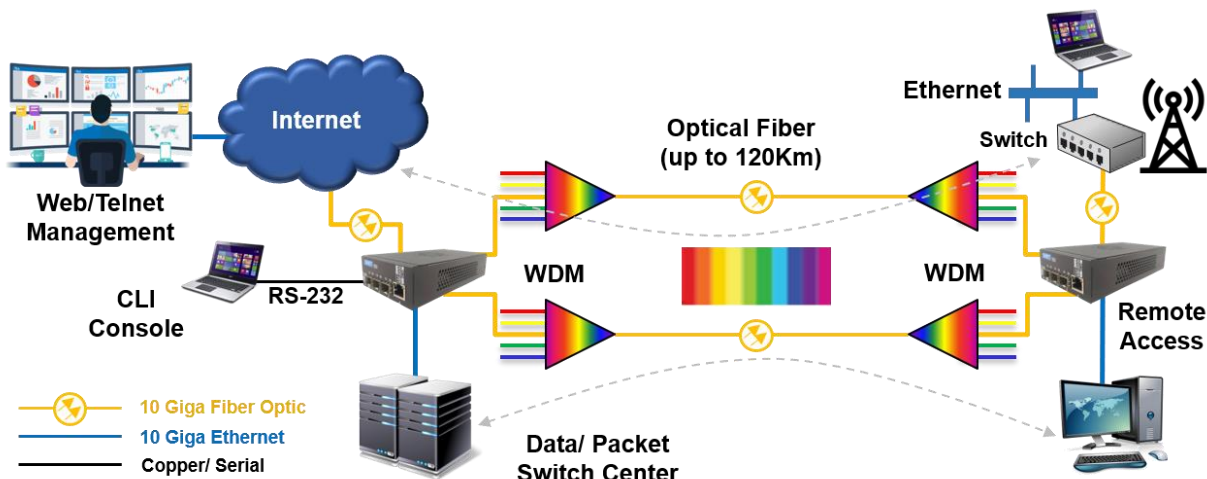# ENTU 783

10G Optical MDC/ Switch

- One Copper Interface: Comply with IEEE 802.3u/ 802.3ab/ 802.3bz/ 802.3an standard as 100 Base-Tx/ 1000 Base-T/ N Base-T/ 10G Base-T (10M/ 100M/ 1G/ 2.5G/ 5G/ 10G), Auto Negotiation
- Three SFP+ Interface: Comply with IEEE 802.3z and 802.3ae standard as 100 Base-FX, 1000 Base-X and 10G Base-R, those use SFP+ to 10G Base-SR, 10G Base-LR, 10G Base-ER or 10G Base-ZR for different wavelength and transmission distance
- Compact size, four ports 10G switch in one mini box
- Support IEEE 802.3ah In-band OAM for remote management
- Comply with SFF-8472 industry-standard and support SFP DDM (Digital Diagnostics Monitoring)
- Support IEEE 802.3x Flow Control, Auto MDI/ MDIX
- Support cable diagnostics feature for copper wires
- Comply with IEEE 802.1q Tag based VLAN
- Support IEEE 802.1ad Q-in-Q function
- Maximum frame size 12Kbytes (Jumbo Frame)
- Ethernet bandwidth control (Rate Limit)
- Support LACP Port Trunking and RSTP for loop prevention
- Provide RMON counter, ACL, Mirror
- Automatic Laser Shutdown, LLCF and RFD for optical link protection
- Management by Web (HTTPs) and SNMP V1/ V2c/ V3 supported
- Report all alarm status to the designated NMS and computer terminal interface

ENTU 783 series is so called 10G fiber optical switch, or Ethernet Media Data Converter (MDC). The interface of ENTU 783 includes one 10G Ethernet port and three Optical SFP+ ports. With the physical quick setting dip switch on the back panel, the user can easily select from MDC mode to the Ethernet Switch mode. In order to interoperate with different line rates, it supports flow control which can send pause frames dynamically to control the transmitting rate so it won't be overwhelmed with data packets.

At the customer premise, ENTU 783 provides link protection, bandwidth combination and loop prevention. Deploying at the operators' network, SNMP and RMON feature allows the operators to monitor remotely. As the functions like Q-in-Q, it can separate each user's traffic while preserving the VLAN tag from the data. Overall, it is an ideal device to act as a demarcation point between the operators and the customers.

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Model

- ENTU 783S：Triple optical link 10G Ethernet NTU Standalone
- ENTU 783C：Triple optical link 10G Ethernet NTU card type

Network Interface：Small Form-factor Pluggable

- Connector type: Three SFP+
- Auto detection for 100 Base-FX, 1000 Base-X, 10G Base-R, SFP-1000 Base-T, SFP-10G Base-T
- Allow for 10G BASE-SR, 10G BASE-LR, 10G BASE-ER and 10G BASE-ZR in different transmission distance
- Automatic Laser Shutdown (ALS)
- IEEE 802.3ad Port Trunking: Bandwidth Aggregation by join the trunk hash
- Support SFP DDM (Digital Diagnostic Monitoring)：
  - Compliant with SFF-8472 SFP DDM (Digital Diagnostic Monitoring), include temperature, supply voltage, bias current, transmitted and received power
- For detailed wavelength and distance of SFP+ modules, please refer to SFP+ Transceivers datasheet

User Interface：Ethernet

- Connector type：One shield RJ-45 jack
- Auto-negotiation 10M/ 100M/ 1G/ 2.5G/ 5G/ 10G six speed
- Auto-MDI/ MDIX detection
- Support cable diagnostics feature for copper wires

Networking Function

- Link Fault Pass Through (LFPT)
- IEEE 802.3x Flow Control
- Rate Limit for Ethernet bandwidth control
- RMON counter
- Maximum frame size up to 12Kbyte (Jumbo Frame)
- Complies with IEEE 802.1p QoS
- DHCP & SNTP Client
- IEEE 802.1q Tagged based VLAN
- IEEE 802.1ad Q-in-Q
- IEEE 802.3az Energy Efficient Ethernet
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- Ethernet Loop detection and prevention
- Ingress and Egress Port Mirror (Duplicate traffics)
- Link Aggregation Control Protocol (LACP)

Management & OAM Functions

- Quick setup Port Trunking and protection mode via DIP switch
- Configure via craft CLI, Telnet (SSH), WEB (HTTPs) or SNMP V1/ V2c/ V3
- RJ45 connector (RS232C)：Craft port
- Web/ HTTP firmware upgrade
- Reset button back to factory default
- Support warning threshold for setting the upper and lower limit of optical parameters to send a warning message
- Support IEEE 802.3ah Link Layer OAM
  - Auto discovery
  - Link monitoring
  - Loopback test
  - Dying Gasp
  - Change remote IP
- Enhanced Login security check
  - Three access levels for administrator, operator, user, and operation log
  - Support login password complexity of 6 characters, lower and uppercase letters, digits, special symbols
  - Anti-camouflage attack mechanism：lock IP and delay login

LED Indicators

- PWR/ ALM, SFP+ LNK 1 ~ 3, LAN LNK

Certification

- ISO 9001 Quality Management
- CE Approval EN 55032, 55024, 61000-3-2, 61000-3-3

Power Requirement

- AC/ DC, DC/ DC external power adapter (12V, 2A)
- Power consumption < 18W

Dimension

- ENTU 783：89 (W) x 175 (D) x 37 (H) mm

Operating Environment

- Operating temperature：0 ºC ~ 50 ºC
- Storage Temperature：-20 ºC ~ 70 ºC
- Humidity：90%, non-condensing

Enterprise

AI Big Data Service

Voice Service

Data Center Core Switching Network

IoT Service

VLAN 1

VLAN 2

10G

CRAN Centralized Radio Access Network

vBBU + RRH

5G Base Station

10G

vBBU + RRH

5G Base Station

10G

10G

vBBU：virtualized Baseband Unit
RRH：Remote Radio Head

Wi-Fi Router

10G

5G Small/ Macro Cell

5G Base Station