

# Everon® Power Supply Unit (PSU) Managed Remote Power Solution

Features	Benefits	
Application	LAN switches or GPON ONTs Distributed Antenna Systems	LED Lighting Security/Access Control
Common Power Source Features	<ul style="list-style-type: none"> <li>AC input range: 110 VAC to 240 VAC/19A max</li> <li>Power factor (type): 0.97/230 VAC at full load</li> <li>Forced air cooling, built-in fans</li> <li>Two output port options: 16-port or 32-port model</li> <li>Output power and derating                             <ul style="list-style-type: none"> <li>Nominal power of up to 3,000 W shared with all output ports</li> <li>Derating with input voltage: Output power derates linearly from 3,000 W at 180–264 VAC to 1,500 W at 90 VAC</li> <li>Derating with temperature: Output power derates linearly from 3,000 W at 45°C (122°F) to 1,500 W at 65°C (167°F)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>HVDC input range: 280 VDC to 370 VDC/13A max</li> <li>High efficiency up to 92%</li> <li>Two output voltage options: 56 VDC or 24 VDC</li> <li>Built-in monitoring and control:                             <ul style="list-style-type: none"> <li>Main PS output voltage monitoring/DC OK</li> <li>Overtemperature, overload, and fan alarms</li> <li>Per port voltage and current monitoring</li> <li>Per port ON-OFF control</li> </ul> </li> <li>Protections: short circuit, overload, overvoltage, and overtemperature</li> <li>Outputs protection auto-recovery</li> </ul>

## Description

The Corning® Everon® Power Source Unit (PSU) provides National Electricity Code® (NEC®) Class-2 outputs that allow various output power characteristics (greater or reduced) achieved via connectivity to an external (and thus, modular) aggregator and step-down converter units.

• **Aggregators** allow feeding loads with power higher than NEC Class-2 95 W. These aggregators are available as 2- and 8-port models.

For example: providing 150 W requires connection to two ports; providing 450 W requires connection to five ports of an 8-port model; providing 300 W may be based on a single 8-port model or by paralleling the outputs of two 2-port models, etc.

*Note: the 8-port model provides up to 700 W. The 2-port model provides up to 170 W of output power.*

• **Step-Down Converters** allow voltage reduction from 56 V to 24 V, supporting up to 90 W loads.

Corning’s Everon PSU provides the following main enhancements:

- **High density of output** ports per unit
- Supports **high-voltage DC source input**
- Status LEDs and **dry contact alarm**
- **User-defined output power characteristics** via aggregators and step-down converter units
- Option for **remote management** via Ethernet or RS-485, based on Modbus protocol (with adjusted specific format on top)



Everon PSU: 32 channels, 24 V or 56 V

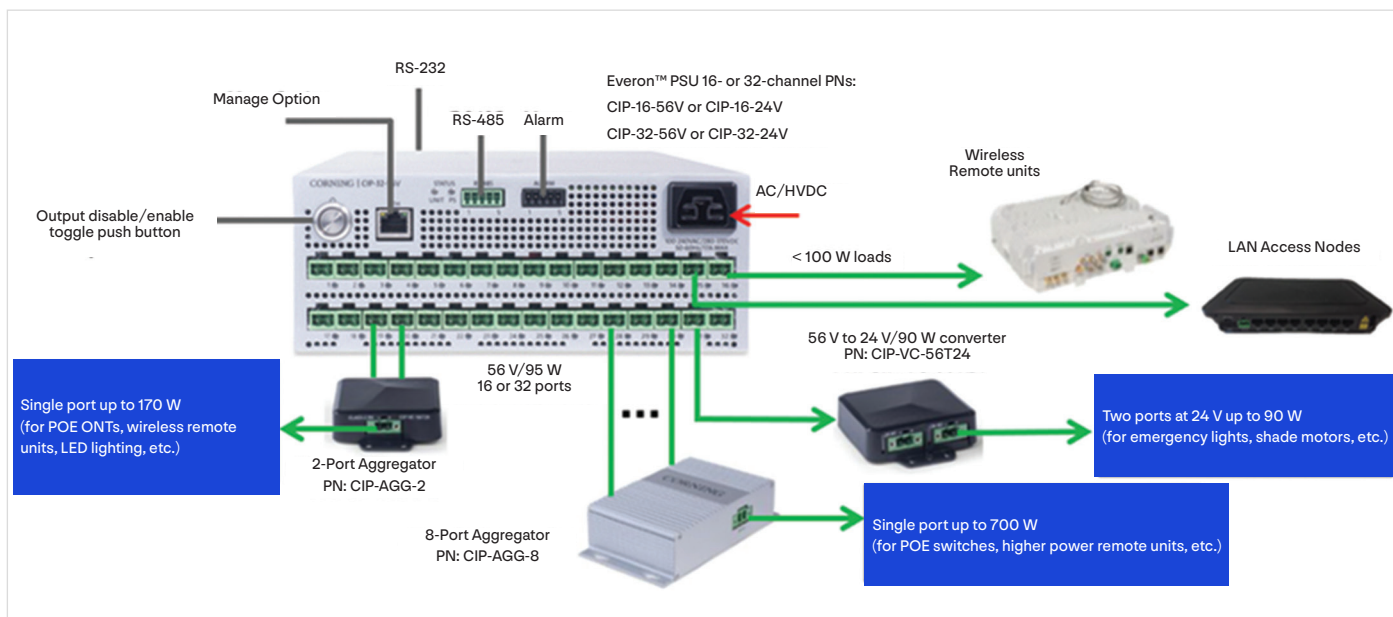


Everon PSU: 16 channels, 24 V or 56 V

## System Architecture

The following diagram illustrates the power characteristics and connectivity between the Corning® Everon® PSU and external units:

### 2- and 8-Port Aggregators and Step-Down Converter



## Important safety-related notes to read prior to installation

- 1 Corning recommends that all designs using the Corning Everon® Managed Remote Power Solution comply with the latest editions of the NEC of the NFPA, OSHA, and all applicable Local and State codes
- 2 The rear panel ventilation holes must NOT be installed facing downwards
- 3 Protective ground connection to the Everon PSU should be done by a certified technician. Permanent earth connection should be at least 2.5 mm<sup>2</sup>/12 AWG
- 4 All terminal block mating connectors should not be removed – even if they are not being used
- 5 Disable all outputs and disconnect the power input cable before servicing the Everon PSU
- 6 The Everon PSU Class-2 provides a maximum 95 W output, allowing cables to be routed without conduits
- 7 The output of the aggregator is a Class-1 circuit (providing more than 95 W). The aggregator should be located near the load to avoid conduit installation.
- 8 The outputs of the aggregators should be connected only to safety-approved devices
- 9 The outputs of multiple aggregators may be wired parallel to each other to achieve higher power as needed, but all Class-2 input ports should be from the same Everon PSU
- 10 For redundant applications, only the same number of Class-2 ports from multiple Everon PSUs may be aggregated together
- 11 The aggregator and converter are provided as separate units, and to be ordered individually
- 12 The dry contact alarm can be used for common/general fault monitoring
- 13 Communication ports functionality is optional
- 14 RS-232 port is for factory use only

## Environmental Specifications

Feature	Description
Working temperature	-20°C to +65°C (-4°F to +149°F) (refer to power source derating specifications)
Working humidity	0% to 90% RH non-condensing
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Storage humidity	10% to 95% RH
Vibration	10 Hz to 500 Hz, 2G 10 min/cycle, 40 min each along X, Y, Z axes

## Standards and Certifications

Feature	Description
EMC	FCC CFR 47 Part 15 Subpart B, EN 55035:2017, EN 55032:2015 CISPR 32, AS/NZS CISPR 32: 2012EN 61000-3-2: 2014, EN 61000-3-3:2013, EN 61000-4-8: 2010
Safety compliance	UL/EN/IEC 62368-1 Edition 2 as a LPS (Limited Power Source)
Regulatory Compliance	CE / UKCA

## Power Specifications

Feature	Description
Input power source	AC/HVDC
Max power consumption	16 Ports: Max 1,700 W 32 Ports: Max 3,400 W
Max input current	19A with 110 VAC, 13A with 280 VDC
Output port power	56 VDC or 24 VDC, supporting up to 95 W per port

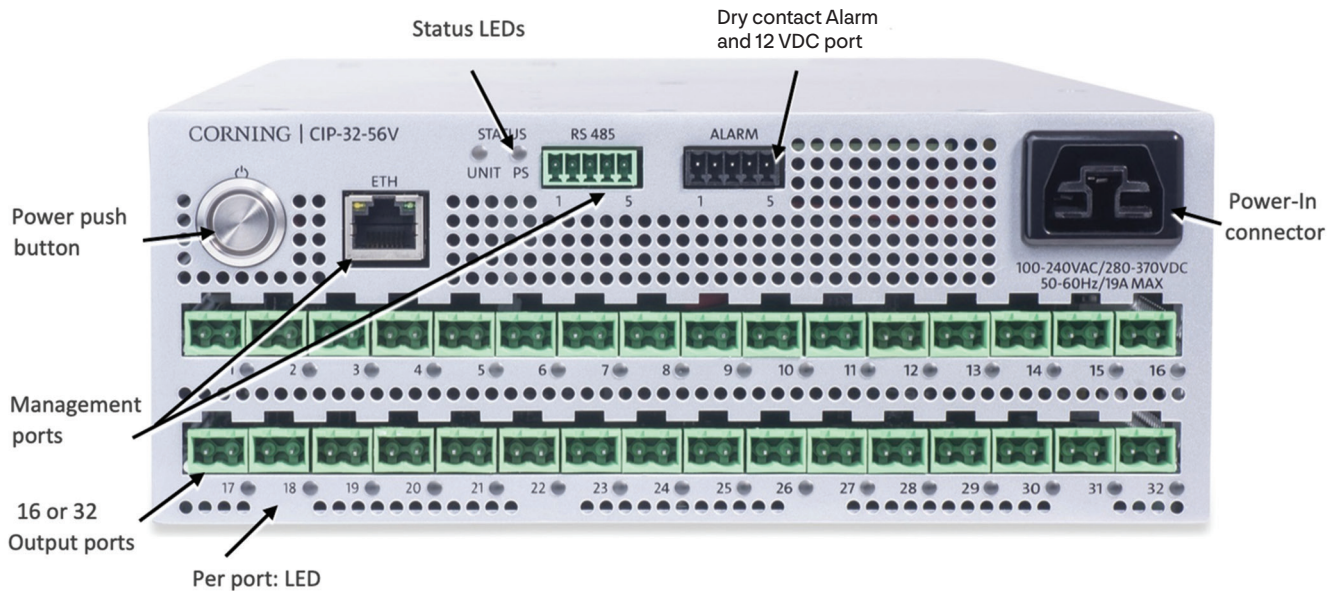
### Notes:

- 1) For the 32-channel Corning® Everon® PSU model: in order to always get maximum power, there is a need to work 220/240 VAC or, alternatively, with HDVC 280 VDC to 370 VDC.
- 2) In both the 16- and 32-channel PSU models, the available power depends on temperature and input voltage. Higher temperature and/or lower AC input voltage may reduce available power. Refer to derating information.

## Interfaces Specifications: PSUs

16- or 32-port outputs/1.5U-2U Corning® Everon® PSU 16- or 32-channel PNs: CIP-16-56V or CIP-16-24V/CIP-32-56V or CIP-32-24V


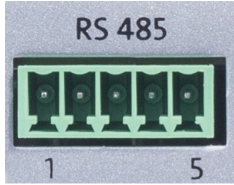
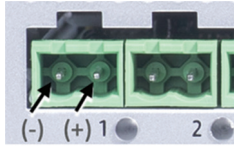

### Front Panel

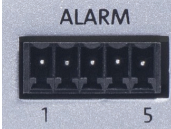





### Back Panel



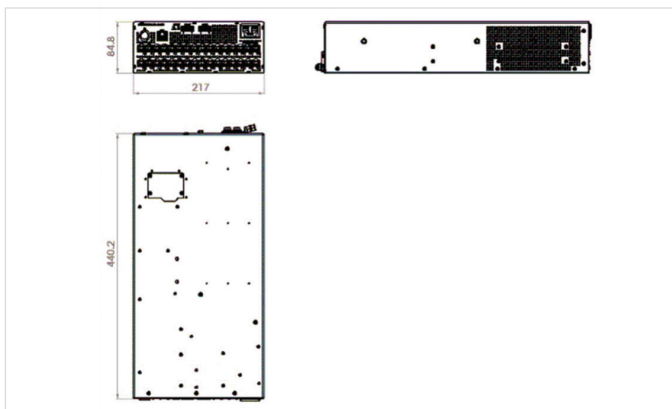
# PSU Interfaces

Feature	Description	Purpose
<p>Power push button</p> <p>In order to extend the life of the power input connector, the power input cable should be disconnected while the outputs are disabled</p>	<ul style="list-style-type: none"> <li>• <b>First long press (6 to 8 sec):</b> Disconnects all Class-2 outputs (recommended before disconnecting from power source); All ports' LEDs will turn red</li> <li>• <b>Second long press:</b> Restarts outputs (all ports LEDs will turn green if related ports are not overloaded)</li> </ul> <p>Long press toggle between all outputs enabled/disabled mode</p> <p>Switch light blinks while in disabled mode and solid while enabled</p>	 <p>Disabling or enabling all output ports</p>
<p>Management Connectors:</p> <ul style="list-style-type: none"> <li>• Ethernet</li> <li>• RS-485 bus</li> </ul>	<p><b>Optional communication functionality:</b></p> <p>Both connectors are based on Modbus protocol with a unique data formatting on top (see note below)</p> <p>The Ethernet port RJ45 – Modbus communication over 10/100 Mbps Ethernet and has two LED lights:</p> <ul style="list-style-type: none"> <li>• The green LED light (left) indicates Ethernet connection</li> <li>• The yellow LED (right) indicates that there is data transmitted over the serial port</li> </ul> <p>Terminal Block – Modbus communication over RS-485; 120 Ω termination option pins.</p> <p>RS-485 bus allows connecting a few units, where the last one need to provide 120 Ω termination.</p> <p>In case of chaining multiple units, the last PSU can provide an internal termination. The termination is activated by shorting pin 4 with pin 5 using a jumper.</p> <p>RS-485 connector pins description can be found in the Quick Installation Guide</p>	<p>Ethernet communication</p>  <p>RS-485 communication</p> 
<p>16/32 output ports</p>	<p>12 AWG to 20 AWG output interfaces</p> <p>The right pin of each output port connector is the positive signal while the left pin is the negative</p> <p>Class-2 LPS – 95 W output power per port, at maximum output voltages of 24 VDC or 56 VDC</p> <p>Support of multiple pairs paralleling with remote aggregation box for high power loads</p>	<p>Class-2 output ports (16 or 32 ports)</p> 
<p>LED (per port)</p>	<p><b>Green</b> – Power Good</p> <p><b>Red</b> – Line shorted, overloaded, or disabled</p> <p>Few seconds (up to four) after short circuit or overload condition ends, the LEDs automatically resume to green</p>	<p>Class-2 output LEDs (16 or 32 LEDs)</p> 
<p>Power-in connector (AC/HVDC)</p>	<p>Anderson Saf-D-Grid connector, supporting AC or high-voltage DC power input</p>	<p>Power Input</p>  <p>100-240VAC/280-370VDC 50-60Hz/19A MAX</p>

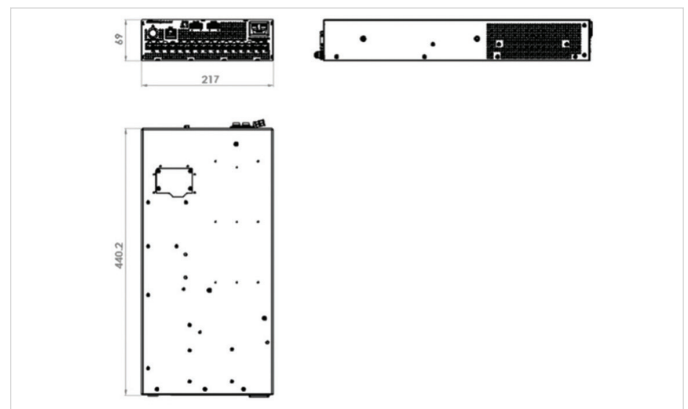
Feature	Description	Purpose
Dry contact alarm (for monitoring)	Dry contact for major alarm and for 12 V/3 W output: <b>Dry contact:</b> Both N.O. or N.C. alarms are available for use <b>12 V/3 W output:</b> Allows connection to accessories (i.e., optical media bridge)	Alarm Interface 
Status LEDs (unit, PS)	<b>Unit LED:</b> Green/red LED indicating unit level common alarm status. This will also be indicated by the dry contact alarm management (i.e., in the event of shortage in one of the Class-2 outputs, the LED will light red and the unit status will also light up) • Power supply faults: internal PS overvoltage, overtemperature, overcurrents • Unit faults: Short circuit or overload condition in one of the channels or internal overtemperature of the box  <b>PS LED:</b> Green/red LED indicating internal main power supply alarm status; If faulty, all outputs will be disabled (this also may happen due to overheating)	 System status indications: • Unit status • PS status
RS-232 (back panel)	D-Type 9 pins (optional)/configuration RS-232 serial communication port supporting CLI commands  For factory/Corning technician use only	RS-232 Interface 
Ground terminal (back panel)	Grounding is required to ensure safety compliance	Chassis grounding 

Note: Future/optional management enhancement: based on Modbus protocol over Ethernet or over RS-485 includes a unique data formatting, to be used with a dedicated SW tool. Please contact Corning Marketing Team if activation is needed.

## Physical Specifications



32-port model



16-port model

Feature	Description
<b>32-port model (2 RU)</b>	
Dimensions (H x W x D)	85 x 217 x 440 mm (3.3 x 8.5 x 17.3 in)
Weight	6.5 kg (14 lbs)
<b>16-port model (1.5 RU)</b>	
Dimensions (H x W x D)	69 x 217 x 440 mm (2.7 x 8.5 x 17.3 in)
Weight	5.5 kg (12 lbs)

## Mount Installation

See Quick Installation Guide for details



## Ordering Information

Unit and accessories (refer to Quick Installation Guide for further installation details)


Class-2 Related Units

Part Number	Description	Image
CIP-16-56V	Corning® Everon® PSU, 16-port model with 56 VDC Class-2 outputs	
CIP-32-56V	Everon PSU, 32-port model with 56 VDC Class-2 outputs	
CIP-16-24V	Everon PSU, 16-port model with 24 VDC Class-2 outputs	
CIP-32-24V	Everon PSU, 32-port model with 24 VDC Class-2 outputs	

## Accessories Included with Everon® PSU Basic Kit

Part Number	Description	Image
264A418601 (included in basic kit)	Everon PSU Mounting Bracket Equipped with single-stacked configuration wall-mounting brackets (2 units)	Two brackets for each Everon PSU: 
705A070601 (included in basic kit)	AC cable for Everon PSU 12 AWG, 25A/370 V Connector on one side with open wires on the other side to allow adjustment to 110 or 240 VAC input	Single-ended plug assembly 

## Accessories Kit (optional, to be ordered separately)

Part Number	Description	Image
CIP-AGG-2 2-Port Aggregator	Two Class-2 inputs per aggregator (supports 24 VDC to 56 VDC Class-2 inputs x 2) Cable-side Dinkle connectors are attached to the unit	
CIP-AGG-8 8-Port Aggregator	Eight Class-2 inputs per aggregator (supports 24 VDC to 56 VDC Class-2 inputs x 8) Cable-side Dinkle connectors are attached to the unit	
CIP-VC-56T24 Step-Down Converter	Class-2 56 VDC to 24 VDC step-down converter (up to 90 W input distributed over two 24 V outputs) Multiple CIP-VC-56T24 converter outputs that are powered from 56 VDC Corning® Everon™ PSU ports may be aggregated with the 2- or 8-port aggregator to feed big loads	
CIP-CBLMGMT	0.5RU Cable Management Kit For 16-port units, the cable management fills the missing 0.5U shelf to complete 2U	
CIP-19SHELF-1.5U	19-in rack-mount shelf with 1.5U and 2U blank plates for CIP-16-56V and CIP-16-24V The 1.5U and 2U blank plates have two different orientations to fit both 1.5U and 2U Everon PSUs	 <p>U shelf</p> <p>1.5U and 2U blank plates Orientation-2 to fit 2U shelf</p>
CIP-19SHELF-2U	19-in rack-mount shelf with 1.5U and 2U blank plates for CIP-32-56V and CIP-32-24V The 1.5U and 2U blank plates have two different orientations to fit both 1.5U and 2U Everon PSUs	 <p>2U shelf</p> <p>1.5U and 2U blank plates Orientation-2 to fit 2U shelf</p>
CIP-DUALBKT	Wall-mountable bracket for dual-stacked configuration for all types of Everon PSUs	 <p>Two brackets are needed to support one or two Everon PSUs/wall-mount installation</p>

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