Cisco DigiStar Ethernet over Coax (EoC) HomePlug AV Aggregation Point (AP) E230.2

The Cisco DigiStar Ethernet over Coax (EoC) System is designed to combine CATV signal with Ethernet data for transmission to subscriber's home through the existing coaxial access network.

With Ethernet data delivered to the building, the DigiStar EoC system meets the IP interactive service requirement of cable operators for multiple dwelling unit (MDU) applications. The DigiStar EoC system fully supports video-on-demand (VoD) and IPTV services and also allows for subscriber service differentiation through rate limiting.

The Aggregation Point (AP) of the DigiStar EoC system provides CATV signal pass-through and Ethernet data management to the end-points. Ethernet data is delivered to an AP either through an external media card to its Gigabit Ethernet port or through the EPON network to its internal Small Form-Factor Pluggable (SFP) ONU from the Optical Line Terminal (OLT). The AP provides high-speed and reliable data transmission.

Figure 1. DigiStar Ethernet over Coax AP HomePlug E230.2

Features

Standards and Protocols

- Complies with HomePlug AV international standards and IEEE 1901 Standard
- Complies with IEEE 802.1p (QoS/CoS Control) and 802.1q (VLAN Protocol)

Product Configuration

- Configurations available with 1 or 2 HomePlug modules
- RF configurations available with 1 or 2 input/ output ports
- SFP Interface supports the ONU module in an EPON network

Data Transportation

- Supports data throughput of greater than 250 Mbps per HomePlug AV module
- Supports long-distance transportation; Max. link loss greater than 85 dB

Network Management

- Supports snooping (IGMP v1/v2)
- Supports remote management through SNMP
- Supports Secure Shell (SSH) remote logon and remote management through Command Line Interface (CLI)
- Supports Access Control List (ACL) through MAC layer

Other Features

- IP68 Housing
- 2 powering versions available, including Mains Power (from 100 to 230 VAC ± 10%) and Line Power (40-90 VAC)

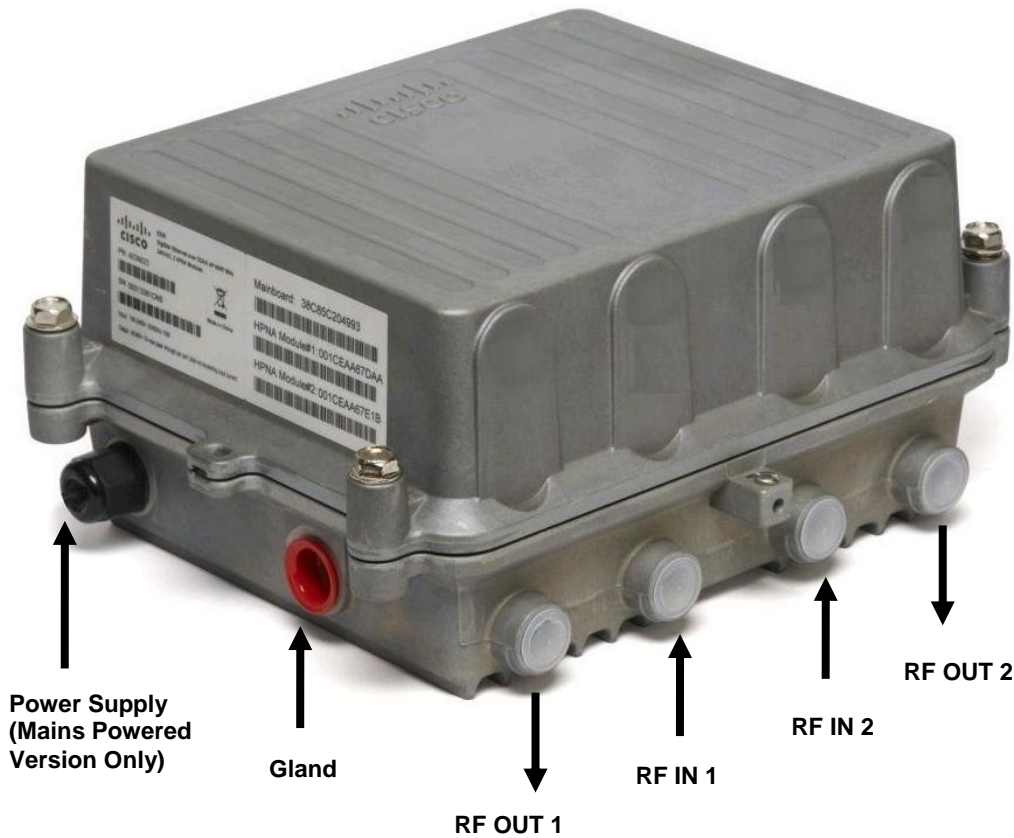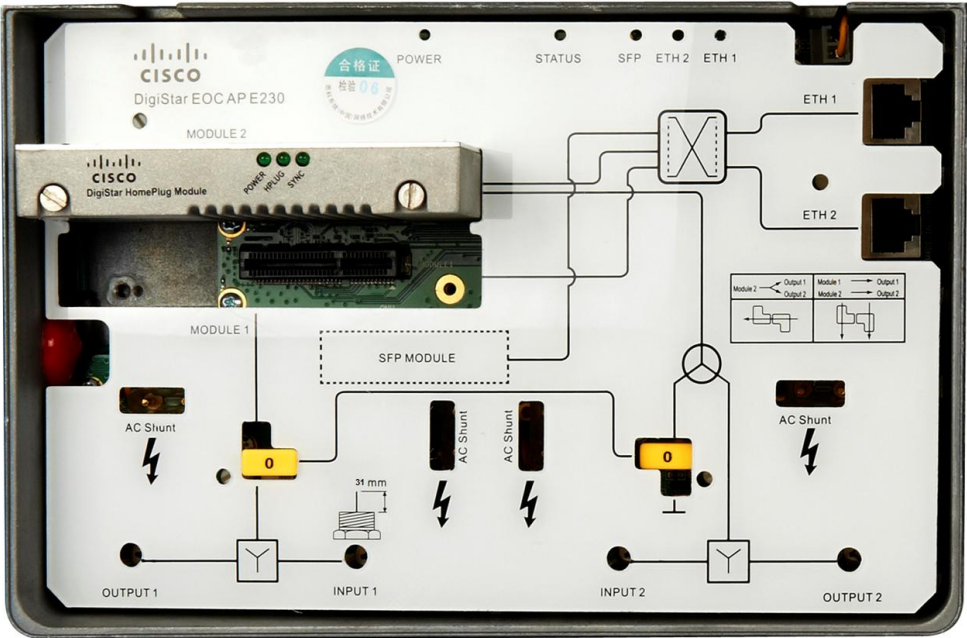**Figure 2.** DigiStar Ethernet over Coax HomePlug AV AP E230.2, Ports Overview

Figure 3. DigiStar Ethernet over Coax HomePlug AV AP E230.2, White Board

Product Specifications

See the table below for product specifications.

Table 1. General Performance

Specification	
Item	**Value**
Work Band	5-65 MHz
CATV Band	87-1000 MHz
CATV Band Return Loss	> 16 dB
CATV Band Insertion Loss (min.)	< 1 dB*
Link Loss (max.)	> 85 dB
RF Modulation	OFDM
Maximum Number of EPs per AP	64 per HomePlug AV module
Maximum AC Through Current	7 A @ 60 VAC
Surge Protection	2 kV (Combination Wave) 6 kV (Ring Wave)

Note: Only for 1 IN/1 OUT configuration.

Table 2. Interface Specifications

Interface Specification	
Item	**Value**
Ethernet Port	RJ-45 connector, 10/100/1000 Base-T
RF Input Port	PG11[1]
RF Output Port	PG11[1]
Gland Port	PG16[2]
Fiber Port	PG11[1]
Power Input Port	PG11[1]

Notes:

1. 5/8'' Inserts are available. See section **Ordering Information** for more information.
2. Waterproof glands are available. See section **Ordering Information** for more information.

Table 3. Power Supply Specifications

Power Supply Specification		
Item	**Configuration**	**Value**
Voltage (50/60 Hz)	Mains Power Supply	From 100 to 230 VAC ± 10% (Nominal)
	Network Power Supply	From 40 to 90 VAC
Power Consumption	2 Modules	≤ 15 W
	1 Module	≤12 W

Table 4.   Environmental Specifications

Environmental Specifications	
Item	**Value**
Operating Temperature	-20 to +60 °C -4 to +140 °F
Storage Temperature	-40 to +85 °C -40 to +185 °F
Relative Humidity (non-condensing)	10% to 90%

Table 5.   Mechanical Specifications

Mechanical Specifications		
Item	**Configuration**	**Value**
Dimensions (L x W x H)	All Configurations	305 x 245 x 133 mm 12.0 x 9.6 x 5.2 in
Weight	2 Modules	< 5.1 kg <11.2 lb
	1 Module	< 4.8 kg < 10.6 lb
Water/Dust Ingress Rating	All Configurations	IP68

Note: Unless otherwise noted, specifications reflect typical performance when the AP is used with the Cisco DigiStar EoC EP and are referenced to 20 °C (68 °F).

Ordering Information

See the table below for ordering information.

Table 6.   Ordering Information for AP

Description	Available Region	Part Number
DigiStar EoC AP E230.2, 65/87 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, without ONU, China Plug	China	EAP8500211106000
DigiStar EoC AP E230.2, 65/87 MHz Split, 2 HomePlug AV Module, 2 IN/2 OUT, without ONU, China Plug	China	EAP8500212206000
DigiStar EoC AP E230.2, 65/87 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, without ONU, US Plug	North America	EAP8500221106000
DigiStar EoC AP E230.2, 65/87 MHz Split, 2 HomePlug AV Modules, 2 IN/2 OUT, without ONU, US Plug	North America	EAP8500222206000
DigiStar EoC AP E230.2, 65/87 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, without ONU, EU Plug	EMEA	EAP8500231106000
DigiStar EoC AP E230.2, 65/87 MHz Split, 2 HomePlug AV Modules, 2 IN/2 OUT, without ONU, EU Plug	EMEA	EAP8500232206000
DigiStar EoC AP E230.2, 65/87 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, without ONU, Line Power	APAC/EMEA /North America	EAP8500101106000
DigiStar EoC AP E230.2, 65/87 MHz Split, 2 HomePlug AV Modules, 2 IN/2 OUT, without ONU, Line Power	APAC/EMEA /North America	EAP8500102206000
DigiStar EoC AP E230.2, 65/87 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, with ONU, China Plug	China	EAP8500211116000
DigiStar EoC AP E230.2, 65/87 MHz Split, 2 HomePlug AV Modules, 1 IN/2 OUT, with ONU, China Plug	China	EAP8500212A16000
DigiStar EoC AP E230.2, 65/87 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, with ONU, Line Power	China	EAP8500101116000
DigiStar EoC AP E230.2, 65/87 MHz Split, 2 HomePlug AV Modules, 1 IN/2 OUT, with ONU, Line Power	China	EAP8500102A16000
DigiStar EoC AP E230.2, 30/36 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, with ONU, China Plug	China	EAP8100211116000
DigiStar EoC AP E230.2, 30/36 MHz Split, 2 HomePlug AV Modules, 1 IN/2 OUT, with ONU, China Plug	China	EAP8100212A16000
DigiStar EoC AP E230.2, 30/36 MHz Split, 1 HomePlug AV Module, 1 IN/1 OUT or 2 IN/2 OUT, with ONU, Line Power	China	EAP8100101116000
DigiStar EoC AP E230.2, 30/36 MHz Split, 2 HomePlug AV Modules, 1 IN/2 OUT, with ONU, Line Power	China	EAP8100102A16000

Note: APAC includes China.

Table 7.   Ordering Information for Modules

Description	Available Region	Part Number
DigiStar EoC AP, 7410 HomePlug AV Module	APAC/EMEA /North America	4042685
DigiStar EoC AP, 7410 HomePlug AV Module, Half Working Frequency	China	4043637
DigiStar EoC AP, ONU	APAC/EMEA /North America	4036988

Table 8.   Ordering Information for Accessories

Description	Available Region	Part Number
DigiStar EoC AP, Gland with 2 CAT 5 Cable Plugs	APAC/EMEA /North America	4038460
DigiStar EoC AP, Gland with 1 CAT 5 Cable Plug and 1 Fiber Plug	APAC/EMEA /North America	4038461
DigiStar EoC AP, F-Connector, Metric	APAC/EMEA /North America	4037919
DigiStar EoC AP, F-Connector, Standard	APAC/EMEA /North America	4037920
DigiStar EoC AP, 5/8'' Insert, Short	APAC/EMEA /North America	4037921
DigiStar EoC AP, 5/8'' Insert, Long	APAC/EMEA /North America	4037922
DigiStar EoC AP, 5/8'' Insert, Long, with 6.5 mm Hole	APAC/EMEA /North America	4043325
DigiStar EoC AP, Port Plug	APAC/EMEA /North America	4037907

Note: The DigiStar EoC AP E230.2 in table 6 does not contain any of the above accessories in table 8. Please order the accessories separately as needed.