Media Converter Solutions

RUBY TECH®
Networking & Communications

PSGC-110H

PSGC-110H:

10/100/1000Base-T to 1000Base-X PoE PSE+ GbE Media Converter

Key Features

- IEEE802.3at and IEEE802.3af PoE (Power over Ethernet) PSE compatible
  - ---Internal AC power supply
  - ---Over-current protection
  - ---Under-current detection
  - ---Minimum load sensing
  - ---Fault Protection Input
  - ---PSE MDI power enable/disable
- LFP (Link Fault Pass-through) and FEF (Far End Fault)
- Supports one 10/100/1000Base-T Gigabit Ethernet UTP port and one 1000Base-SX / LX (SC/LC) Gigabit Ethernet Fiber port
- Supports 802.3x flow control for full-duplex ports and backpressure for half-duplex ports
- Supports comprehensive types of fiber with different distances and connections, including SC/Bidi/LC and so on
- Supports auto mode on the TP port
- DIP switch to set configurations
  - ---DIP 1: Cut through/Normal
  - ---DIP 2: LFP/LFP DIS
  - ---DIP 3: PoE/PoE DIS
- Supports jumbo frame (Normal Mode: 2KB, Cut-Through Mode: 9KB)
- PSE RJ-45 Pin-out Alternatives A/B Auto detection(Both Midspan and Endpoint)
- RoHS Compliance

Overview

PSGC-110H is designed a 10/100/1000 Base-T to 1000Based-SX/LX (SC/LC) GbE media converter, which allows two types of network segments to be connected easily and inexpensively. Complied with IEEE802.3at (Max. PoE output: 30W) and backward compatible with IEEE802.3af (Max. PoE output: 15.4W) Power Over Ethernet standard, this AC powered PoE media converter is a Power Sourcing Equipment Plus (PSE+: Means PoE High Power Output Device)

Technical Specifications

- **Standards**
  - ---IEEE802.3 10Base-T,
  - ---IEEE802.3u 100ase-TX,
  - ---IEEE802.3z/ab 1000Base-T,
  - ---IEEE802.3x full-duplex flow control,
  - ---1000Base-SX/LX
  - ---IEEE802.3x full-duplex flow control
- **Cable**
  - ---UTP: Cat. 5 cable and up to 100m
  - ---Fiber: 1000SX: 50/125, 62.5/125μm multi-mode
    - 1000LX: 8.3/125, 8.7/125, 9/125 or 10/125μm single-mode
- **Data Transfer Rate:** 2000Mbps/full-duplex
- **Network Interface**

Category	Connector	Transmission	Max. Cable Length	Wavelength
10/100 Base-TX	RJ-45	Full/Half Duplex	100M	
1000 Base-T	RJ-45	Full Duplex	100M	
1000Base-SX (M-M)	SC/LC	Full Duplex	0.55Km 50/125μm	850nm
1000Base-LX (S-M)	SC/LC	Full Duplex	10/30/50Km 9/125μm	1310nm or 1550nm

- **LED Indicator**

LED	Color	Function
PWR	Green	Lit when power is coming up
FX LNK/ACT	Green	Lit when fiber connection is good / Blinks when fiber data is present
TP LNK/ACT	Green	Lit when TP connection is good / Blinks when TP data is present
10/100/1000 Mbps	Green/ Amber	Lit Green when TP link on 1000Mbps / Lit Amber when TP link on 100Mbps / Off when TP link on 10Mbps
PoE1	Green	Lit when RJ-45 (1,2),(3,6) pairs detect PD
PoE2	Green	Lit when RJ-45 (4,5),(7,8) pairs detect PD

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which combines data received over a TP link with 56VDC power, providing power to IEEE802.3af or IEEE802.3at powered device (PD) over the existing CAT5 UTP cable. The converter includes a PD signature sensing and power monitoring features. Other features include over-current protection, under-current detection and fault protection input. The LFP (Link Fault Pass-through) allows the media converter to monitor both the fiber and copper RX ports for loss of signal. In case of a loss of RX signal on one media port, the converter will automatically disable the TX signal to the other media port, thus passing through the link fault. FEF (Far End Fault) enables the converter to stop sending link pulse to the link partner once a loss of the fiber RX signal is encountered. Then the link partner will synchronously stop sending data. FEF prevents loss of valuable data transmitted over invalid link. Combining LFP and FEF troubleshooting features of PSGC-110H, both end devices can be notified of a loss of fiber link.

• **Hardware Spec**

Feature	Detailed Description
Power Characteristics	Requirement: 100~240 VAC, 47~63 Hz
	Consumption: Max. up to 30W
Ambient Temperature	0 ~ 40℃
Humidity	5% ~ 90%
Dimensions	40 (H) x 158 (W) x 133 (D) mm
Weight	0.6kg
EMI	Comply with FCC Part 15 Class A & CE Mark approval

Packing Information

Carton Dimensions (mm)	pcs/Carton	N.W (KG)	G.W (KG)
530x512x345	14	18	19

Ordering Information

PSGC-110HSC	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, SC Multi-Mode
PSGC-110HSC.S10	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, SC Single-Mode 10km
PSGC-110HSC.S30	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, SC Single-Mode 30km
PSGC-110HSC.S50	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, SC Single-Mode 50km
PSGC-110HBS5.S20	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, Bidi SC Single-Mode 20km, 1550nm
PSGC-110HBS3.S20	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, Bidi SC Single-Mode 20km, 1310nm
PSGC-110HLC	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, LC Multi-Mode 850nm
PSGC-110HLC.S10	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, LC Single-Mode 10km
PSGC-110HLC.S30	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, LC Single-Mode 30km
PSGC-110HLC.S50	10/100/1000Base-T to 1000Base-X PoE PSE+ GbE converter, LC Single-Mode 50km