Cisco cBR Series 8x10G Remote PHY Digital Physical Interface Card

Cisco cBR Series 8x10G Remote PHY Digital Physical Interface Card provides the Ethernet network connection between the CCAP core and Remote PHY devices.

Product Overview

Remote PHY is the cable technology that helps cable operators overcome the limitations of analog fiber and remove the HFC bottleneck in bandwidth increase. It enables "fiber deep" architectures that push digital fiber out much closer to homes. Ultimately, Remote PHY helps cable operators deliver capacity and Gigabit service tiers on parity with any pure-fiber competitor, at a fraction of the cost of replacing the existing HFC plant.

Remote PHY splits CMTS functions so that CCAP core and physical-layer functions can run separately in different locations. CCAP core routing can run out of larger hubs while QAM and OFDM modulation are pushed out to Remote PHY devices (RPDs) located nearer to subscribers.

The Cisco® cBR Series 8x10G Remote PHY Digital Physical Interface Card (Figure 1) is seated in the PIC slots in a cBR-8 system and provides the Ethernet network connection between the cBR-8 CCAP core and the Remote PHY devices. The cBR-8 Digital PIC works together with the Cisco cBR-8 Remote PHY line card or cBR-8 integrated CCAP line card configured for Remote PHY to offer CCAP core functionality in a Remote PHY system. The Digital Physical Interface Card provides up to 8x10GE ports interfacing Remote PHY node or shelf. It is designed to support a 4+4 setup to provide 40Gbps performance with link layer redundancy.

Figure 1.　　Cisco cBR Series 8x10G Remote PHY Digital Physical Interface Card
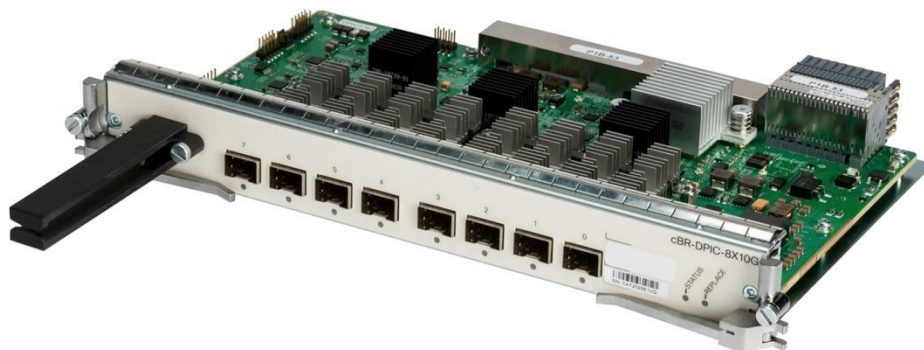
Features and Benefits

Table 1.   Features and Benefits

Feature	Benefit
8 x 10G SFP+ ports	High-density physical interface card
CableLabs Remote PHY Standard compliant	Standard-based technology including DEPI, UEPI, GCP capability
R-DTI compliant	Each 10G port supports R-DTI (Remote DOCSIS Timing Interface, IEEE1588v2 based) standard to make sure of timing accuracy
Digital connectivity	Enable reliable and digital connectivity between CCAP core and RPDs
OBFL	Increased hardware failure troubleshooting accuracy, enhanced ability to determine root cause
Board health monitoring	Detect failures at the first moment

Product Specifications

Table 2.   Product Specifications

Description	Specification
Dimensions (H x W x D) in. (cm)	1.43 x 10.96 x 7.32 in (3.6 x 27.8 x 18.6 cm)
Power consumption (W)	Typical: 28W, maximum rated power including 8 SFP+: 38W
Weight lbs. (Kg)	2.943 lbs. (1.335Kg)
Supported SFP+ modules	- SFP-10G-SR - SFP-10G-LR - SFP-10G-ER - SFP-10G-ZR
LED	"Status" LED indicates board status "Replace" LED indicates whether board needs to be replaced due to hardware failure
Environmental	- Operating temperature (nominal): 32 to 104°F (0 to 40°C) sealevel - Operating humidity (nominal) (relative humidity): 5 to 85% - Operating humidity (short-term): 5 to 90% **Note:** Not to exceed 0.024 kg water per 1 kg of dry air. - Storage temperature: -40 to 158°F (-40 to 70°C) - Storage (relative humidity): 5 to 95% **Note:** Not to exceed 0.024 kg water per 1 kg of dry air. - Operating altitude: -60 to 4000m
Regulatory compliance	Safety - UL/CSA/IEC/EN 60950-1 2nd Ed. - United States, Canada, Europe - AS/NZS 60950.1 - Australia - EN60825/IEC 60825 Laser Safety - FDA - Code of Federal Regulations Laser Safety Electromagnetic Emissions Certification - EN50083-2 - Europe - KN 32 Class A - Korea - FCC Part 15 Class A - United States - ICES 003 Class A - Canada - AS/NZS Class A - Australia - CISPR 22 Class A - Europe - EN55022 Class A - Europe - VCCI Class A - Japan - CNS13438 Class A - Taiwan - IEC/EN61000-3-2 Power Line Harmonics - Europe - IEC/EN61000-3-3 Voltage Fluctuations and Flicker - Europe

Description	Specification
	Immunity • EN50083-2 - Europe • CISPR 24 - Europe • KN 35 - Korea • IEC/EN61000-4-2 Electrostatic Discharge Immunity (8kV contact, 15kV air) • IEC/EN61000-4-3 Radiated Immunity (10V/m) • EC/EN61000-4-4 Electrical Fast Transient Immunity (2kV power, 1kV signal) • IEC/EN61000-4-5 Surge AC Port (4kV CM, 2kV DM) • IEC/EN61000-4-5 Surge Signal Port (1kV) • IEC/EN61000-4-5 Surge DC Port (1kV) • IEC/EN61000-4-6 Immunity to Conducted Disturbances (10Vrms) • IEC/EN61000-4-8 Power Frequency Magnetic Field Immunity (30A/m) • IEC/EN61000-4-11 Voltage Dips, Short Interruptions, and Voltage Variations Network Equipment Building Standards The system is designed to meet the following Networking Equipment Building Standards (NEBS): • NEBS Level 3, Bellcore: GR-63-CORE, GR-1089-CORE European Telecommunication Standards Institute (ETSI) • EN 300 386 Telecommunications Network Equipment (EMC) • EN50083-2 Cable networks for television signals, sound signals and interactive services • EN55022 Information Technology Equipment (Emissions) • EN55024 Information Technology Equipment (Immunity) • EN61000-6-1 Generic Immunity Standard • EN61000-6-2 Generic Immunity Standard for Industrial Environments
Network Management Information	• ENTITY-MIB • IF MIB • CISCO-ENTITY-ALARM-MIB • CISCO-ENTITY-ASSET-MIB • CISCO-ENTITY-FRU-CONTROL-MIB • CISCO-ENVMON-MIB
Software Release	• Cisco IOS® Software Release IOS XE 16.5.1 or later

System Requirements

Table 3. System Requirements

Item	Details
Software	Cisco IOS® Software Release IOS XE 16.5.1 or later

Ordering Information for Cisco cBR-8 8x10G Digital Physical Interface Card

Table 4. Ordering Information

Product Description	Part Number
Cisco cBR Series 8x10G Remote PHY Digital Physical Interface Card	CBR-DPIC-8X10G
Cisco cBR Series 8x10G Remote PHY Digital Physical Interface Card, spare	CBR-DPIC-8X10G=

Warranty Information

The Cisco cBR Series 8x10G Remote PHY Digital Physical Interface Card has a 1-year limited liability warranty.

Cisco and Partner Services

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For More Information

For more information about the Cisco cBR-8 Converged Broadband Router and Remote PHY deployment, visit http://www.cisco.com/c/en/us/products/video/cbr-series-converged-broadband-routers/datasheet-listing.html or contact your local account representative.

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