

Cubro Packetmaster EX 484-3

Version 1.3 May, 2016



The Packetmaster EX 484-3 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. Packetmaster EX 484-3 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. Packetmaster EX484-3 also supports traffic modification as well as changing, removing and adding VLAN's.

No additional software costs all applications included in the unit price.

Extended Function:

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, TC L, 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 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 informations from a other packetmaster.



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

Functions & Features

Link/Port Aggregation

Aggregation many to any, and any to many at all link speeds

40 Gbps traffic demultiplex

If highly loaded 10 Gbps links have to be monitored the traffic can be easily demultiplex-ed into 24 low traffic Gbps links.

Session aware load balancing

layer 3 and 4 selectable with configurable hash

Packet slicing in lines peed

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
6 x QSPF+ 40 Gbps
1 x 10/100/1000 Base-T (Management)
1 x RS232 Console

Configuration / Communication

Telnet and SSH

Bandwidth

1280 Gbps backplane
1500 million Packets per sec

Aggregation latency

Average 1 μ s for 64-byte frames

MTBF

198,185 hours

Power Versions

230 V AC dual power supply

Operating Temperature

0 to 45°C

Operating Humidity

90% maximum relative humidity

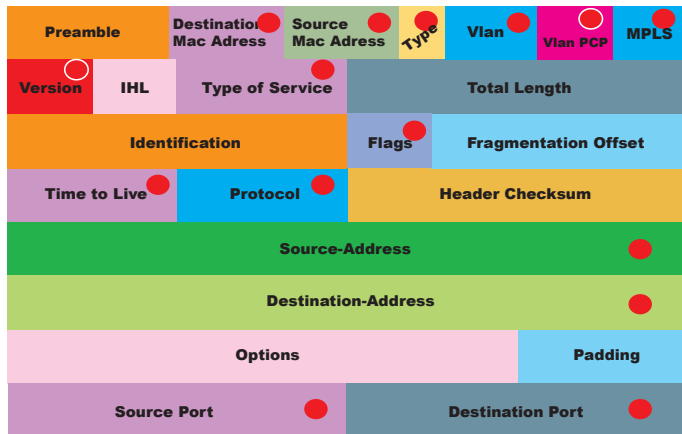
Dimension

W=435.00 mm, L=393.70 mm, H=42.80 mm

General Functions

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

Filtering: 2048 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.

Available actions functions after a positive match are:

Send out: to one or more ports - even the same as the input is possible.

Drop: delete the specific packet

Modify: modify specific fields in the matched packets, VLAN, MPLS, MAC SRC, MAC DST, PORT, VLAN Priority and some more.

Add VLAN: The unit can tag a VLAN on the input to separate the traffic after aggregation

Strip VLAN: VLAN can be removed, Q in Q is supported

Add MPLS: Add an MPLS Tag to a matched packet

Strip MPLS: Remove an MPLS Tag from a matched packet

Stacking of rules: this function gives the option to generate very complex filter rules.

Lifetime of rules: Rules can be set with a live time counter, if the counter becomes 0 the rule will be removed automatically

Generate nFLOWS and sFLOWS CDRS:

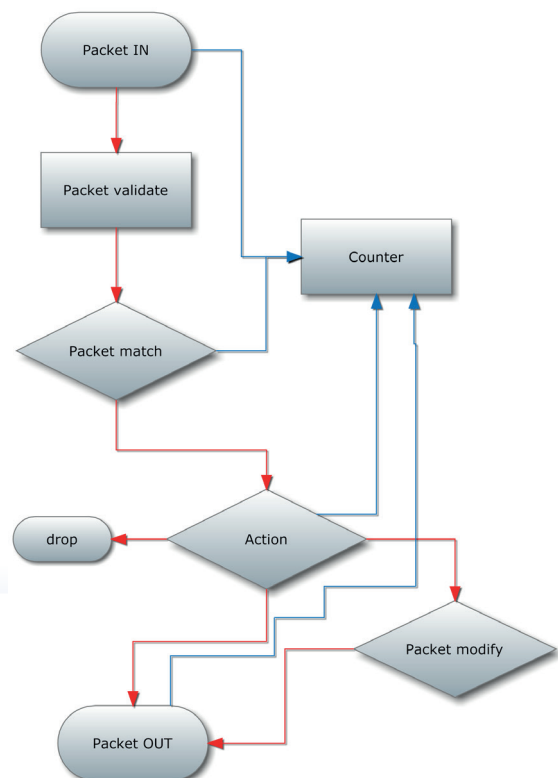
The EX484-2 can send standard nFlow or sFlow CDRS to a collector devices to monitor the traffic processed by the EX 484-2. These devices can produce graphs and snmp traps for northbound signalization.

GRE/VXLAN Tunnel support: The device can work as end device for a GRE/VXLAN tunnel, for back hauling applications.

Load balancing: L2 / L3 hash based load balancing, up to 10 load balancing groups.

AAA Radius support: user identification

Stacking of units: one Packetmaster can control several other Packetmaster. This gives the possibility to extend the amount of ports per unit.



Technical Data



48 x 1/10 Gbit SFP

6 x 40 Gbit QSFP



Rule Name	Rule Priority	Outstate	In Port	Protocol	VLAN	MAC Src	MAC Dst	IP Src	IP Dst	Prot. Src	Prot. Dst	ICMP Type	ICMP Code	Actions	Packets	Bytes	Duration	Table	TCAM Flows	
HLR_2	32768		1-4	ip				117.10.10.20	20.20.20.20					output-6	0	0	0	544278.648s	0	4
HLR_1	32768		1-4											output-6	0	0	0	544883.297s	0	4
MSGW_1	32768		1-4	udp				10.10.10.10		UDP	1508			output-5-6	0	0	0	696314.656s	0	4
MSGW_2	32768		1-4	udp				10.10.10.10		UDP	1508			output-5-6	0	0	0	696314.656s	0	4
DPI_2_1	50000		1-4	udp				10.10.17.17		UDP	601			output-5-6	0	0	0	542825.952s	0	4
DPI_2_1	50000		1-4	udp				10.10.17.18		UDP	601			output-5-6	0	0	0	269613.502s	0	4
DPI_1	32768		1-4											drop	0	0	0	1948.01s	0	1
DPI_1	32768		1-4			101								drop	0	0	0	543649.434s	0	4
MSGW_3	32768		1-4			33								drop	0	0	0	534567.736s	0	4
GGSN_1_1SP	32768		2-5			123-129								output-5	0	0	0	843838.256s	0	10
GGSN_1_1SP	32768		3			601-604								output-2	0	0	0	643642.786s	0	4
DPI_2	32768		1-4	ip				15.15.15.15						output-5	0	0	0	542926.039s	0	4
Proxy1	40000		1-4	udp						UDP	80			drop	0	0	0	696095.493s	0	4
Proxy1	40000		1-4	tcp						TCP	80			drop	0	0	0	696237.576s	0	4
Proxy1	32768		1-4	tcp						TCP	80			drop	0	0	0	696027.914s	0	4

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 or / and output depending on the application and configuration

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:

- Dimensions (H x W x D): 42.8 x 435 x 393.7 mm
- Weight : 9.4 kg

Electrical Specifications:

- Input Power: 100-240V, 2A, 47-63Hz
- Maximum power consumption: 350W

Certifications

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

Performance

- Performance up to 1280 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 Mbit
- Configuration (CLI) Port: (1) RS-232 DB9
- Micro USB for Update

Indicators

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