

OMX3200

Optimized Multi-Terabit Visibility for 100/40/10G Networks



Line-Rate Packet Optimization for Monitoring Next-Gen Optical Networks

Increased network traffic being driven by the rise of mobility, IoT and cloud computing is causing major challenges for the network monitoring and cyber intelligence communities.

Network security and mass surveillance applications require deep network traffic visibility in order to identify threats and minimize network vulnerabilities. Standard network visibility solutions using x86 platforms and white box switches cannot keep up with blazing transport speeds as networks transition to 100G+ interfaces carrying traffic with deep IP protocol stacks. Programmable HW-based processing is required for packet optimization and metadata generation, effectively offloading the downstream traffic visibility tools.

The OMX3200 leverages the latest in FPGA technology to deliver a modular, high-density packet processing platform for visibility across 100G+, 40G and 10G Ethernet and OTN networks. The OMX utilizes advanced algorithms to remove transport protocols and generate flow-level metadata while filtering out unnecessary traffic so that IP packets of interest are optimally delivered to the appropriate downstream tools for further analysis.

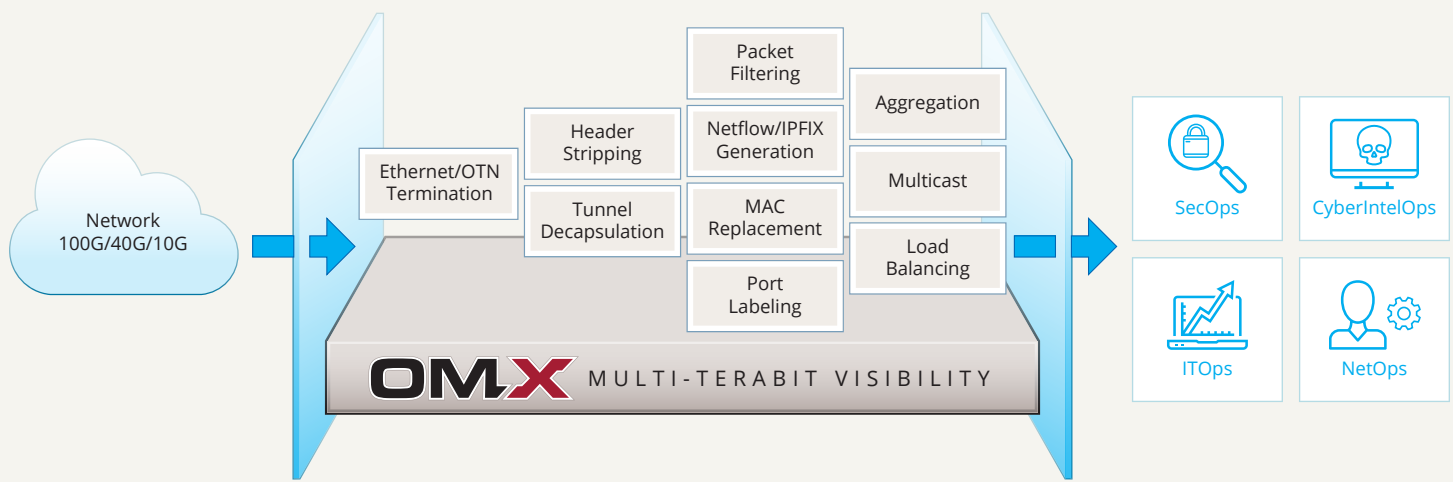


Key Features

- Header Stripping – Mass removal of VLAN tags and MPLS labels
- IP De-tunneling – Access inner IP packets by removing multiple layers of IP tunnels including GTP, GRE and IP-in-IP
- Advanced Traffic Filtering
- WAN Access – Support for OTN and coherent network interfaces
- Packet Slicing
- Port Tagging, MAC Replacement
- Traffic Aggregation
- Flow-level metadata generation

Key Benefits

- Optimize tool utilization by processing network headers and optical transport protocols
- Improve visibility solutions by only passing traffic of interest
- Offload advanced packet processing functions from costly network packet broker solutions
- Enable migration to cost effective white box monitoring switches



Header and Protocol Stripping

The OMX3200 automates the identification and removal of transport wrappers used to route IP packets through the network. This includes removal of VLAN tags, MPLS labels and common IP tunneling protocols such as GTP, GRE and IP-in-IP. The OMX can de-tunnel the traffic and remove the tunnel headers so that the innermost IP packet is extracted and forwarded to the appropriate monitoring tool. The OMX will report detailed statistics on the headers and tunnels that have been removed.

Line-Rate Filtering

The OMX supports advanced filtering rules that can be customized for optimizing compute resources in the security and visibility tools. Traffic can be forwarded or discarded based on basic 5-tuple information or more advanced application level identification algorithms.

WAN Access

The OMX supports WAN-to-LAN conversion and packet processing of Ethernet streams carried over OTN and coherent networks. This includes support for native 100GbE, OTU4, 10GbE and OTU2/2e/1e.

Packet Slicing

By removing unnecessary payload information and reducing the packet size, packet slicing sends the monitoring tools only what is needed. This protects sensitive user data from being shared with analytic tools and also increases general tool efficiency by reducing packet sizes by up to 75%.

Traffic Aggregation

The OMX supports aggregation of monitored traffic to efficiently pass traffic to tool ports. The OMX can identify the network origin of each packet for the downstream visibility tool by inserting custom VLAN tags and/or replacing source and destination MAC addresses.

SPECIFICATIONS

Processing

100G Ports	32 (max)
40G Ports	24 (max)
10G Ports	96 (max)
OTN Transponder	100G OTU4, 10G OTU2/2e/1e
Header Stripping	VLAN, VXLAN, MPLS
Protocol De-Tunneling	GTP, GRE, IP-in-IP
Traffic Filtering	Positive/Negative L2-L4 filtering Pattern Matching
Additional processing features	MAC tagging, Port labeling, Packet slicing
Traffic Aggregation	Any-to-any switching within processing module plus load balancing
Flow-level Metadata	NetFlow/IPFIX

Chassis

Chassis Height	1U
Size	1.75" H x 17.37" W x 27" D 4.45cm H x 44.1cm W x 68.6cm D
Weight	35 lbs (15.8 kg)
Power Consumption	520W (typical)
Power Supplies	Dual AC or DC (load-sharing)
Cooling	Front to Rear Airflow
Operating Temp	0° – 40° C
Humidity	10 – 90% non-condensing
Compliance	FCC, UL, CE, RoHS

Management

Physical Ports	1 RJ45 for network connectivity 1 Micro USB for CLI
Protocols supported	REST API, Telnet, SSH, GSCP, SNMP
Alpine Patrol Support	EMS and Embedded GUI

Optics Interfaces

100G	QSP28
40G	QSFP+
10G	QSFP+ 4x10G MPO
100/200G Coherent	CFP2-DCO