PRODUCT DATASHEET

BLM 1500 GP8 GPON Line Card

DESCRIPTION

The GP8 supports eight G.984-compliant GPONs, each with a capacity of 2.5 Gbps downstream and 1.2 Gbps upstream and a reach of 12.4 miles (20 km). The GP8 works in conjunction with the BLM1500™ Pluggable GigE (E28) boards to support native Ethernet switching across the BLM 1500 OLT. The BLM 1500 supports up to 1:64 split ratio for the PON, in addition to dynamic bandwidth allocation (DBA) for superior bandwidth utilization.

KEY ATTRIBUTES

HIGH-DEFINITION IPTV SERVICES: The GP8 board uses embedded multicasting to guarantee "instant" channel change performance regardless of the network size and load, making it ideal for the roll out of triple-play services over PON. It uses PON multicasting to optimize network efficiency by allowing multiple ONTs to join the same video multicast group in the same PON.

The GP8 board supports Gigabit speeds that enable sophisticated highbandwidth IPTV services including Digital Video Recording (DVR) combined with HD programming and online gaming. The GP8 board embeds a full IGMP stack, allowing the IGMP protocol to be terminated as close to the consumer as possible.

EASY MIGRATION TO AN ALL-IP NETWORK WITH SUPPORT FOR LEGACY SERVICES: Voice, video, TDM, and data services are packetized by the ONT or ONU and transported over the PON to the BLM 1500 using GPON Encapsulation Method (GEM), which provides superior bandwidth efficiency.

IDEAL FOR DEPLOYING GPONS ON A MASSIVE SCALE: The GP8 board interoperates with the Ericsson T-series ONT/ONUs and other G.984-compliant ONTs. Up to 14 GP8 boards can be housed in a single BLM 1500 chassis with redundant uplinks allowing connections of up to 7168 ONTs. This makes it possible to serve thousands of customers from a single chassis in the central office.

EASY MANAGEMENT: The BLM 1500 uses the standards-compliant OMCI to manage the ONT and ONUs. A BLM 1500 OLT system can be provisioned and managed manually through the EntriView™ EMS, or automatically via flow-through provisioning.

Network operators can use existing OSSs to integrate the PON network into existing back-office systems, or to transition to new network management architectures and systems.

ORDERING INFORMATION

Calix BLM 1500 GP8 GPON Line Card

100-03597..... PACK, GP8, 8-PORT GPON optical line terminal

Calix

SPECIFICATIONS

BLM 1500 GP8 GPON Line Card

GENERAL FEATURES

COMPLIANCE

ITU-T G.984 (GPON specification)

LAYER 2 PROTOCOL

Ethernet over GPON Encapsulation Method (GEM)

DYNAMIC BANDWIDTH ASSIGNMENT (DBA)

Enables on-demand allocation of unused upstream PON bandwidth

DOWNSTREAM SECURITY

Provisionable 128-bit Advanced Encryption Standard (AES) encryption algorithm

FORWARD ERROR CORRECTION

Provisionable FEC

IP ANTI-SPOOFING

Upstream IP over Ethernet traffic

OPTICAL INTERFACE

Class B+ ODN with 28 dB loss budget
Class C+/FEC ODN with 32 dB loss budget

TRANSMITTER

Wavelength: 1480 to 1500 nm
Data Rate: 2488.32 Mbps

RECEIVER

Wavelength: 1260 to 1360 nm
Data Rate: 1244.16 Mbps
Compatible with 1550 nm downstream RF video overlay

IPTV

Embedded IGMP stack with on-board hardware-based multicasting

APPLICATIONS

Central office or remote terminal solutions for residential and business class voice, data and video

PHYSICAL SPECIFICATIONS

DIMENSIONS

HxWxD: 400 x 23 x 260 mm
(HxWxD: 15.75 x 0.91 x 10.25 in)

WEIGHT

1.1 kg (2.5 lb)

POWER REQUIREMENTS

Typical: 96W
Maximum: 108W

OPTICAL CONNECTORS

Eight SFPs

STATUS INDICATORS

Board LEDs
FAULT—Indicates whether the board has an equipment fault
MAINT—Indicates whether the board is removed from service
IS—Indicates whether the board is functioning normally

PORT LEDS

Laser ON LED for each laser
GREEN—indicates that the laser is active
AMBER—indicates that a fault is detected

ENVIRONMENTAL SPECIFICATIONS

ENVIRONMENTAL COMPLIANCE

GR-63-CORE (NEBS Level 3)

OPERATING TEMPERATURE

Rack-mount:
Operating: 41°F to 104°F (5°C to 40°C)
Short-term: 23°F to 131°F (–5°C to 55°C)

STORAGE TEMPERATURE

–40°F to 158°F (–40°C to 70°C)

HUMIDITY

Operating: 5% to 85% (non-condensing)
Short-term: 5% to 90% but not to exceed 0.024 kg water/kg of dry air

OPERATING ALTITUDE

Minimum: 61m (200 ft.) below sea level
Maximum: 4,000m (13,100 ft.)

SAFETY

UL 60950
CAN/CSA-C22.2 No. 60950-00
EN 60950
IEC 60950

LASER

Class I Laser
ITUT G.664
IEC 60825-1 and -2

IMMUNITY

GR-1089-CORE (NEBS Level 3)
EN 300 386

EMISSIONS

F CC Part 15 (Class A)
GR-1089 (NEBS Level 3)
EN 300 386