

**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

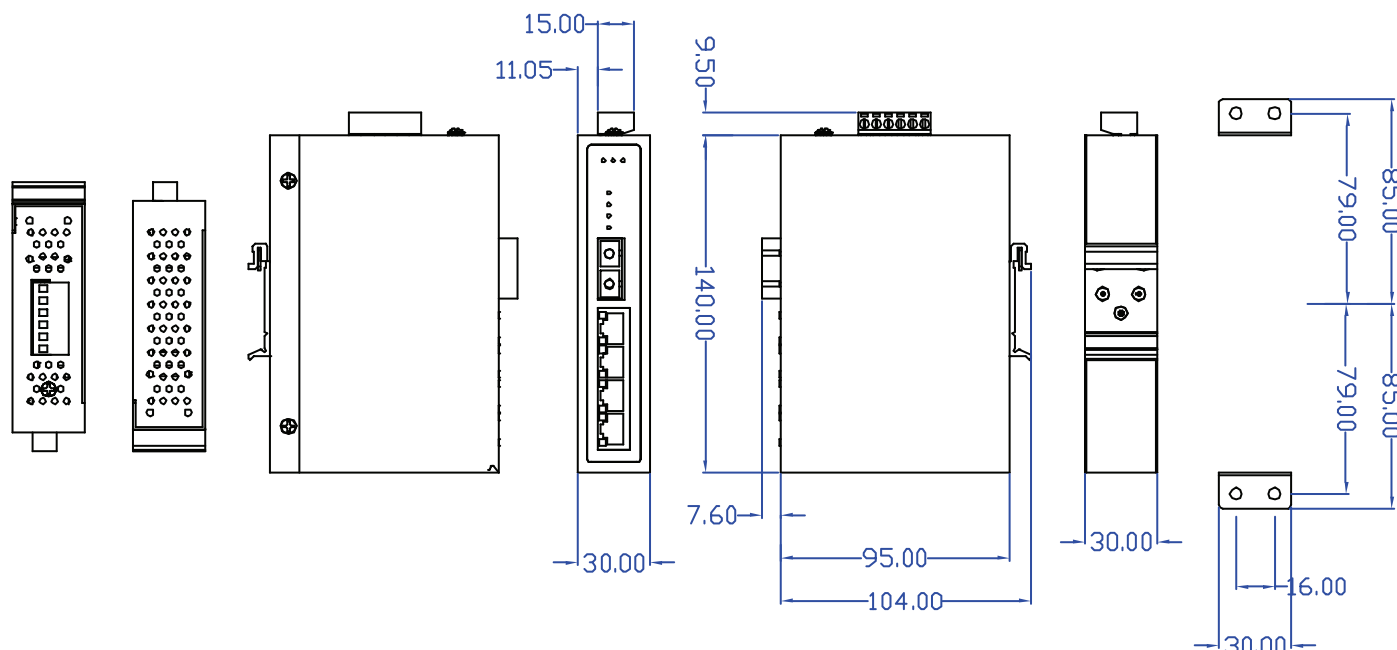
- ✓ Supports Redundant 48VDC power input
- ✓ Supports 4,000 VDC Ethernet ESD Protection
- ✓ Provides surge (EFT) protection 3,000 VDC for power line
- ✓ Overload Current Reset-table Fuse present
- ✓ Power Polarity Reverse Protection Present
- ✓ Terminal block present for master and slave power



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

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

Environmental

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

Technology Specifications

Standard	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX/100BASE-FX IEEE802.3x Flow Control and Back pressure IEEE802.3af Power over Ethernet
Network Media	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)
Protocol Technology	CSMA/CD
Switching Architecture	Store and Forward

Performance

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

Regulatory Approvals

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

Power over Ethernet Specification

PoE Compliance	100% IEEE 802.3af compliant
PoE Classification	Power Sourcing Equipment (PSE)
PoE Voltage	45 to 48 VDC depending on power input
PoE Power	Up to 15.4 watts per channel
PoE Pin Assignment	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)
PoE Protection	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

CUE-413	Industrial 4 10/100TX + 1 100FX Single-mode SC with 1-port PoE Injector Switch
CUE-413E	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

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



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