

**CUE-413  
CUE-413E**

**Industrial 5-Port Unmanaged PoE Switch With PoE Injector**



**Features**

- High Performance Network Switching Technology**

  - ✓ Comply with IEEE 802.3, IEEE 802.3u, IEEE 802.3X, IEEE 802.3af
  - ✓ Provides 4 x 10/100 Mbps Ethernet ports with RJ-45 connector
  - ✓ Provides 1 x 100Mbps single-mode SC type fiber port
  - ✓ Embedded 4 ports PoE Injector Function classified as PSE
  - ✓ Supplies 15.4 watts of power per port full load with PoE
  - ✓ RJ-45 Port support auto MDI/MDI-X crossover
  - ✓ Provides broadcast storm protection
  - ✓ Supports IEEE 802.3X flow control on full duplex, back pressure on half duplex
- Robust Industrial Design**

  - ✓ Robust Aluminum case complying to IP-30 housing standard
- ✓ Supports operating temperature -10 to 70°C & Extended temperature -40 to 80°C
  - ✓ DIN-Rail, Panel mount or desktop installation
  - ✓ High level of immunity to electromagnetic interference & power supply surges typically found in industrial plant environments or external curb side enclosures
- Reliable Power Design**

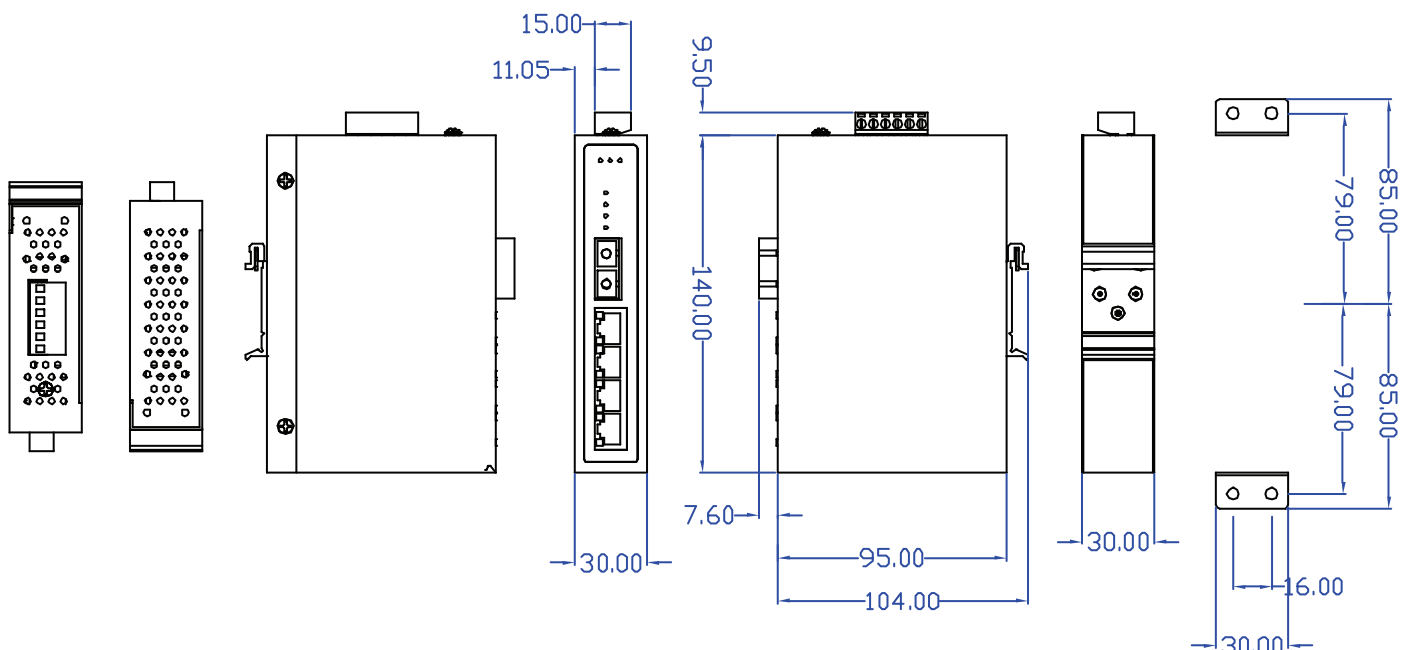
  - ✓ Supports Redundant 48VDC power input
  - ✓ Supports 4,000 VDC Ethernet ESD Protection
  - ✓ Provides surge (EFT) protection 3,000 VDC for power line
  - ✓ Overload Current Reset-table Fuse present
  - ✓ Power Polarity Reverse Protection Present
  - ✓ Terminal block present for master and slave power



**Overview**

The Cobra CUE-413 is an Industrial 5-port Slim Unmanaged Power over Ethernet Switch with one single-mode fiber port. It supports four PoE injector ports classified as power source equipment (PSE). With the optic port, CUE-413 transmits data at high speed for long distances up to 30 km with an SC connector. CUE-413 provides 15.4 watt of power per port and can be used to power IEEE802.3af compliant powered devices (PD) by Ethernet cable and eliminates the need for additional power wiring. The compact, slim line switch is equipped with a relay output for an event alarm for easy troubleshooting. It offers 48 VDC redundant powers input design and is secured with Power Polarity Reverse protection and an Overload Current Reset-table Fuse. The IP-30 housing protection, wide operating temperature of -10 to 70°C and DIN rail mounting makes CUE-413 suitable for an industrial environment. The E version extends the temperature rating to -40 to 80°C. The CUE-413 is a plug-and-play solution for your Power over Ethernet applications.

**Dimensions**



## Hardware Specifications

### Interface

<b>RJ-45 Ports</b>	4 10/100Base-TX auto-negotiation speed, Full/Half duplex, auto MDI/MDI-X (PoE port)
<b>Fiber port</b>	1 100Base-FX single-mode port (SC connector)
<b>LEDs</b>	Per unit: Power 1 (Green), Power 2 (Green), Fault(Red) Fiber: Link/Active(Green) TX: Link/Active(Green), Full duplex/Collision (Yellow) PoE: Feeding Power (Green)
<b>Power Input</b>	VDC 48V Redundant power with polarity reverse protect function and removable terminal block
<b>Power Protection</b>	Power Reverse Polarity: Present
<b>Power Consumption</b>	4.6 watts without PoE 58 watts full load with PoE
<b>Dimensions</b>	IP-30 standard, 30 mm (W) x 140 mm (H) x 95 mm (D)
<b>Installation</b>	DIN-Rail, Panel mount or desktop

### Environmental

<b>Operating Temperature</b>	Regular: -10 to 70°C Extended: -40 to 80°C
<b>Storage Temperature</b>	-40 to 85°C (-40 to 185°F)
<b>Operating Humidity</b>	5%~90% RH (Non-condensing)

## Technology Specifications

<b>Standard</b>	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX/100BASE-FX IEEE802.3x Flow Control and Back pressure IEEE802.3af Power over Ethernet
<b>Network Media</b>	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/5e cable EIA/TIA-568 100-ohm (100m)
<b>Protocol Technology</b>	CSMA/CD
<b>Switching Architecture</b>	Store and Forward

### Performance

<b>Data Transfer Rate</b>	14,880 pps for Ethernet port and 148,800 pps for Fast Ethernet port
<b>MAC Address</b>	1K
<b>Memory Buffer</b>	512 bytes
<b>Back-plane</b>	1.0 Gbps
<b>Transfer Packet Size</b>	1.19Mpps @ 64bytes

## Regulatory Approvals

<b>EMI</b>	FCC Class A
<b>EMS</b>	EN6100-4-2 EN6100-4-3 EN-6100-4-4 EN6100-4-5 EN6100-4-6 EN61000-4-8 EN61000-4-11
<b>Safety</b>	UL, cUL, CE/EN60950
<b>Shock</b>	IEC60068-2-27
<b>Vibration</b>	IEC60068-2-6
<b>Free Fall</b>	IEC60068-2-32
<b>Class 1 DIV 2</b>	Pending *
<b>DNV</b>	Pending *
<b>Environmental</b>	WEEE, RoHS
<b>MTBF</b>	325,000 hrs based on Mil-Hdbk-217F, GB
<b>Warranty</b>	5 years

## Power over Ethernet Specification

<b>PoE Compliance</b>	100% IEEE 802.3af compliant
<b>PoE Classification</b>	Power Sourcing Equipment (PSE)
<b>PoE Voltage</b>	45 to 48 VDC depending on power input
<b>PoE Power</b>	Up to 15.4 watts per channel
<b>PoE Pin Assignment</b>	RJ-45 port # 1~# 4 support IEEE 802.3af End-point, Alternative B mode. Positive (VCC+): RJ-45 pin 1, 2. Negative (VCC-): RJ-45 pin 3, 6. Data (1,2,3,6)
<b>PoE Protection</b>	Over-temperature, over-current, over/under-voltage and transient

## Optical Specifications

Model	Fiber type (um)	Connector	Wavelength (um)	TX Power (min)	TX Power (Max)	Rx Power (Min)	Rx Power (Max)	Link Budget (dbm)	Distance (km)
CUE-413	Single-mode 8-10/125	SC	1310nm	-15dBm	-8dBm	-34dBm	-8dBm	19dBm	30km
CUE-413E	Single-mode 8-10/125	SC	1310nm	-15dBm	-8dBm	-34dBm	-8dBm	19dBm	30km

### Ordering Information

<b>CUE-413</b>	Industrial 4 10/100TX + 1 100FX Single-mode SC with 1-port PoE Injector Switch
<b>CUE-413E</b>	Industrial 4 10/100TX + 1 100FX Single-mode SC with 1-port PoE Injector Switch, Extended Temperature -40 to 80°C

\* Extended temperature products are produced to order

### Recommended Accessories

<b>DR-7548</b>	76.85W/1.6A DIN-Rail 48 VDC power supply
<b>DR-12048</b>	120W/2.5A DIN-Rail 48 VDC power supply
<b>DR-24048</b>	240W/5A DIN-Rail 48 VDC power supply



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