MEN-9632

Managed Layer 3 Aggregation Gigabit Ethernet Switch

24-slot Multi-rate 100FX/Gigabit SFP + 4 Gigabit Combo Ports

Description

Designed to meet the most demanding performance requirements of ISPs, MSOs and enterprises class network, the MEN-9632 implements latest and advanced technologies that perfectly suit Metro Ethernet Networks. Featuring complete Layer 2 and basic Layer 3 switching capabilities, the switch enables administrators to effectively manage network traffic transmissions. In addition, the MEN-9632 is built with powerful chipset and supported by hardware features such as Code Redundancy, Battery Backup and much more to offer best in class network performance, uptime and hardware monitoring capabilities.

The MEN-9632 is ideally designed to offer gigabit solution with its 24-slot Multi-rate 100FX/Gigabit SFP for real-time network applications that need extended reach and flexible operating bandwidths. And its 4 Gigabit combo uplink ports provide a convenient option for administrators to either use fiber or copper connection. As an ideal solution for large-scale networks, the switch provides rich management tools and diagnostic features such as SNMP, RMON and SFP DDMI, all-in-one package of power, performance, and reliability and enables administrators to minimize OPEX even in today's growing networks that demand high bandwidth.

Features Highlight

Basic Layer 3 Features

Being a Layer 3 switch, the MEN-9632 is designed with intelligent modern routing capabilities such as Static-route and Inter-VLAN routing to maximize routing efficiency. While static routing can be used for small networks, Inter-VLAN routing brings capability to route traffic between VLANs. These both Layer 3 features provide logical segmentation of the network with additional security and separation of broadcast domains. The MEN-9632 implements Inter-VLAN routing, the best solution to route traffic between VLANs, that makes use of latest technology to ensure a very fast, reliable and cost-effective routing solution.

Robust Network Security

The MEN-9632 implements complete Layer 2 to Layer 4 ACLs to restrict access to your sensitive network resources by filtering specific packets based on TCP/UDP ports, source and destination IP addresses or particular network devices. Furthermore, DHCP snooping, ARP, IEEE 802.1X and Port Security provide additional tools to manage access and levels of use of the network. These defence mechanisms of the MEN-9632 deliver robust network security and enables service providers to offer more stable services on a more secure network.

Comprehensive QoS Mechanisms to Assign Priority

Network applications need different levels of services delivered to them reliably without any transmission delays and interruptions. The MEN-9632 has comprehensive QoS mechanisms that assign priority to applications and send only specific dedicated traffic to them. In addition, bandwidth management functions of the switch allocate greater bandwidth for mission-critical communications. With increased control, administrators can prevent unpredictable errors and utilize the bandwidth more effectively.

Multicast Video Service Support

Deploying multicast applications such as IPTV has never been easier than before with comprehensive multicast traffic functions, IGMP snooping and MVR, in the MEN-9632. IGMP snooping regulates multicast traffic in a given VLAN and MVR operates with hosts on different VLANs in a Layer2 network. These features on isolate the multicast streams and significantly reduce traffic from streaming media and other bandwidth-intensive IP multicast applications for better bandwidth. Thereby, the MEN-9632 supports applications that use multi-traffic in large scale across the network, saves network bandwidth, reduces operational burden and enhances the overall network performance.

Efficient Network Monitoring and Management Tools

Issues that impact network performance can be quickly identified with enhanced traffic management, monitoring and analysis tools including SNMP and RMON. Designed to improve management efficiency, SNMP allows end users to centrally manage different levels in a network and RMON gives the capability to monitor the network performance. Service providers can ensure a reliable network by identifying connectivity and performance issues, and isolating the problem remotely on individual switches. This avoids high OPEX and manage a healthy and efficient network.

Features Highlight

Advanced Hardware Features

Administrators can take full advantage of the MEN-9632's advanced and efficient hardware functions including SFP DDMI and Hardware monitoring IC for increased operational efficiency of network equipment. With SFP DDMI (Digital Diagnostics Monitoring Interface) enabled on the switch, administrators can easily monitor and troubleshoot SFP parameters such as temperature, voltage, laser bias current and evaluate SFP's working condition. In addition, administrators can easily monitor device operational status with Hardware monitor function which displays device main health parameters such as voltage, temperature and fans speed.

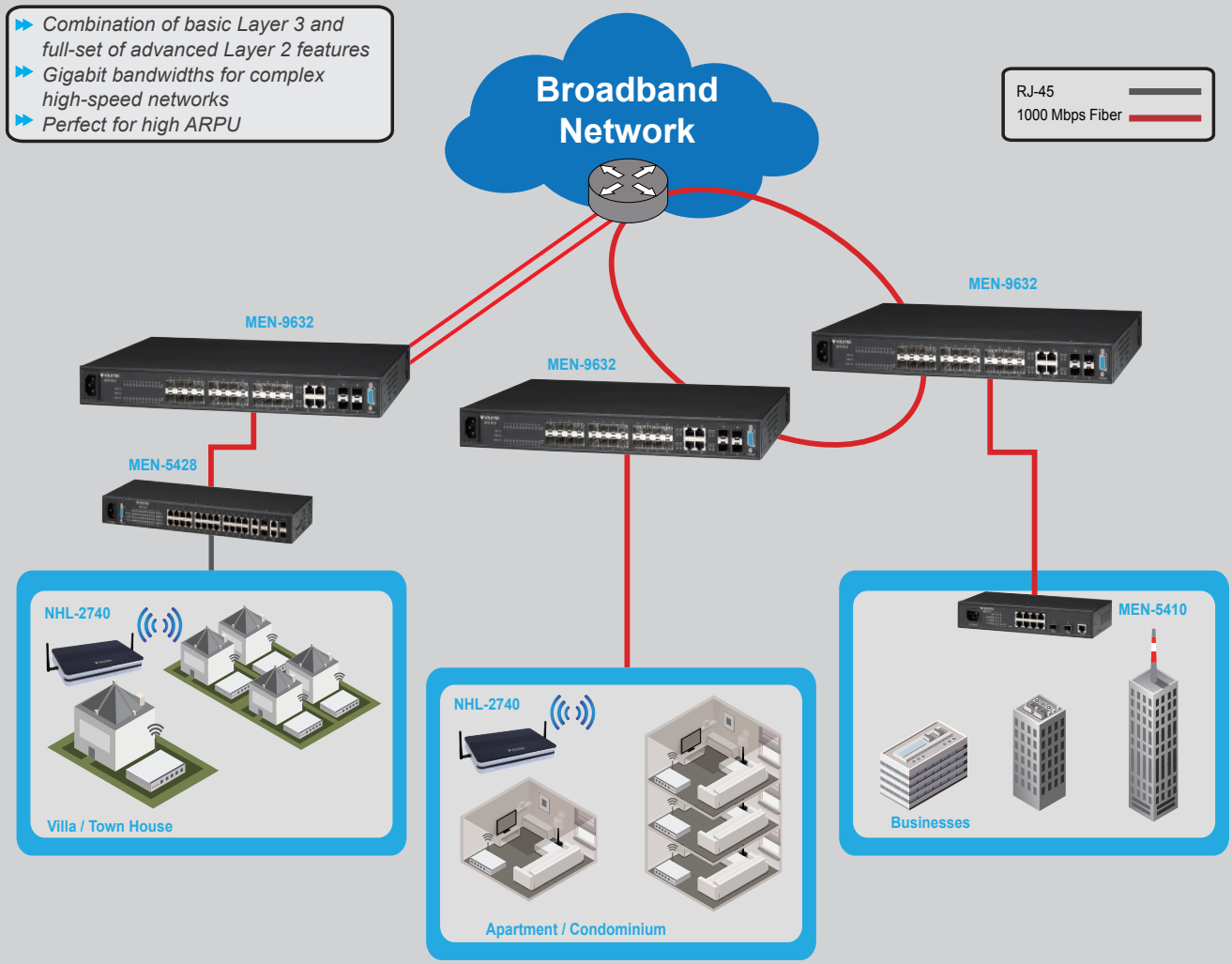
High Performance

The 24 multi-rate SFP slots (100/1000Mbps) and 4 Gigabit Combo ports of the MEN-9632 are capable of providing a switching fabric of 56Gbps and high throughputs. The switch complements 41.7Mpps Layer 2 Forwarding and enables organizations to setup virtual private networks (VPNs) over public network. The task of upgrading LAN to cater the increasing demands of high bandwidth is now simplified using the MEN-9632. Service providers can connect up to 28 networking devices to the switch and using its multi-rate SFP ports they can serve their subscribers who opt for any high-bandwidth packages.

Application

Experience superior performance and massive bandwidths that deliver remarkable quality services

- *Combination of basic Layer 3 and full-set of advanced Layer 2 features*
- *Gigabit bandwidths for complex high-speed networks*
- *Perfect for high ARPU*



Aggregation Level
MEN-9632: 24-slot Gigabit Multi-rate SFP,
4-Gigabit Combo ports Managed L3 Aggregation Switch

Access Level
MEN-5428: 24-port 10/100/1000Base-T,
4 Gigabit Combo port Managed Access Switch

Access Level
MEN-5410: 8-port 10/100/1000Base-T,
2-slot Gigabit SFP Managed Access Switch

CPE
NHL-2740: 1-port 100/1000 WAN + 4 ports 10/100/1000 LAN
802.11n 2T2R Wireless Router

Specifications

Features	
Network L3 Function	Web-based GUI
Static Route	SNMP v1/v2c
Inter-VLAN routing	RMON (1, 2, 3, 9)
Enhanced Function	Port Mirroring
Code Redundancy	Private MIB
MSTP	Firmware Upgradeable
Xpress Ring	Configuration Backup/Restore
Dual Homing	Port configuration, status, statistics
Protocol-based VLAN	Device Lock
MAC-based VLAN	**User Security**
IP subnet-based VLAN	Port Isolation
GARP/GVRP	Static MAC forwarding
VLAN Trunking	Port Security
MAC-based 802.1x	ACL (L2/L3/L4)
IGMP Statistics/Group Filter	BPDU Filter
IGMP Message Filter/Throttling	DHCP Snooping
DHCP Relay/Option 82	HDoS, ARP Inspection
Network L2 Function	**Traffic Management and QoS**
LACP/Static Link Trunking Support	802.1Q Tag-based VLAN
STP/RSTP	Port-based VLAN
Multicast VLAN Registration	VLAN Stacking (Q in Q)
Loop Detection	Active VLAN Support 4K
VLAN Stacking (Q in Q)	8 Hardware Queues
Network Storm Protection	SP/WRR
SFP DDMI support	Network Storm Control
Network Management	Rate Limiting
RS-232c Local Console	802.1p/DSCP/ToS Support
Telnet and CLI	Management VLAN

Maximum Distance	
Copper	100 m
Console	15 m
SFP	Up to 110 Km

Performance	
Throughput	14,880 pps to 10 Mbps ports
	148,800 pps to 100 Mbps ports
	1,488,000 pps to 1000 Mbps ports
Switch Fabric	56Gbps
L2 Forwarding	41.7Mpps
MAC Table Size	32K
Packet buffer size	2MByte
Jumbo Frame Size	9K

Standards	
IEEE 802.3	10Base-T
IEEE 802.3u	100Base-TX/FX
IEEE 802.3ab	1000Base-T
IEEE 802.3z	1000Base-SX/LX/LHX
IEEE 802.3x	Flow Control
IEEE 802.3ad	Link Aggregation
IEEE 802.1d	STP
IEEE 802.1w	RSTP
IEEE 802.1p	CoS Prioritization
IEEE 802.1q	VLAN Tagging
IEEE 802.1x	Port Authentication
IEEE 802.1s	MSTP
IEEE 802.1v	Protocol-based VLANs

Power	
Input Voltage	AC: 100~240V
	DC: 36~60V
Power Consumption	55W (w/o Battery)

Interface	
Ports	24 x 100/1000Base-FX/SFP
	4 x GbE Combo
	1 x RS-232 Console (DB-9, female)

Mechanical and Environment	
Operating Temperature	0°C~50°C
Storage Temperature	-20°C~70°C
Operating Humidity	10 to 80% RH (non-condensing)
Storage Humidity	5 to 90% RH (non-condensing)
Weight	4.5kg
Dimensions	440x44x284mm (WxHxD)

Ordering Information	
MEN-9632	Managed Layer 3 24-slot 100FX/GbE SFP, 4G Combo Switch, w/ AC Power
MEN-9632D	Managed Layer 3 24-slot 100FX/GbE SFF, 4G Combo Switch, w/ DC Power Supply
MEN-9632R	Managed Layer 3 24-slot 100FX/GbE SFP, 4G Combo Switch, w/ Redundant AC Power Supply
MEN-9632DR	Managed Layer 3 24-slot 100FX/GbE SFP, 4G Combo Switch, w/ Redundant DC Power Supply
FPM-107	100Base-FX Multi-mode SFP, 2Km
FPM-107-30	100Base-FX Single mode SFP, 30Km
GBM-132	100Base-FX Bi-di Single Mode SFP Module, 20Km
GBM-104	1000Base-SX 1.25G, Multi-mode SFP, 500m
GBM-104-2	1000Base-SX 1.25G, Multi-mode, 3.3V, 1310nm, 2Km
GBM-104-10	1000Base-LX 1.25G, Single mode SFP, 10Km
GBM-123	1000Base-LX Bi-di Single Mode SFP Module, 10Km

**Specifications subject to change without notice.*

Dimension