

UEP3808 OLT Product Overview



The UEP3808 OLT is a new generation disaggregated XGS-PON/Combo PON/GPON OLT white box that can be with complete software or as white box for integration with SDN virtual OLT software.

As a white box OLT, it provides open interfaces for all control and management functions for easy integration into an SDN and NFV environment and equipped with Intel ATOM environment. It includes a commonly used Linux platform for developers to build their code or to install existing software developments easily. This approach allows telecom service providers to pace their own developments and extend them to their access networks without waiting for lengthy standardizations by international entities or for the vendor to fit new customized or proprietary feature requests into tight software roadmaps. This in turn lets providers avoid vendor lock-in and build, develop, or integrate software and functionality at will.

Access Network architectures commonly use monolithic devices where the control and forwarding planes are hosted on the same device. By disaggregating the control plane and forwarding plane, the ISP can control multiple OLT boxes as if they were cards in a chassis. They can employ a virtual controller to fit any subscriber density, freely adding ports as their network grows without the limitations of a fixed sized chassis.

It can also be used as a traditional XGS-PON OLT; the relevant features are also included in this document.

Product Highlights

- Up to 16 x XGS-PON ports, 8 x CPON ports, or 16 x GPON ports
- Two delivery options:
 - Complete OLT solution with software or
 - Disaggregated white box OLT
- Integrated switch to handle fully compliant OLT services:
 - IGMP
 - QoS
 - BGP
 - MPLS
 - RIP
- 4K VLAN entries

Key Benefits

Control and forwarding plane separation

Hardware acceleration of forwarding data, while control functions are kept running in the CPU for optimal performance

Advanced traffic management and QoS

H-QoS with three levels of traffic management and policing schemes

Flexibility to scale

Providers can add ports and OLT white boxes as needed to scale to as their network grows

Ready for NFV integration & acceleration

The UEP3808 OLT can integrate with and accelerate servers with NFV applications for mobile and access services

Specifications Table

Network Interface	
PON interface	4/8/16 x XGS-PON (10/10 Gbps), or 4/8 x CPON, or 16 x GPON configurations (All configurations use the same design with different pin-compatible FPGAs)
100 GbE Ethernet	2 x 100GbE QSFP+, compatible with 40G SFP
25 GbE Ethernet	6 x 10GE/25GbE SFP+, compatible with 10G SFP
Local Management Interface	
Console	RJ-45 EIA/TIA-232 console management port
MGMT	1000BASE-T out-band management port
Other Interface	
GPS	1PPS and TOD input interface
USB (optional)	1 x USB 2.0 interface
Alarm	4 alarm input and 1-alarm output
Performance	
Switching Capacity	820Gbps
Split ratio	1:128
XGEM port IDs	16K XGEM port-ids, 1024 T-CONT, 128 ONT per OLT port
T-CONTs	1024 + 128
DBA cycle	0.5mSec for large amount of ONUs or 0.25ms for below 32 ONUs per PON
Power Supply and Consumption	
Power Adaptor	AC Input: 100-240V, 50/60 Hz; DC Input: 36V-75V
Redundancy Design	Pluggable double power supply, double AC, double DC and AC+DC
Consumption	<200 W
Environmental Conditions	
Storage	Temperature -10 to 70°C, rel. humidity 10–90% (non-condensing)
Operation	Temperature 0 to 45°C, rel. humidity 10–90% (non-condensing)
Physical Specifications	
Dimensions	440mm × 400mm × 44mm (W * D *H)
Weight	< 10KG

Features List

Ethernet Switching (L2)

- VLAN
 - 4K VLAN entries
 - Port-based QinQ and Selective QinQ (Stack VLAN)
 - Port-based/MAC-based/IP subnet-based VLA
- Spanning Tree
 - IEEE 802.1x STP/RSTP/MSTP
 - ONU remote loop detection
- MAC
 - MAC Black Hole
 - Port MAC limit
 - 64K MAC address
- Port
 - Bi-direction bandwidth control
 - Port mirroring and traffic mirroring

Service Features

- Multicast
 - IGMPv1/v2/v3
 - IGMP Snooping/Proxy
 - IGMP filtering
- QoS
 - Base on port or user-defined rate limitation
 - Base on port or user-defined priority tag, provide 802.1P, DSCP tag ability of priority
 - Base on port or user-defined high grade queue scheduling
 - Priority queues and scheduler of SP, WRR and SP+WRR.
 - Congestion avoidance system

Security

- User security
 - Anti-ARP-spoofing deceive defend
 - Anti-ARP-flooding flooding attack automatic control
 - IP MAC port and VLAN binding
 - Port isolation
 - TACACS+ Authentication
- Device security
 - Defend DOS attack
 - Security IP login through Telnet
 - Hierarchical management and password protection of users
- Network security
 - IP address VLAN ID MAC address and port manual binding
 - Port broadcast /multi broadcast restrain
 - Base on source/destination MAC address,VLAN,802.1p, ToS, DiffServ, source/destination IP(IPv4/IPv6) address, TCP/UDP port number protocol type of IP package flow classify and flow defined regulation management, support package header 80 byte depth L2-L7 ACL flow filtrate
 - Dynamic ARP table-based binding
 - DHCP Option82 and PPPoE+ upload user's physical location
- Network management
 - Command-line interface (CLI, Console, Telnet and WEB configuration)
 - RMON (Remote Monitoring)1/2/3/9 groups of MIB
 - System configuration with SNMPv1/v2/v3
 - NTP (Network Time Protocol)
 - NMS3000 network management

Ordering Information

Product Name	Product Description
UEP3808XP	16 XGS-PON interfaces
UEP3808XH	8 XGS-PON interfaces
UEP3808XD	4 XGS-PON interfaces
UEP3808CH	8 CPON interfaces
UEP3808CD	4 CPON interfaces
UEP3808GP	16 GPON interfaces
ET3808AC	AC Power module for 30XG-16
ET3808DC	DC Power module for 30XG-16

All configurations use the same design with different pin-compatible FPGAs