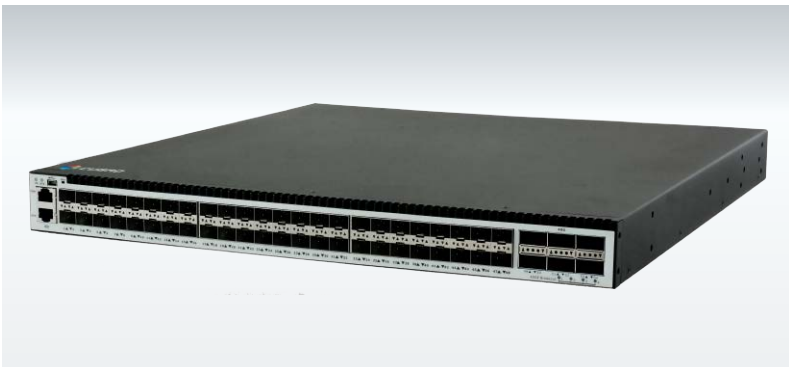


Cubro Packetmaster EX484-3

PRODUCT OVERVIEW



The Packetmaster EX484-3 is a network packet broker and network controller switch that aggregates, filters and load balances network traffic sent to network monitoring, security and management tools. The EX484-3 allows you to filter and load-balance traffic from 10 or 40-Gbps link to multiple 1-Gbps monitoring tools or aggregate multiple 1-Gbps links to 10 or 40-Gbps monitoring tools. The EX484-3 also supports traffic modification as well as changing, removing and adding VLANs.

Functions / Benefits:

- **Lifetime of rules:** Rules can be set with a live time counter, if the counter becomes 0 the rule will be removed automatically
- **Generate sFLOWS CDRS:** The EX484-3 can send standard sFlow CDRS to collector devices to monitor the traffic processed by the EX484-3. These devices can produce graphs and SNMP traps for northbound signalization.
- **Load balancing:** L2 / L3 hash based load balancing, up to 15 load balancing groups.
- **GRE Tunnel support:** The device can work as end device for a GRE tunnel, for back hauling applications.
- **AAA Radius support:** User identification
- **VXLAN Tunnel support:** The device can work as end device for a VXLAN tunnel, for back hauling applications.
- **Stacking of units:** One Packetmaster can control several other Packetmasters. This gives the possibility to extend the amount of ports per unit.

Network Packet Broker (NPB) At a glance

Definition

A network packet broker (NPB) is a tool that receives data from a number of network links, duplicates, aggregates and filters that data for the monitoring tools.

Advantages of EX484-3

- Filters and load-balances traffic from a 10 or 40-Gbps link to multiple 1-Gbps monitoring tools
- Aggregates multiple 1 Gbps links to 10 or 40-Gbps monitoring tools
- Supports traffic modification as well as changing, removing and adding VLANs
- No additional software costs, all applications included in the unit price

Extended Functions:

The management host controller of every EX unit runs a full featured Debian Linux as operating system. On this host script languages like Python, Perl, TCL, or simple Linux shells are available to run 3rd party applications to extend the function of the Packetmaster. These applications can be developed by Cubro or the customer.

Examples:



A perl script collects counters and writes these counters in an external SQL Database for later analysis.



A python script reads files from a server and sets filters based on this changing data.



A python script changes the filters based on link load information from another Packetmaster.



A shell script pings different devices and changes filter rules based on ping response.

PRODUCT CAPABILITIES / FEATURES

Link/Port Aggregation	Aggregation many to any, and any to many at all link speeds
40 Gbps traffic de-multiplexer	If highly loaded 10 Gbps links have to be monitored, the traffic can be easily de-multiplexed into 24 low traffic 10 Gbps links.
Session aware load balancing	Layer 3 and 4 selectable with configurable hash
Packet slicing in lines speed	Configurable 64-144 byte
Jumbo Frame Support	The Packetmaster supports jumbo Ethernet frames with a size of up to 12000 bytes
Ports	48 x 10 Gbps/1 Gbps and 6 x QSFP + 40 Gbps 1 x 10/100/1000 Base-T (Management) 1 x RS232 Console
Configuration / Communication	Telnet and SSH
Bandwidth	1440 Gbps backplane 1500 million Packets per sec
Aggregation latency	Average 1 μ s for 64-byte frames
MTBF	198.185 hours
Power	1100-240 VAC dual power supply (DC power module available)

TECHNICAL DATA / SPECIFICATIONS:



Operating specifications:

Operating Temperature: 0°C to 40°C
 Storage Temperature: -10°C to 70°C
 Relative Humidity: 10% min, 95% max
 Non-condensing

Mechanical specifications:

Dimension (W X D X H): 484 X 490 X 43 mm
 Weight: 9,4 kg

Electrical specifications:

AC:
 Input Power: 100-240V, 2A, 47-63 Hz
 Maximum Power Consumption: 350W
 DC:
 Input 36-75V, 16A
 Maximum Power Consumption: 400W

Certifications:

Fully RoHS compliant
 CE compliant
 Safety - UL 60950-1 / CSA C22.2 60950-1-07 / IEC 60950-1 (2005) EN 60950-1 (2006)

INPUTS*

48 x 1 Gbps / 10 Gbps full duplex SFP Ports for any kind of SFP/SFP+
 6 x 40 Gbps full duplex QSFP Ports for any kind of QSFP/QSFP+

* Each port can be input and / or output depending on the application and configuration

OUTPUTS*

48 x 1 Gbps / 10 Gbps full duplex SFP Ports for any kind of SFP/SFP+
 6 x 40 Gbps full duplex QSFP Ports for any kind of QSFP/QSFP+

* Each port can be input and / or output depending on the application and configuration

PERFORMANCE

Performance up to 1440 Gbps
 1500 million packets/sec
 Non-blocking design
 Boot time from power on to working 180 sec
 Packet delay through processing constant at 700 ns

MANAGEMENT

Management Port: (1) RJ45
 10/100/1000 Mbit Configuration (CLI) Port: (1) RS-232 DB9
 USB for software update

INDICATORS

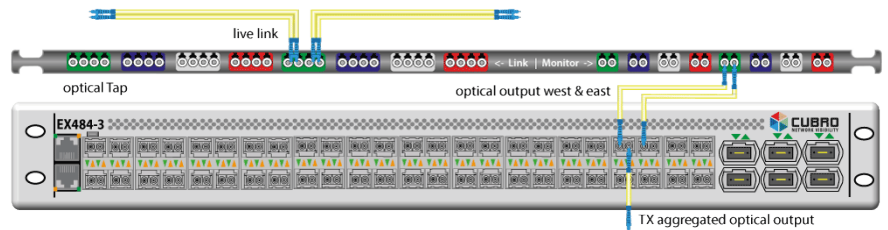
Per RJ45 port: Speed, Link/ Activity
 Per SFP+ port: Status, Rx, Tx, Link
 Per Device: Power, Status
 Per SFP+ port: Status, Rx, Tx, Link
 Per Device: Power, Status

APPLICATIONS / SOLUTIONS



Aggregation

Traffic aggregation from many input ports to one or many output ports. This works also with different link speed up to 40 Gbps.



Preamble	Destination Mac Address	Source MacAddress	Type	Vlan	Vlan PCP	MPLS
Version	IHL	Type of Service	Total Length			
Identification			Flags	Fragmentation Offset		
Time to Live	Protocol	Header Checksum				
Source-Address						
Destination-Address						
Options					Padding	
Source Port			Destination Port			



Filtering

4500 flow rules (filters) can be set in the unit. The red dot marked fields can be used as a match for a packet, stand-alone, combined or with wild cards. For IP Src and IP Dst super nets are supported.



Load balancing

L2 / L3 hash based load balancing, up to 15 load balancing groups.

ORDERING INFORMATION

Part Number	Description
CUB.PM-EX484-3	Packetmaster EX484-3, 48x10G and 6x40G Network Packet Broker
CUB.PM-DC-C	DC Power supply module for CUBRO Packetmaster EX20400/48400/484-3
CUB.RR19-1U	Universal Rackrail Kit for 1U 19" units (Packet/Sessionmaster)

Product Components:

- Packetmaster EX484-3
- AC, DC power modules available
- Europe/US/UK power cords available

For more information please check our website www.cubro.com