

FTTx ONU Solution

C4000



Features

- Support both 1G-EPON and 10G-EPON
- Dual Redundant Power Supply
- Battery Back-up Port
- Embedded 1:2 & 1:16 splitter
- SC/APC connector, 20Km Optic Module
- Up to 256 MAC addresses
- High speed Internet service, Multicast IPTV Service
- LD Shutdown (Automatic)
- QoS & CoS Features
- Compliant with 10/100/1000BASE-PX20 according to YD/T 1475-2006-EPON.
- IEEE 802.3av 10G-EPON and 802.3ah 1G-EPON compliant
- DPoE v1.0 & 2.0
- In band management for the cards with MNG card(TBD)

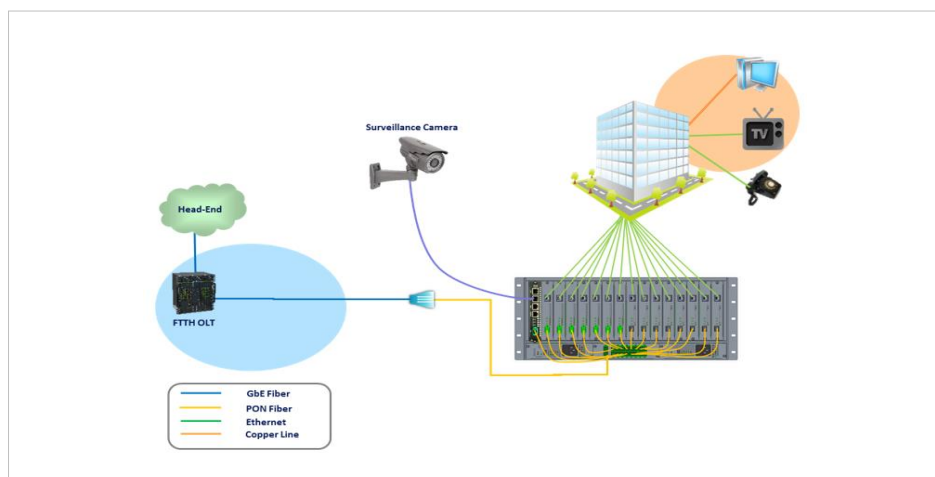
System Overview

The C4000 DPoE Chassis ONU is a collection of ONU products in a chassis-based platform, designed for use in MDUs that are already wired with UTP cables.

The C4000 ONU features support for the DPoE 1.0 and 2.0 standards. It can be operated and maintained from the headend, and fully supports service provisioning and billing. The chassis houses an optical splitter to allow easy access and proper cable management. Two C4000 ONUs can be coupled together in a daisy chain fashion using an embedded splitter, with a split ratio of 1:2.

For high availability, power supply modules can be configured in redundant mode with two SMPs using AC input. Reliability can be further ensured with backup power supplies, such as batteries or UPSs.

Deployment Diagram



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Specification

HW Specification

System Architecture & Console

- Shelf type chassis (19 comprising modules)
- 16 ONU card slots
 - XG1T for 10G-EPON
 - : SFP+ Pluggable optic module
 - : Redundant Fan Module
 - : Fan runs on temperature conditions
 - + Below 45°C : no operation
 - + 46°C - 50°C : runs for 1 minute, stops for 3 minutes
 - + 51°C - 55°C : runs for 2 minutes, stops for 2 minutes
 - + 56°C - 60°C : runs for 3 minutes, stops for 1 minute
 - + Above 61°C : 1 fan runs nonstop.
 - 1G1T for 1G-EPON
 - : SC/APC SFF pig-tail optic module is embedded
- 2 Power supply modules
 - Active-Active redundant architecture
 - AC 100 ~ 240V, 50Hz/60Hz
 - 200 Watt capacity per module
- 1 Embedded splitter
 - 1:16 split ratio
 - 1:2 daisy chain port
- Battery backup for reliable operation
 - 48Vdc power source connection

Physical Dimension

- 440.0mm(W) x 220.0mm(H) x 250mm(D)
- 19 inch Rack Mount, 5 RU height

Weight

- Chassis only: 8.9 Kg (19.6 lb)
- PSM-AC: 1.36 Kg (2.9 lb)
- XG1T card: 0.3 Kg (0.7 lb)
- 1G1T card: 0.2 Kg (0.5 lb)
- Splitter case: 0.8 Kg (1.8 lb)
- Fully loaded with 16 XG1T cards: 17.6 Kg (38.8 lb)
- Fully loaded with 16 1G1T cards: 16.5 Kg (36.4 lb)

Environment Condition

Input power and frequency

- AC 100 ~ 240V, 50Hz/60Hz

Power Consumption

- Max. 170W (@ 50°C)

Operating Temperature

- 0°C ~ 50°C

Humidity

- 5 ~ 95%

Management Interfaces

- TBD

Services and Features

Standard

- IEEE 802.3av 10G-EPON and 802.3ah 1G-EPON compliant

EPON

- IEEE802.3ah MPCP, OAM compliant
- 802.1Q VLAN
- Per LLID Filtering/Classification
- Supports up to four Logical Link IDs (LLID)
- AES-128 Downstream decryption
- Automatic Plug and Play function for WAN PON Port (Discovery and Authorization)

Layer 2

- IEEE802.1Q VLAN
- IEEE802.1D Spanning Tree Protocol
- Support up to 256 MAC Address

Multicasting

- IGMP v1/v2, IGMP proxy/snooping for IPTV service

QoS

- IEEE802.1P
- Packet classification and marking (802.1P)
- Rate limiting

Security & Filtering

- MAC address limiting

Technical Standard and Protocol

- IEEE Std 802.3™-2002 Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications
- IEEE Std 802.1D, 1998 Edition Media Access Control (MAC) Bridges
- IEEE Std 802.1Q, 2003 Edition Virtual Bridged Local Area Networks
- IEEE Std 802.1w-2001 Media Access Control (MAC) Bridges — Amendment 2: Rapid Reconfiguration
- IEEE Std 802.1s™-2002 Virtual Bridged Local Area Networks— Amendment 3: Multiple Spanning Trees
- IEEE Std 802.1X-2001 Port-Based Network Access Control
- IEEE Std 802.3ah.-2004 Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications Amendment:
- Media Access Control Parameters, Physical Layers, and Management Parameters for Subscriber Access Networks
- IEEE P802.1ad/D6.0 Draft Standard for Local and Metropolitan Area Networks—Virtual
- Bridged Local Area Networks — Amendment 4: Provider Bridges