Empowered by Innovation

NEC

OPTICAL LINE TERMINAL (OLT)

ME2100

CARRIER GRADE OPTICAL ACCESS PLATFORM

COMPACT GIGABIT ETHERNET PASSIVE OPTICAL NETWORK (GEPON) PLATFORM DELIVERS HIGH-SPEED VOICE, DATA AND VIDEO SERVICES TO RESIDENTIAL AND BUSINESS Subscribers

NEC's ME2100 Optical Line Terminal (OLT) provides a direct optical interface to the Ethernet/IP network core. Together with NEC's Optical Network Unit (ONU), it completes the end-to-end optical last mile with up to 1 Gbps of bandwidth to residential and business customers. Combining the economic benefits of Ethernet Passive Optical Network (GEPON) with built-in L2/L3 switching and routing functionalities, the ME2100's is an optimal transport platform for bandwidth-intensive triple play services.

KEY BENEFITS

Cost-effective Triple Play Transport
ME2100 supports up to 8 PON links, each delivering 1 Gbps of shared bandwidth between up to 64 subscribers, serving a maximum of 512 subscribers from a compact 1U chassis. High subscriber density and low cost of entry, combined with the operational cost savings of passive GEPON technology make ME2100 a compelling alternative to legacy, last-mile access solutions.

Customized Broadband Service Offerings
ME2100's QoS features allow operators to oversubscribe bandwidth while protecting delay-sensitive traffic based on individualized Service Level Agreement (SLA). Dynamic bandwidth allocation enables operators to bill bandwidth in 1 Mbps increments. For video services, IGMP support allows for multicast control and ensures efficient utilization of network infrastructure.

Flexible Provisioning, Quick to Revenue

Powerful OAM functions enable remote diagnostics, flexible provisioning, and reconfiguration of the ME2100 platform.

KEY FEATURES

IEEE 802.3AH GEPON

32 SPLITS, 20KM REACH

64 SPLITS,10KM REACH

512 SUBSCRIBERS SERVED IN COMPACT 1U CHASSIS

ADVANCED L2/L3 FUNCTIONS

DYNAMIC BANDWIDTH ALLOCATION

INDIVIDUALIZED BILLING PER SERVICE LEVEL AGREEMENT

MULTICAST SUPPORT FOR VIDEO STREAMING

REMOTE PROVISIONING AND MANAGEMENT

ADVANCED SECURITY

Technical Specifications

HARDWARE

MAIN CHASSIS
• PHYSICAL DIMENSION:
482.6mm (W) x 280mm (D) x 43.6mm (H)
• WEIGHT: 12 Pounds
• Power consumption of each module: Max.30 Watt
• Power consumption of chassis with two LTM modules:
Maximum 100 Watts
• Power supply: DC:–36V to -72V, 2 pluggable -48V DC power
module for redundancy protection
• Architecture: 2 pluggable OLT module, hot swappable
  1 pluggable GSM module, 1 pluggable Fan module
• Console Port: 1 RS232
• LAN management: 1 RJ45 10/100Base-T Fast Ethernet
• UP Link Ports: 4 SFP Connectors for insertion of either
electrical or optical transceivers

MTBF
• GSM2 Module: 269,944 Hours
• Power Module: 2,362,686 Hours
• Fan Tray: 678,978 Hours
• LTM: 437,523 Hours

AVAILABLE MODULES
• Controller and Switch Module: GSM/GSM2. One Per Chassis
• OLT Module: LTM4/LTM6: Up to 2 per Chassis
• Power Modules: PWR: Up to 2 per Chassis
• FAN Tray: 1 Per Chassis

AVAILABLE CONFIGURATIONS
PMC BASED
• PWR, FAN, LTM4 and GSM

CORTINA BASED
• PWR, FAN, LTM6 and GSM2

OLT MODULE
• NUMBER OF OLT PORT: 4 port/Module; 8 port /Chassis
• COMPLIANCE: IEEE802.3ah
• OPTICAL FIBER: Single SMF Fiber
• CONNECTOR: SC Connector
• SPLITS PER OLT PORT: 1:32 ; 1:64
• DATA RATE: 1 Gbps up and down stream
• OPTICAL LOSS BUDGET: 29 dB for PON link
• WAVELENGTH: Tx: 1490 nm, Rx: 1310 nm

ADVANCED FEATURES
LAYER 2 SWITCHING FUNCTIONS
• Non-blocking line rate switching
• Port based VLAN , protocol based VLAN and 802.1q VLAN
• Per ONU Q in Q support

• IEEE 802.3ad link aggregation and load balance
• Packet mirroring per ingress/egress port
• STP (IEEE 802.1d), RSTP(IEEE 802.1w) and PVST+ Support
• 16K MAC table support
• MAC management(Learning control, limit and aging) support
• 802.1X support for ONU AAA

LAYER 3 ROUTING FUNCTIONS
• L3 switching and full line speed support
• Static Route
• ARP support(static ARP, proxy ARP per RFC1027,ARP per
RFC826)
• TCP/IP, ICMP per RFC792 support
• DHCP server/relay

MULTICAST FEATURES
• IGMPv1/v2 snooping and Proxy
• Fast Leave
• Up to 512 Multicast groups

QUALITY OF SERVICE
• Up to four CoS queues per subscriber
• Strict Priority and WRR Scheduling
• IEEE 802.1 p
• IPv4 TOS priority
• Egress rate shaping
• Upstream Dynamic Bandwidth Allocation (DBA) per ONU
• Downstream Bandwidth Control per ONU

SECURITY
• Access Control List (ACL)
• Global and Per VLAN User Isolation
• EPON Frame Encryption: AES128 (Future)
• Broadcast/Multicast/DLF storm control

USER AUTHENTICATION
• IEEE 802.1x/Radius

SYSTEM MANAGEMENT
• FTP, SNMP v1 & v2c, DHCP, Telnet, console interface with CLI
• In-Band/Out-of-band management
• Auto provision of ONUs
• Environmental monitoring

CERTIFICATION
• UL, VCCI ,CE, FCC Part 15 ClassA, MIC

ENVIRONMENTAL SPECIFICATIONS
OPERATING TEMPERATURE
• 0ºC to +50º C (Continuous) RELATIVE HUMIDITY
• 5% to 90% non condensing STORAGE TEMPERATURE
• –40 to +75º CSTORAGE HUMIDITY
• 75% (maximum)

⚠ Safety Precautions	★ Before installing, connection or using this product, be sure to carefully read and observe the cautionary and prohibited matters provided in the instruction manual.

For inquiries, contact :