed IDC TandAction hybrid protectors.

The compact size and aesthetic appearance of the CP series station protector housings make them ideal for residential installations.

### Features and Benefits

### Environmentally hardened outdoor housing for wallor conduit-mounting

Withstands extreme environmental conditions

### Enclosures have overlapping edges Provides excellent environmental protection from water and sand/dust

### Compact, low-profile enclosure

Allows installation and access in small spaces

### Slide-in grommet

Allows telco and premises wire entry and facilitates cable routing





Station Protector Housings 12-line housing, 12 USP-123-3 Sealed IDC TandAction™ hybrid protectors

CORNING



General Specifications	
Product Type	Network Interface Devices (NIDs)

Dimensions	
Height	36.3 cm
Width	33.8 cm
Depth	10.2 cm

Shipping Dimensions	
Height	493 mm (19.41 in)
Width	368 mm (14.49 in)
Depth	338 mm (13.31 in)

## Station Protector Housings 12-line housing, 12 USP-123-3 Sealed IDC TandAction™ hybrid protectors

Ordering Information	
Product Number	CP-12-00ZG12
EAN Code	4056418181257
Package Contents	12-line housing, 12 SPD 356-XY TandAction™ Hybrid Screw Terminal Station Protectors
Shipping Weight	10.5 kg
Units per Delivery	5/1
Weight	2 kg

### Station Protector Housings 6-line housing, 2 USP-123-3 Sealed IDC TandAction™ hybrid protectors

### CORNING

### Part Number: CP-600-2ZG0

The CP series is a family of station protector housings designed for one- to 12-line outdoor installations. The CP series enclosures provide superior protection against ultraviolet (UV) degradation and extreme temperature fluctuations, while minimizing moisture penetration for overall weatherability enhancement.

The CP series station protector housings feature Corning USP-123-3 Sealed Insulation Displacement Connection (IDC) TandAction™ hybrid protectors.

The CP-200 station protector housings can accommodate up to two station protectors; the CP-600 accommodates up to six station protectors, and the CP-12 will hold up to 12 Sealed IDC TandAction hybrid protectors.

The compact size and aesthetic appearance of the CP series station protector housings make them ideal for residential installations.

### **Features and Benefits**

### Environmentally hardened outdoor housing for wallor conduit-mounting

Withstands extreme environmental conditions

### Enclosures have overlapping edges Provides excellent environmental protection from water and sand/dust

### Compact, low-profile enclosure

Allows installation and access in small spaces

### Slide-in grommet

Allows telco and premises wire entry and facilitates cable routing





## Station Protector Housings 6-line housing, 2 USP-123-3 Sealed IDC TandAction™ hybrid protectors

General Specifications	
Product Type	Network Interface Devices (NIDs)
Dimensions	
Height	21.6 cm
Width	20.3 cm
Depth	6.4 cm

Shipping Dimensions	
Height	406 mm (15.98 in)
Width	406 mm (15.98 in)
Depth	229 mm (9.02 in)

Ordering Information	
Product Number	CP-600-2ZG0
EAN Code	4056418194066
Package Contents	6-line Station Protector Housing equipped with 2 USP-123-3 Sealed IDC TandAction™ hybrid protectors
Shipping Weight	10.5 kg
Units per Delivery	14/1
Weight	0.7 kg

### Station Protector Housings 6-line housing, 6 USP-123-3 Sealed IDC TandAction™ hybrid protectors

### CORNING

### Part Number: CP-600-6ZG0

The CP series is a family of station protector housings designed for one- to 12-line outdoor installations. The CP series enclosures provide superior protection against ultraviolet (UV) degradation and extreme temperature fluctuations, while minimizing moisture penetration for overall weatherability enhancement.

The CP series station protector housings feature Corning USP-123-3 Sealed Insulation Displacement Connection (IDC) TandAction™ hybrid protectors.

The CP-200 station protector housings can accommodate up to two station protectors; the CP-600 accommodates up to six station protectors, and the CP-12 will hold up to 12 Sealed IDC TandAction hybrid protectors.

The compact size and aesthetic appearance of the CP series station protector housings make them ideal for residential installations.

### Features and Benefits

### Environmentally hardened outdoor housing for wallor conduit-mounting

Withstands extreme environmental conditions

### Enclosures have overlapping edges Provides excellent environmental protection from water and sand/dust

### Compact, low-profile enclosure

Allows installation and access in small spaces

### Slide-in grommet

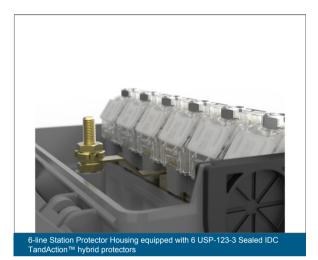
Allows telco and premises wire entry and facilitates cable routing





Station Protector Housings 6-line housing, 6 USP-123-3 Sealed IDC TandAction™ hybrid protectors

CORNING



General Specifications	
Product Type	Network Interface Devices (NIDs)

Dimensions	
Height	21.6 cm
Width	20.3 cm
Depth	6.4 cm

Shipping Dimensions	
Height	419 mm (16.5 in)
Width	401 mm (15.79 in)
Depth	216 mm (8.5 in)

## Station Protector Housings 6-line housing, 6 USP-123-3 Sealed IDC TandAction™ hybrid protectors

# CORNING

Ordering Information	
Product Number	CP-600-6ZG0
EAN Code	4056418188799
Package Contents	6-line Station Protector Housing equipped with 6 USP-123-3 Sealed IDC TandAction™ hybrid protectors
Shipping Weight	12.1 kg
Units per Delivery	14/1
Weight	0.9 kg

# Indoor Flush-Mount DSL Splitter Tier 2 data circuitry, RJ-11 voice port and RJ-14 data port

### CORNING

### Part Number: SPS-IF0-SR1

The indoor flush-mount digital subscriber line (DSL) splitter is designed for use at the subscriber premises and allows DSL services to be used in conjunction with plain old telephone service (POTS) on the same subscriber line. DSL is a broadband technology that provides high-bit-rate digital information over telephone subscriber lines. The POTS splitter is a passive device (not powered) that prevents interference between analog POTS devices (telephones, fax machines, analog modems) and DSL service. This device splits the combined POTS and DSL services on two RJ-14 jacks labeled "VOICE" and "DSL." Additional screw terminals for wiring the POTS and DSL lines are provided for connection to the wiring within the home.

The indoor flush-mount DSL splitter is compatible with ADSL, ADSL2+, VDSL and VDSL2, providing high-speed data access to the subscriber.

This device can be mounted by two methods – wall mounted on a single-gang electrical box (2 x 4 in) or directly into an interior wall.

### **Features and Benefits**

### Multiple indoor mounting options

Can be mounted flush directly into an interior wall or an electrical box

### Screw terminal connections

Allows phone and data line to be wired separately within the home

# Tier 3 configuration provides flying leads for secondary voice and DSL connections

Allows additional voice and/or DSL service for bonded pair deployments

# Indoor Flush-Mount DSL Splitter Tier 2 data circuitry, RJ-11 voice port and RJ-14 data port

## CORNING

Standards	
Federal Communications Commission Standard	FCC Part 68
Remote End POTS Splitter Requirements	ATIS-0600016.2008
Dynamic Testing of Splitters and In-Line Filters with xDSLTransceivers	acc. TR-127 (broadband forum)
ATIS	ATIS-0600016.2008
CS03	Listed

Electrical Characteristics	
Capacitance	≤ 1 nF at 20 Hz to 30 Hz to ground, POTS Port
Return Loss - ERL	> 6 dB
Return Loss - SRL-H	> 3 dB
Return Loss - SRL-L	> 5 dB
Insertion Loss - Short Loop	≤ 1 dB, ZTc = 900, ZTr = 600, 1004 Hz
Insertion Loss - Long Loop	≤ 0.75 dB, ZTc = 900, ZTr = 600, 1004 Hz
Return Loss - SRL-H Single Frequency	2 dB

Dimensions	
Height	4.9 cm
Width	7.1 cm
Depth	11.7 cm

Shipping Dimensions	
Height	406 cm
Width	254 cm
Depth	203 cm

# Indoor Flush-Mount DSL Splitter Tier 2 data circuitry, RJ-11 voice port and RJ-14 data port

# CORNING

Ordering Information	
Product Number	SPS-IF0-SR1
EAN Code	4056418199634
Units per Delivery	35/1

## Indoor Wall-Mount ADSL/POTS Splitter Tier 2 data circuitry, RJ-11 jacks including center jack

### CORNING

### Part Number: SPS-IW0-SR1

Corning ADSL POTS indoor wall-mount splitter is designed for use at the subscriber premises. ADSL represents Asymmetrical Digital Subscriber Line, which provides highbit-rate digital information over telephone subscriber lines. The POTS (plain old telephone service) splitter is a passive device, which allows both voice and data signals to travel over the telephone line. This device splits the combined signal to provide separate outputs for both phone and data in the form of female jacks. Screw terminals for wiring the phone and data lines are provided for connection to the wiring within the home.

The indoor wall-mount splitter can be mounted in a variety of methods – wall-mounted on a single-gang electrical box ( $2 \times 4$  in), as a wall-mounted stand-alone unit, wall-mounted beside an INI (indoor network interface), or used as a desktop unit.

### Features and Benefits

### Multiple indoor mounting options

Can be mounted on a wall in an electrical box, beside an existing indoor NID, or as a stand-alone unit, or inside a wiring closet

Jacks and wiring terminals for each port Provides separate outputs for voice and data

# Indoor Wall-Mount ADSL/POTS Splitter Tier 2 data circuitry, RJ-11 jacks including center jack

# CORNING

Standards	
Federal Communications Commission Standard	FCC Part 68
Remote End POTS Splitter Requirements	ATIS-0600016.2008

Environmental Conditions	
Power Cross	Telcordia GR-1089-CORE First and Second Level AC Power Fault Immunity
Lightning Surge	Telcordia GR-1089-CORE Level 1 and Level 2 surge
Temperature Range, Operation	-40 °C to 65 °C (-40 °F to 149 °F )
Relative Humidity	0 % to 95 % Non-condensing

Electrical Characteristics	
Capacitance	$\leq$ 1 nF at 20 Hz to 30 Hz to ground, POTS Port
Return Loss - ERL	> 6 dB
Return Loss - SRL-H	> 3 dB
Return Loss - SRL-L	> 5 dB
Insertion Loss - Short Loop	≤ 1 dB, ZTc = 900, ZTr = 600, 1004 Hz
Insertion Loss - Long Loop	≤ 0.75 dB, ZTc = 900, ZTr = 600, 1004 Hz
Return Loss - SRL-H Single Frequency	2 dB

Dimensions	
Height	4.9 cm
Width	7.1 cm
Depth	11.7 cm

# Indoor Wall-Mount ADSL/POTS Splitter Tier 2 data circuitry, RJ-11 jacks including center jack

# CORNING

Shipping Dimensions	
Height	406 cm
Width	254 cm
Depth	203 cm

Ordering Information	
Product Number	SPS-IW0-SR1
EAN Code	4056418199627
Units per Delivery	35/1

# Universal Line Module DSL Splitter Tier 3 DSL video-enhanced circuitry, TandAction™ Hybrid USP Protector

### CORNING

### Part Number: ULM-DSL-33U1

The IDC universal line module ADSL/VDSL splitter combines the best of outside plant technology with superior DSL performance. The DSL splitter includes the Corning universal circuit that meets multiple DSL requirements while delivering compatibility with all industry-standard NIDs. The Corning modular design allows the protector to easily separate from the splitter for mounting inside any NID application. This splitter offers the best of DSL performance in any outside plant application.

### Features and Benefits

### Instant single-position snap-in line module

Allows quick and easy line module expansions

# Environmentally-sealed, tool-less IDC terminations with Gas Tube Station Protector

Provides maximum heavy-duty protection, termination and performance in one compact module unit

### Additional secondary surge protection

Provides higher level of defense in the event of additional metallic surges

### Includes ring-trip enhancements

Provides maximum video performance in Internet Protocol Television (IPTV) deployments



# Universal Line Module DSL Splitter Tier 3 DSL video-enhanced circuitry, TandAction™ Hybrid USP Protector

## CORNING

Standards	
Federal Communications Commission Standard	FCC Part 68
Remote End POTS Splitter Requirements	ATIS-0600016.2008
Approvals and Listings	Meets Telcordia GR-1089 first- and second-level lightning and AC power fault criteria, National Electrical Code® (NEC®) OFNP, CSA FT-6, ICEA S-83-596, UL Listed to United States and Canadian safety standards
CS03	Listed
Design and Test Criteria	Sealed design complies with Telcordia GR-49-CORE and TR- NWT-00195 maximum environmental protection

Environmental Conditions	
Relative Humidity	0 % to 95 % Non-condensing
Power Cross	Telcordia GR-1089-CORE First and Second Level AC Power Fault Immunity
Lightning Surge	Telcordia GR-1089-CORE Level 1 and Level 2 surge
Temperature Range, Operation	-40 $^\circ\text{C}$ to 65 $^\circ\text{C}$ (-40 $^\circ\text{F}$ to 149 $^\circ\text{F}$ )

Electrical Characteristics	
Capacitance	≤ 1 nF at 20 Hz to 30 Hz to ground, POTS Port
Return Loss - ERL	> 6 dB
Return Loss - SRL-H	> 3 dB
Return Loss - SRL-L	> 5 dB
Insertion Loss - Short Loop	≤ 1 dB, ZTc = 900, ZTr = 600, 1004 Hz
Insertion Loss - Long Loop	≤ 0.75 dB, ZTc = 900, ZTr = 600, 1004 Hz
Return Loss - SRL-H Single Frequency	2 dB

Dimensions	
Height	254 mm (10 in)

# Universal Line Module DSL Splitter Tier 3 DSL video-enhanced circuitry, TandAction™ Hybrid USP Protector

## CORNING

Dimensions	
Width	89 mm (3.5 in)
Depth	57 mm (2.24 in)

Shipping Dimensions	
Height	259 mm (10.2 in)
Width	206 mm (8.11 in)
Depth	76 mm (2.99 in)

Ordering Information	
Product Number	ULM-DSL-33U1
EAN Code	4056418187105
Package Contents	Universal Line Module DSL Splitter, Tier 3 DSL video-enhan- ced circuitry, TandAction™ Hybrid Universal Station Protector
Shipping Weight	1.5 kg
Units per Delivery	10/1

# Universal Line Module DSL Splitter Tier 3 DSL video-enhanced circuitry

### CORNING

### Part Number: ULM-DSL-U3U1

The IDC universal line module ADSL/VDSL splitter combines the best of outside plant technology with superior DSL performance. The DSL splitter includes the Corning universal circuit that meets multiple DSL requirements while delivering compatibility with all industry-standard NIDs. The Corning modular design allows the protector to easily separate from the splitter for mounting inside any NID application. This splitter offers the best of DSL performance in any outside plant application.

### Features and Benefits

### Instant single-position snap-in line module

Allows quick and easy line module expansions

# Environmentally-sealed, tool-less IDC terminations with Gas Tube Station Protector

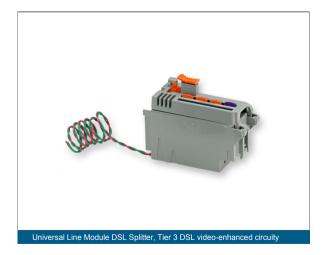
Provides maximum heavy-duty protection, termination and performance in one compact module unit

### Additional secondary surge protection

Provides higher level of defense in the event of additional metallic surges

### Includes ring-trip enhancements

Provides maximum video performance in Internet Protocol Television (IPTV) deployments



# Universal Line Module DSL Splitter Tier 3 DSL video-enhanced circuitry

# CORNING

Standards	
Federal Communications Commission Standard	FCC Part 68
Remote End POTS Splitter Requirements	ATIS-0600016.2008
Approvals and Listings	Meets Telcordia GR-1089 first- and second-level lightning and AC power fault criteria, National Electrical Code® (NEC®) OFNP, CSA FT-6, ICEA S-83-596, UL Listed to United States and Canadian safety standards
CS03	Listed
Design and Test Criteria	Sealed design complies with Telcordia GR-49-CORE and TR- NWT-00195 maximum environmental protection

Environmental Conditions	
Relative Humidity	0 % to 95 % Non-condensing
Power Cross	Telcordia GR-1089-CORE First and Second Level AC Power Fault Immunity
Lightning Surge	Telcordia GR-1089-CORE Level 1 and Level 2 surge
Temperature Range, Operation	-40 $^\circ\text{C}$ to 65 $^\circ\text{C}$ (-40 $^\circ\text{F}$ to 149 $^\circ\text{F}$ )

Electrical Characteristics	
Capacitance	≤ 1 nF at 20 Hz to 30 Hz to ground, POTS Port
Return Loss - ERL	> 6 dB
Return Loss - SRL-H	> 3 dB
Return Loss - SRL-L	> 5 dB
Insertion Loss - Short Loop	≤ 1 dB, ZTc = 900, ZTr = 600, 1004 Hz
Insertion Loss - Long Loop	≤ 0.75 dB, ZTc = 900, ZTr = 600, 1004 Hz
Return Loss - SRL-H Single Frequency	2 dB

Dimensions	
Height	254 mm (10 in)

# Universal Line Module DSL Splitter Tier 3 DSL video-enhanced circuitry

## CORNING

Dimensions	
Width	89 mm (3.5 in)
Depth	57 mm (2.24 in)

Shipping Dimensions	
Height	259 mm (10.2 in)
Width	206 mm (8.11 in)
Depth	76 mm (2.99 in)

Ordering Information	
Product Number	ULM-DSL-U3U1
EAN Code	4056418189109
Package Contents	Universal Line Module DSL Splitter, Tier 3 DSL video-enhan- ced circuitry, TandAction™ Hybrid Universal Station Protector
Shipping Weight	1.5 kg
Units per Delivery	10/1

# ADSL/VDSL Adjunct POTS Splitter 7600 and 9600 NID Footprint

### CORNING

### Part Number: SPS-SA1-SR1

The Corning ADSL/VDSL adjunct POTS splitter is an upgrade of Corning's popular ADSL2+ SLM adjunct POTS splitter. The splitter provides passive electronics to separate data and voice signals at the subscriber premises in a network interface device (NID). The upgraded circuit design offers full VDSL compliance up to 12 MHz, as well as backward compatibility with ADSL and ADSL2+ systems. The ADSL/VDSL adjunct POTS splitter fits in the space of a single-line module and works in conjunction with the existing line module in the NID, reducing service installation costs. The ADSL/VDSL adjunct POTS splitter is equipped with spade connectors for connecting to the existing line module and color-coded screws for voice connections.

### **Features and Benefits**

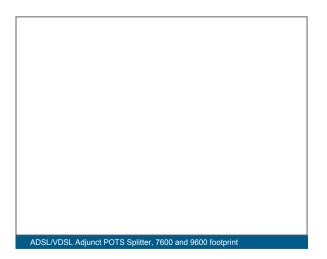
Single-position line module footprint Fits in most NIDs

Internal components are coated and encased in rugged, outdoor-rated plastic Withstands harsh environmental conditions

**Circuit compliance up to 12 MHz** Suitable for VDSL applications

### Self-contained splitter

May be installed in any outdoor or indoor application



# ADSL/VDSL Adjunct POTS Splitter 7600 and 9600 NID Footprint

# CORNING

Standards	
Federal Communications Commission Standard	FCC Part 68
Remote End POTS Splitter Requirements	ATIS-0600016.2008

Environmental Conditions	
Power Cross	Telcordia GR-1089-CORE First and Second Level AC Power Fault Immunity
Lightning Surge	Telcordia GR-1089-CORE Level 1 and Level 2 surge
Temperature Range, Operation	-40 °C to 65 °C (-40 °F to 149 °F )
Relative Humidity	0 % to 95 % Non-condensing

Electrical Characteristics	
Capacitance	≤ 1 nF at 20 Hz to 30 Hz to ground, POTS Port
Return Loss - ERL	> 6 dB
Return Loss - SRL-H	> 3 dB
Return Loss - SRL-L	> 5 dB
Insertion Loss - Short Loop	≤ 1 dB, ZTc = 900, ZTr = 600, 1004 Hz
Insertion Loss - Long Loop	≤ 0.75 dB, ZTc = 900, ZTr = 600, 1004 Hz
Return Loss - SRL-H Single Frequency	2 dB

Dimensions	
Height	5.1 cm
Width	2.5 cm
Depth	2.6 cm

# ADSL/VDSL Adjunct POTS Splitter 7600 and 9600 NID Footprint

# CORNING

Shipping Dimensions	
Height	406 cm
Width	254 cm
Depth	203 cm

# DSL Ancillary Housing Equipped with Tier 2 DSL data circuitry

### CORNING

### Part Number: SPS-H70-SR1

Corning ADSL/VDSL POTS splitter outdoor ancillary device is designed for use at the subscriber premises. DSL represents digital subscriber line, which provides high-bitrate digital information over telephone subscriber lines. The POTS (plain old telephone service) splitter is a passive device, which allows both voice and data signals to travel over the telephone line. This device splits the combined signal to provide separate outputs for both phone and data.

The H70 series combines rugged outside plant technology with superior DSL performance. The H70 series is a standalone splitter that is self-contained within its own weatherproof enclosure. Wiring terminals for each of the three splitter ports (Network, Voice, Data) make the H70 series versatile for wiring to any station protector or network interface device (NID).

The DSL splitter includes the Corning universal circuit that meets ADSL/2/2+, VDSL and VDSL2 requirements.

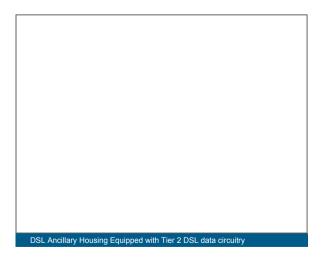
### **Features and Benefits**

Environmentally hardened outdoor housing for wallor conduit-mounting

Withstands extreme environmental conditions

Wiring terminals for each splitter port (network, voice, data)

Allows versatility in wiring to station protectors or NIDs



# DSL Ancillary Housing Equipped with Tier 2 DSL data circuitry

# CORNING

Standards	
Federal Communications Commission Standard	FCC Part 68
Remote End POTS Splitter Requirements	ATIS-0600016.2008

Environmental Conditions	
Power Cross	Telcordia GR-1089-CORE First and Second Level AC Power Fault Immunity
Lightning Surge	Telcordia GR-1089-CORE Level 1 and Level 2 surge
Temperature Range, Operation	-40 °C to 65 °C (-40 °F to 149 °F )
Relative Humidity	0 % to 95 % Non-condensing

Electrical Characteristics	
Capacitance	≤ 1 nF at 20 Hz to 30 Hz to ground, POTS Port
Return Loss - ERL	> 6 dB
Return Loss - SRL-H	> 3 dB
Return Loss - SRL-L	> 5 dB
Insertion Loss - Short Loop	≤ 1 dB, ZTc = 900, ZTr = 600, 1004 Hz
Insertion Loss - Long Loop	≤ 0.75 dB, ZTc = 900, ZTr = 600, 1004 Hz
Return Loss - SRL-H Single Frequency	2 dB

Dimensions	
Height	6.6 cm
Width	8.9 cm
Depth	12.2 cm

# DSL Ancillary Housing Equipped with Tier 2 DSL data circuitry

# CORNING

Shipping Dimensions	
Height	396 cm
Width	249 cm
Depth	216 cm

Ordering Information	
Product Number	SPS-H70-SR1
EAN Code	4056418199641
Units per Delivery	25/1

# PLC Splitters Raw Optical, 1x8, 250 $\mu m,$ Input, 250 $\mu m,$ Output

### CORNING

# Part Number: 80611326622

'Planar Light Circuit (PLC) Single-mode optical splitter 1x8 Single-mode Raw PLC Optical Splitters 250 μm Input/250 μm Output are provided in choices of port nµmber. Each splitter has an input fiber of 250 micron coated fiber ready for direct splicing to feeder cable. The output fibers are discrete individual 250 μm coated fibers ready for direct splicing to distribution or drop cables. These splitters offer an advantage in applications where single splicing is done without having to separate ribbons into individual fibers, minimizing possible fiber breaks. No connectorization is provided.

# PLC Splitters Raw Optical, 1x8, 250 $\mu m$ , Input, 250 $\mu m$ , Output

# CORNING

Design	
Pigtail Length	1.5 m (4.92 ft)
Splitter Module	1x8

Ordering Information	
Product Number	80611326622
EAN Code	51115261046
Units per Delivery	1/1

# Copper NID Grommets Kit, Grommet, Bottom Entry, UNID

## CORNING

Part Number: UNI-GRM-B

Corning offers various entry grommets to be sold separately as replacements for select Corning fiber NIDs. This allows damaged or lost grommets to be replaced as needed in the field. The grommets are easily fitted onto existing NID housings, and can be stocked as part of a field technician's parts supply.



# Copper NID Grommets Kit, Grommet, Bottom Entry, UNID

# CORNING

Dimensions	
Height	5.3 cm
Width	3.1 cm
Depth	0.8 cm

Shipping Dimensions	
Height	27.9 cm
Width	10.4 cm
Depth	10.9 cm

Ordering Information	
Product Number	UNI-GRM-B
EAN Code	4056418178219
Package Contents	Kit, Grommet, Bottom Entry, UNID
Units per Delivery	100/1

# Copper NID Grommets Kit, Grommet, Rear Entry, UNID

## CORNING

Part Number: UNI-GRM-R

Corning offers various entry grommets to be sold separately as replacements for select Corning fiber NIDs. This allows damaged or lost grommets to be replaced as needed in the field. The grommets are easily fitted onto existing NID housings, and can be stocked as part of a field technician's parts supply.





# Copper NID Grommets Kit, Grommet, Rear Entry, UNID

# CORNING

Dimensions	
Height	3.6 cm
Width	2.8 cm
Depth	0.8 cm

Shipping Dimensions	
Height	27.9 cm
Width	10.4 cm
Depth	10.9 cm

Ordering Information	
Product Number	UNI-GRM-R
EAN Code	4056418186627
Package Contents	Kit, Grommet, Bottom Entry, UNID
Units per Delivery	100/1

### FNI-NG Fiber Network Interface Device Enclosure Empty housing, KS screw

### CORNING

### Part Number: FNI-NG2-UUU10

The Corning OptiWay® fiber network interface device, NG series is the next generation in all-plastic enclosures specifically designed to house electronic circuits for the growing fiber-to-the-premises (FTTP) and broadband access markets. This state-of-the-art fiber NID is designed to either replace or supplement existing fiber or standard copper NIDs. Suitable for outdoor environments, the OptiWay FNI-NG utilizes a smaller enclosure in keeping with the shrinking size of today's electronics. The enclosure incorporates a hinged interface for access to OEM electronics. An optional integrated slack storage housing combines economy of space with the trend toward customers' preference for a sleek appearance on the side of the house. The OptiWay FNI-NG fiber NID accommodates Corning proven OptiTap® drop cable assembly adapter in a more seamless manner than earlier models, greatly reducing installation time and complexity.

### Features and Benefits

**Compact, modular unit with craft-friendly design** Minimizes installation time with room for future expansion

Flame-retardant, impact-resistant engineering-grade thermoplastic and hinged cover with padlock Maximum product lifetime and security

### Flexible

Design accommodates many applications

## FNI-NG Fiber Network Interface Device Enclosure Empty housing, KS screw

# CORNING

Dimensions	
Height	32.3 cm
Width	25.1 cm
Depth	9.7 cm

Shipping Dimensions	
Height	508 cm
Width	508 cm
Depth	33 cm

Ordering Information	
Product Number	FNI-NG2-UUU10
EAN Code	4056418193410
Units per Delivery	10/1

## Line Module Mounting Adapters CAC 7600 Adapter, allows Corning ULM to fit line module footprint of a CAC 7600-type NID

CORNING

Part Number: UNI-ADP-C

Corning offers various mounting adapters designed to allow installation compatibility among Corning and other industry-standard line modules and NIDs. Adapters are available that fit onto Corning universal line modules (ULMs) which allow them to fit into other existing NIDs; other adapters fit onto other industry-standard line modules, such as 7600- or PTD-types which allow them to fit into Corning universal NIDs (UNIDs).



## Line Module Mounting Adapters CAC 7600 Adapter, allows Corning ULM to fit line module footprint of a CAC 7600-type NID

General Specifications	
Product Type	Network Interface Devices (NIDs)
Dimensions	
Height	
Theight	1.5 cm
Width	1.5 cm

Shipping Dimensions	
Height	27.9 cm
Width	10.4 cm
Depth	10.9 cm

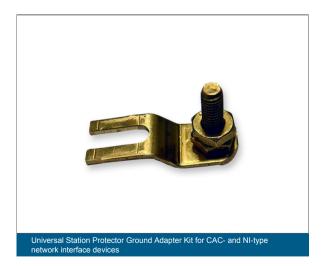
Ordering Information	
Product Number	UNI-ADP-C
EAN Code	4056418187020
Package Contents	Kit, Adapter, CAC 7600, allows Corning ULM to fit line module footprint of a 7600-type NID
Units per Delivery	1000/1

## Line Module Mounting Adapters Ground Adapter, metal ground extension for Corning Universal Station Protector in CAC- & PTD- NIDs

CORNING

#### Part Number: UNI-ADP-CX

Corning offers various mounting adapters designed to allow installation compatibility among Corning and other industry-standard line modules and NIDs. Adapters are available that fit onto Corning universal line modules (ULMs) which allow them to fit into other existing NIDs; other adapters fit onto other industry-standard line modules, such as 7600- or PTD-types which allow them to fit into Corning universal NIDs (UNIDs).



## Line Module Mounting Adapters Ground Adapter, metal ground extension for Corning Universal Station Protector in CAC- & PTD- NIDs

General Specifications	
Product Type	Network Interface Devices (NIDs)
Dimensions	
Height	4.6 cm
Width	1.3 cm

Shipping Dimensions	
Height	27.9 cm
Width	10.4 cm
Depth	10.9 cm

Ordering Information	
Product Number	UNI-ADP-CX
EAN Code	4056418178202
Package Contents	Kit, Ground Adapter, metal ground extension, allows Corning IDC Universal Station Protector (USP™) to be grounded in CAC- and NI-type NIDs
Units per Delivery	100/1

## Line Module Mounting Adapters PTD Adapter, allows Corning ULM to fit the line module footprint of NI-2000 PTD NIDs

CORNING

#### Part Number: UNI-ADP-P

Corning offers various mounting adapters designed to allow installation compatibility among Corning and other industry-standard line modules and NIDs. Adapters are available that fit onto Corning universal line modules (ULMs) which allow them to fit into other existing NIDs; other adapters fit onto other industry-standard line modules, such as 7600- or PTD-types which allow them to fit into Corning universal NIDs (UNIDs).



## Line Module Mounting Adapters PTD Adapter, allows Corning ULM to fit the line module footprint of NI-2000 PTD NIDs

CORNING

General Specifications	
Product Type	Network Interface Devices (NIDs)
Dimensions	
Height	6.9 cm
Width	2.5 cm
Depth	2.5 cm

Shipping Dimensions	
Height	25.4 cm
Width	25.4 cm
Depth	20.3 cm

Ordering Information	
Product Number	UNI-ADP-P
EAN Code	4056418181622
Package Contents	Kit, Adapter, PTD, allows Corning ULM to fit the line module footprint of NI-2000 NIDs that use PTD-type line modules
Units per Delivery	100/1

# Indoor/Outdoor 3-Line NID 1 IDC Universal Line Module, gas tube protector

## CORNING

#### Part Number: UNI-3003-11U1

The Corning UNI<sup>™</sup> 3003 Series universal network interface devices are environmentally sealed units that provide demarcation points for subscriber lines. The three-line housings feature molded, engineering-grade thermoplastic construction and have corrosion-resistant brass and stainless-steel internal components. They are ideal for indoor and outdoor use.

The design enables one-step TELCO access to protector modules and network connections. Its versatile internal layout accepts industry-standard line modules and protectors. A snap-in ground feature minimizes installation time and wiring errors to deliver significant operational savings. Heavy-duty rear- and bottom-entry grommets are included to optimize internal wiring management.

The UNI-3003 features a universal line module (ULM), with insulation displacement connections (IDCs) or screw terminals, and integrated protection. It also allows for subscriber termination and TELCO demarcation and testing in one compact, modular unit.

The IDC universal line module is available with ADSL/ VDSL splitter circuitry (ULM-DSL) that meets ADSL, ADSL2, ADSL2+, VDSL, and VDSL2 requirements and includes ring-trip enhancements to prevent video deployment errors. All ULMs have bypass switches that disengage the plug from the jack before wiring can be accessed – meeting UL safety standards.



## Features and Benefits

#### Sealed Universal Line Module with integrated TandAction™ Hybrid or 3-element gas tube Station Protector

Advanced IDC terminations with superior surge protection protect valuable electronics

#### Instant snap-in line module and one-step telco cover access

Allows quick and easy installation, maintenance and line module expansions

## Accepts current industry-standard line modules, protectors and DSL splitters

Universal footprint maximizes return on investment and reduces inventory complexity



## Indoor/Outdoor 3-Line NID 1 IDC Universal Line Module, gas tube protector

## CORNING

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
UL-Listed	Listed to UL 477 and 497

Dimensions	
Height	24.5 cm
Width	16.9 cm
Depth	7.6 cm

Shipping Dimensions	
Height	24.5 cm
Width	16.9 cm
Depth	7.6 cm

Ordering Information	
Product Number	UNI-3003-11U1
EAN Code	4056418186191
Package Contents	Universal Network Interface, 3-Line Housing; equipped with 1 Universal Line Module (ULM) with 3-Element Gas Tube Universal Station Protector (USP™), Sealed Insulation Displacement Connections (IDC), 3/8-in Hex Security
Shipping Weight	0.5 kg
Units per Delivery	10/1
Weight	0.48 kg

## Indoor/Outdoor 3-Line NID 1 IDC line module, DSL Tier 3 video-enhanced splitter, TandAction™ Hybrid IDC station protector

## CORNING

#### Part Number: UNI-3003-13D1

The Corning UNI<sup>™</sup> 3003 Series universal network interface devices are environmentally sealed units that provide demarcation points for subscriber lines. The three-line housings feature molded, engineering-grade thermoplastic construction and have corrosion-resistant brass and stainless-steel internal components. They are ideal for indoor and outdoor use.

The design enables one-step TELCO access to protector modules and network connections. Its versatile internal layout accepts industry-standard line modules and protectors. A snap-in ground feature minimizes installation time and wiring errors to deliver significant operational savings. Heavy-duty rear- and bottom-entry grommets are included to optimize internal wiring management.

The UNI-3003 features a universal line module (ULM), with insulation displacement connections (IDCs) or screw terminals, and integrated protection. It also allows for subscriber termination and TELCO demarcation and testing in one compact, modular unit.

The IDC universal line module is available with ADSL/ VDSL splitter circuitry (ULM-DSL) that meets ADSL, ADSL2, ADSL2+, VDSL, and VDSL2 requirements and includes ring-trip enhancements to prevent video deployment errors. All ULMs have bypass switches that disengage the plug from the jack before wiring can be accessed – meeting UL safety standards.

# 1 DC Universal Line Module (UILM). DSI. Tier 3 video.enhaped spiiter

## 1 IDC Universal Line Module (ULM), DSL Tier 3 video-enhanced splitter circuitry, TandAction™ Hybrid IDC Universal Station Protector (USP™)



## Features and Benefits

#### Sealed Universal Line Module with integrated TandAction™ Hybrid or 3-element gas tube Station Protector

Advanced IDC terminations with superior surge protection protect valuable electronics

## Instant snap-in line module and one-step telco cover access

Allows quick and easy installation, maintenance and line module expansions

## Accepts current industry-standard line modules, protectors and DSL splitters

Universal footprint maximizes return on investment and reduces inventory complexity

## Indoor/Outdoor 3-Line NID 1 IDC line module, DSL Tier 3 video-enhanced splitter, TandAction™ Hybrid IDC station protector

CORNING



## Specifications

Depth

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
UL-Listed	Listed to UL 477 and 497
Dimensions	
Height	24.5 cm
Width	16.9 cm

7.6 cm

## Indoor/Outdoor 3-Line NID 1 IDC line module, DSL Tier 3 video-enhanced splitter, TandAction™ Hybrid IDC station protector

Shipping Dimensions	
Height	9.64 cm
Width	6.34 cm
Depth	3 cm

Ordering Information	
Product Number	UNI-3003-13D1
EAN Code	4056418187211
Package Contents	1 IDC Universal Line Module (ULM), DSL Tier 3 video-en- hanced splitter circuitry, TandAction™ Hybrid IDC Universal Station Protector (USP™)
Shipping Weight	0.55 kg
Packing Weight	97975.95 g
Units per Delivery	10/1
Weight	0.48 kg

## Indoor/Outdoor 3-Line NID 1 IDC Universal Line Module, TandAction™ Hybrid Universal Station Protector

## CORNING

#### Part Number: UNI-3003-13U1

The Corning UNI<sup>™</sup> 3003 Series universal network interface devices are environmentally sealed units that provide demarcation points for subscriber lines. The three-line housings feature molded, engineering-grade thermoplastic construction and have corrosion-resistant brass and stainless-steel internal components. They are ideal for indoor and outdoor use.

The design enables one-step TELCO access to protector modules and network connections. Its versatile internal layout accepts industry-standard line modules and protectors. A snap-in ground feature minimizes installation time and wiring errors to deliver significant operational savings. Heavy-duty rear- and bottom-entry grommets are included to optimize internal wiring management.

The UNI-3003 features a universal line module (ULM), with insulation displacement connections (IDCs) or screw terminals, and integrated protection. It also allows for subscriber termination and TELCO demarcation and testing in one compact, modular unit.

The IDC universal line module is available with ADSL/ VDSL splitter circuitry (ULM-DSL) that meets ADSL, ADSL2, ADSL2+, VDSL, and VDSL2 requirements and includes ring-trip enhancements to prevent video deployment errors. All ULMs have bypass switches that disengage the plug from the jack before wiring can be accessed – meeting UL safety standards.



### Features and Benefits

#### Sealed Universal Line Module with integrated TandAction™ Hybrid or 3-element gas tube Station Protector

Advanced IDC terminations with superior surge protection protect valuable electronics

#### Instant snap-in line module and one-step telco cover access

Allows quick and easy installation, maintenance and line module expansions

## Accepts current industry-standard line modules, protectors and DSL splitters

Universal footprint maximizes return on investment and reduces inventory complexity

## Indoor/Outdoor 3-Line NID 1 IDC Universal Line Module, TandAction™ Hybrid Universal Station Protector

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
UL-Listed	Listed to UL 477 and 497
Dimensions	

Billichalona	
Height	24.5 cm
Width	16.9 cm
Depth	7.6 cm

Shipping Dimensions	
Height	24.5 cm
Width	16.9 cm
Depth	7.6 cm

Ordering Information	
Product Number	UNI-3003-13U1
EAN Code	4056418189062
Package Contents	1 IDC Universal Line Module (ULM), TandAction™ Hybrid IDC Universal Station Protector (USP™)
Shipping Weight	0.5 kg
Units per Delivery	10/1
Weight	0.48 kg

## 80611146509

Re-enterable Encapsulant 8882-55B

## General Specifications

Product Number	80611146509
EAN Code	51115145285

#### 80611482359

8882-1500 ft., 1648ml high-gel foil pack, re-enterable encapsulant China version

## **General Specifications**

Product Number

80611482359

# Indoor/Outdoor 12-Line NID 1 IDC Universal Line Module, TandAction™ Hybrid Station Protector

## CORNING

#### Part Number: NI-3012-01-3U12S

Corning NI-3000 series multiline network interface devices (NIDs) combines Corning universal line modules (ULMs) in enclosures suitable for indoor and outdoor mounting.

The NI-3012 housing has a capacity of 12 lines and is made of weather-resistant thermoplastic ideal for indoor or outdoor use.

The NI-3012 comes equipped with Corning IDC universal line module (ULM) and integrated IDC hybrid universal station protector (USP), combining overvoltage protection, environmentally sealed insulation displacement connections (IDCs), subscriber bridge and RJ-11 test jack in one compact unit.

The ULM has an innovative bypass switch design that physically disengages the plug from the jack prior to subscriber wiring access, fulfilling UL safety requirements. Highly visible orange levers and engraved line module doors clearly indicate each tip/ring slot, as well as connected and disconnected IDC positions.

## Features and Benefits

Environmentally sealed IDC terminations Withstands harsh environmental conditions

Instant snap-in line module Allows quick and easy line module expansions

**Compact**, **modular unit with craft-friendly design** Minimizes installation time with room for future expansion





## Indoor/Outdoor 12-Line NID 1 IDC Universal Line Module, TandAction™ Hybrid Station Protector

## CORNING

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
Dimensions	
Height	31.1 cm
Width	29.7 cm
Depth	11 cm

Ordering Information	
Product Number	NI-3012-01-3U12S
EAN Code	4056418179506
Package Contents	1 IDC Universal Line Module (ULM), TandAction™ Hybrid Station Protector (USP™)
Units per Delivery	1/1
Weight	2.3 kg

# Indoor/Outdoor 12-Line NID 6 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

## CORNING

#### Part Number: NI-3012-06-3U12S

Corning NI-3000 series multiline network interface devices (NIDs) combines Corning universal line modules (ULMs) in enclosures suitable for indoor and outdoor mounting.

The NI-3012 housing has a capacity of 12 lines and is made of weather-resistant thermoplastic ideal for indoor or outdoor use.

The NI-3012 comes equipped with Corning IDC universal line module (ULM) and integrated IDC hybrid universal station protector (USP), combining overvoltage protection, environmentally sealed insulation displacement connections (IDCs), subscriber bridge and RJ-11 test jack in one compact unit.

The ULM has an innovative bypass switch design that physically disengages the plug from the jack prior to subscriber wiring access, fulfilling UL safety requirements. Highly visible orange levers and engraved line module doors clearly indicate each tip/ring slot, as well as connected and disconnected IDC positions.

## Features and Benefits

Environmentally sealed IDC terminations Withstands harsh environmental conditions

Instant snap-in line module Allows quick and easy line module expansions

**Compact**, **modular unit with craft-friendly design** Minimizes installation time with room for future expansion



## Indoor/Outdoor 12-Line NID 6 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

## CORNING

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
Dimensions	
Height	31.1 cm
Width	29.7 cm
Depth	11 cm

Ordering Information	
Product Number	NI-3012-06-3U12S
EAN Code	4056418179490
Package Contents	IDC Universal Line Modules (ULM), TandAction™ Hybrid Station Protectors (USP™)
Units per Delivery	1/1
Weight	5.1 kg

# Indoor/Outdoor 12-Line NID 12 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

## CORNING

#### Part Number: NI-3012-12-3U12S

Corning NI-3000 series multiline network interface devices (NIDs) combines Corning universal line modules (ULMs) in enclosures suitable for indoor and outdoor mounting.

The NI-3012 housing has a capacity of 12 lines and is made of weather-resistant thermoplastic ideal for indoor or outdoor use.

The NI-3012 comes equipped with Corning IDC universal line module (ULM) and integrated IDC hybrid universal station protector (USP), combining overvoltage protection, environmentally sealed insulation displacement connections (IDCs), subscriber bridge and RJ-11 test jack in one compact unit.

The ULM has an innovative bypass switch design that physically disengages the plug from the jack prior to subscriber wiring access, fulfilling UL safety requirements. Highly visible orange levers and engraved line module doors clearly indicate each tip/ring slot, as well as connected and disconnected IDC positions.

## Features and Benefits

Environmentally sealed IDC terminations Withstands harsh environmental conditions

Instant snap-in line module Allows quick and easy line module expansions

**Compact, modular unit with craft-friendly design** Minimizes installation time with room for future expansion





## Indoor/Outdoor 12-Line NID 12 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

## CORNING

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
Dimensions	
Height	31.1 cm
Width	29.7 cm
Depth	11 cm

Ordering Information	
Product Number	NI-3012-12-3U12S
EAN Code	4056418179483
Package Contents	1 IDC Universal Line Module (ULM), TandAction™ Hybrid Station Protector (USP™)
Units per Delivery	1/1
Weight	2.3 kg

# Indoor/Outdoor Multi-Line NID 25 IDC Universal Line Modules, TandAction<sup>™</sup> Hybrid Station Protectors

## CORNING

#### Part Number: NI-3025-A3U1-A2

Corning NI-3000 series multiline network interface devices (NIDs) combines Corning universal line modules (ULMs) in enclosures suitable for indoor and outdoor mounting. Available in 25- or 50-line capacity, the housing is made of weather-resistant powder-coated aluminum ideal for indoor or outdoor use. The NI-3000 series multiline NIDs come equipped with Corning IDC universal line module (ULM) and integrated hybrid IDC universal station protector (USP), combining overvoltage protection, environmentally sealed insulation displacement connections (IDCs), subscriber bridge and RJ-11 test jack in one compact unit. The ULM has an innovative bypass switch design that physically disengages the plug from the jack prior to subscriber wiring access, fulfilling UL safety requirements. Highly visible orange levers and engraved line module doors clearly indicate each tip/ring slot, as well as connected and disconnected IDC positions.

## Features and Benefits

Environmentally sealed IDC terminations Withstands harsh environmental conditions

Instant snap-in line module Allows quick and easy line module expansions

**Compact**, **modular unit with craft-friendly design** Minimizes installation time with room for future expansion



## Indoor/Outdoor Multi-Line NID 25 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
Dimensions	
Height	58.4 cm
Width	42 cm
Depth	17 cm

Ordering Information	
Product Number	NI-3025-A3U1-A2
EAN Code	4056418178899
Package Contents	25 IDC Universal Line Modules (ULM), TandAction™ Hybrid Station Protectors (USP™)
Units per Delivery	1/1
Weight	6.8 kg

# Indoor/Outdoor Multi-Line NID 50 IDC Universal Line Modules, TandAction<sup>™</sup> Hybrid Station Protectors

## CORNING

#### Part Number: NI-3050-13U1-A2

Corning NI-3000 series multiline network interface devices (NIDs) combines Corning universal line modules (ULMs) in enclosures suitable for indoor and outdoor mounting. Available in 25- or 50-line capacity, the housing is made of weather-resistant powder-coated aluminum ideal for indoor or outdoor use. The NI-3000 series multiline NIDs come equipped with Corning IDC universal line module (ULM) and integrated hybrid IDC universal station protector (USP), combining overvoltage protection, environmentally sealed insulation displacement connections (IDCs), subscriber bridge and RJ-11 test jack in one compact unit. The ULM has an innovative bypass switch design that physically disengages the plug from the jack prior to subscriber wiring access, fulfilling UL safety requirements. Highly visible orange levers and engraved line module doors clearly indicate each tip/ring slot, as well as connected and disconnected IDC positions.

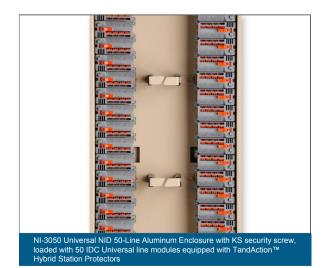
## Features and Benefits

Environmentally sealed IDC terminations Withstands harsh environmental conditions

Instant snap-in line module Allows quick and easy line module expansions

**Compact**, **modular unit with craft-friendly design** Minimizes installation time with room for future expansion





## Indoor/Outdoor Multi-Line NID 50 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

CORNING



General Specifications	
Product Type	Network Interface Devices (NIDs)
Standards	
Approvals and Listings	USDA Rural Development Programs
Dimensions	
Height	83.1 cm
Width	47.5 cm
Depth	31.1 cm

## Indoor/Outdoor Multi-Line NID 50 IDC Universal Line Modules, TandAction™ Hybrid Station Protectors

## CORNING

Ordering Information	
Product Number	NI-3050-13U1-A2
EAN Code	4056418178011
Package Contents	50 IDC Universal Line Modules (ULM), TandAction™ Hybrid Station Protectors (USP™)
Units per Delivery	1/1
Weight	13.5 kg

## Fiber Transition Housings, FTH-76S Slack routing spool with splice holder, ground post, 10 meters slack storage, hex screw

## CORNING

#### Part Number: FTH-76S-00200

Corning fiber transition housing (FTH) provides an optical demarcation and interconnection point for fiber-to-thepremises (FTTP) applications. Suitable for indoor or outdoor locations, the FTH provides physical protection for the transition between provider and customer, and facilitates system testing.

Fiber entering and exiting the housing may be secured using the internal lances with the tie wraps. Slack cable is held neatly and securely within the housing.

The housings are molded from an engineering grade thermoplastic selected to withstand harsh outdoor environments. These housings may be installed on a wall or secured to a vertical conduit. Unauthorized access is deterred by the security screw latch. For added security, a lock may be installed on the integrated locking hasp.

## Features and Benefits

#### Multiple fiber termination options

Supports SC APC and OptiTap® Connector adapters as well as fusion splicing

#### Slack storage

Provides up to 10 m of slack storage (dependent upon type of cable installed)

#### Weather-resistant housing design

Fiber and connections protected for long life



## Fiber Transition Housings, FTH-76S Slack routing spool with splice holder, ground post, 10 meters slack storage, hex screw

Standards	
Approvals and Listings	UL Listed to United States and Canadian safety standards
Design and Test Criteria	Tested to Telcordia standards

Design	
Fiber Management Configuration	Slack routing guides
Number of Adapters	0
Ground Configuration	Ground Post
Security Fasteners	Standard 3/8-in hex screw

Design - Adapter	
Adapter Type	Empty (No adapter installed)

Dimensions	
Height	25.9 cm
Width	21.6 cm
Depth	7.6 cm

Shipping Dimensions	
Height	41.9 cm
Width	38.1 cm
Depth	27.3 cm

Ordering Information	
Product Number	FTH-76S-00200

## Fiber Transition Housings, FTH-76S Slack routing spool with splice holder, ground post, 10 meters slack storage, hex screw

Ordering Information	
EAN Code	4056418171135
Package Contents	Fiber Transition Housing, FTH-76S, slack routing spool with splice holder, ground post, 10 meters slack storage, hex screw
Shipping Weight	5 kg
Units per Delivery	10/1
Weight	0.5 kg

# Fiber Transition Housings, FTH-76S 1 OptiTap® adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw

## CORNING

#### Part Number: FTH-76S-10200

Corning fiber transition housing (FTH) provides an optical demarcation and interconnection point for fiber-to-thepremises (FTTP) applications. Suitable for indoor or outdoor locations, the FTH provides physical protection for the transition between provider and customer, and facilitates system testing.

Fiber entering and exiting the housing may be secured using the internal lances with the tie wraps. Slack cable is held neatly and securely within the housing.

The housings are molded from an engineering grade thermoplastic selected to withstand harsh outdoor environments. These housings may be installed on a wall or secured to a vertical conduit. Unauthorized access is deterred by the security screw latch. For added security, a lock may be installed on the integrated locking hasp.

## Features and Benefits

#### Multiple fiber termination options

Supports SC APC and OptiTap® Connector adapters as well as fusion splicing

#### Slack storage

Provides up to 10 m of slack storage (dependent upon type of cable installed)

#### Weather-resistant housing design

Fiber and connections protected for long life



## Fiber Transition Housings, FTH-76S 1 OptiTap® adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw

Standards	
Approvals and Listings	UL Listed to United States and Canadian safety standards
Design and Test Criteria	Tested to Telcordia standards

Design	
Fiber Management Configuration	Slack routing spool with splice holder
Number of Adapters	1
Ground Configuration	Ground Post
Security Fasteners	Standard 3/8-in hex screw

Design - Adapter	
Adapter Type	OptiTap®

Dimensions	
Height	25.9 cm
Width	21.6 cm
Depth	7.6 cm

Shipping Dimensions	
Height	41.9 cm
Width	38.1 cm
Depth	27.3 cm

Ordering Information	
Product Number	FTH-76S-10200

## Fiber Transition Housings, FTH-76S 1 OptiTap® adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw

Ordering Information	
EAN Code	4056418151243
Package Contents	Fiber Transition Housing, FTH-76S, 1 OptiTap® adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw
Shipping Weight	5 kg
Units per Delivery	10/1
Weight	0.5 kg

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## Fiber Transition Housings, FTH-76S 1 SC Simplex adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw

## CORNING

#### Part Number: FTH-76S-A0200

Corning fiber transition housing (FTH) provides an optical demarcation and interconnection point for fiber-to-thepremises (FTTP) applications. Suitable for indoor or outdoor locations, the FTH provides physical protection for the transition between provider and customer, and facilitates system testing.

Fiber entering and exiting the housing may be secured using the internal lances with the tie wraps. Slack cable is held neatly and securely within the housing.

The housings are molded from an engineering grade thermoplastic selected to withstand harsh outdoor environments. These housings may be installed on a wall or secured to a vertical conduit. Unauthorized access is deterred by the security screw latch. For added security, a lock may be installed on the integrated locking hasp.

## Features and Benefits

#### Multiple fiber termination options

Supports SC APC and OptiTap® Connector adapters as well as fusion splicing

#### Slack storage

Provides up to 10 m of slack storage (dependent upon type of cable installed)

#### Weather-resistant housing design

Fiber and connections protected for long life



## Fiber Transition Housings, FTH-76S 1 SC Simplex adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw

Standards	
Approvals and Listings	UL Listed to United States and Canadian safety standards
Design and Test Criteria	Tested to Telcordia standards

Design	
Fiber Management Configuration	Slack routing spool with splice holder
Number of Adapters	1
Ground Configuration	Ground Post
Security Fasteners	Standard 3/8-in hex screw

Design - Adapter	
Adapter Type	SC APC

Dimensions	
Height	25.9 cm
Width	21.6 cm
Depth	7.6 cm

Shipping Dimensions	
Height	41.9 cm
Width	38.1 cm
Depth	27.3 cm

Ordering Information	
Product Number	FTH-76S-A0200

## Fiber Transition Housings, FTH-76S 1 SC Simplex adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw

Ordering Information	
EAN Code	4056418169996
Package Contents	Fiber Transition Housing, FTH-76S Housing, 1 SC Simplex adapter, slack routing spool & splice holder, ground post, 10 meters slack storage, hex screw
Shipping Weight	5 kg
Units per Delivery	10/1
Weight	0.5 kg

# Fiber NID Grommets Kit, Grommet, Large, Shrouded, FNI-NG

## CORNING

Part Number: FNI-NG-GRMT

Corning offers various entry grommets to be sold separately as replacements for select Corning fiber NIDs. This allows damaged or lost grommets to be replaced as needed in the field. The grommets are easily fitted onto existing NID housings, and can be stocked as part of a field technician's parts supply.



# Fiber NID Grommets Kit, Grommet, Large, Shrouded, FNI-NG

## CORNING

Dimensions	
Height	5.3 cm
Width	4.1 cm
Depth	2.3 cm

Shipping Dimensions	
Height	25.4 cm
Width	25.4 cm
Depth	20.3 cm

Ordering Information	
Product Number	FNI-NG-GRMT
EAN Code	4056418186511
Package Contents	Kit, Grommet, Large, Shrouded, FNI-NG
Units per Delivery	100/1

## Fiber NID Grommets Kit, Grommet, Small, FNI

## CORNING

Part Number: FNI-SM-GRMT

Corning offers various entry grommets to be sold separately as replacements for select Corning fiber NIDs. This allows damaged or lost grommets to be replaced as needed in the field. The grommets are easily fitted onto existing NID housings, and can be stocked as part of a field technician's parts supply.



## Fiber NID Grommets Kit, Grommet, Small, FNI

## CORNING

Dimensions	
Height	4.1 cm
Width	2 cm
Depth	0.8 cm

Shipping Dimensions	
Height	25.4 cm
Width	25.4 cm
Depth	20.3 cm

Ordering Information	
Product Number	FNI-SM-GRMT
EAN Code	4056418188553
Package Contents	Kit, Grommet, Small, FNI
Units per Delivery	1000/1

## Fiber NID Grommets Kit, Grommet, Large (1.75-in)

## CORNING

Part Number: KIT-GROMMET-FNI

Corning offers various entry grommets to be sold separately as replacements for select Corning fiber NIDs. This allows damaged or lost grommets to be replaced as needed in the field. The grommets are easily fitted onto existing NID housings, and can be stocked as part of a field technician's parts supply.





## Fiber NID Grommets Kit, Grommet, Large (1.75-in)

## CORNING

Dimensions	
Height	5.1 cm
Width	5.1 cm
Depth	0.9 cm

Shipping Dimensions	
Height	25.4 cm
Width	25.4 cm
Depth	20.3 cm

Ordering Information	
Product Number	KIT-GROMMET-FNI
EAN Code	4056418184128
Package Contents	Kit, Grommet, Large (1.75-in)
Units per Delivery	100/1

#### По вопросам продаж и поддержки обращайтесь:

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