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 effectively offloading the downstream traffic visibility tools or for high performance 100G Netflow/IPFIX metadata generation.

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 while filtering out unnecessary traffic so that IP packets of interest are optimally delivered to the appropriate downstream tools for further analysis.

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

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
- Netflow/IPFIX 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
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.