

# VOLKTEK

## MEN-5428

### Managed Layer 2 Access Gigabit Ethernet Switch

24 x 10/100/1000 RJ45 & 4 x GbE Combo

#### Description

The MEN-5428 is a high port density managed access switch designed to deliver Gigabit Ethernet speeds with exceptional performance for high density subscriber base with high ARPU. A variety of traffic-shaping QoS mechanisms and rich software features of the MEN-5428 increase overall efficiency and reliability of the network. Easy-to-use management and monitoring capabilities significantly reduces IT overhead by eliminating the need to manually configure policies on the switch, saving valuable time and effort, and avoids unnecessary OPEX.

The switch is equipped with 24 multi-rate (10/100/1000Mbps) copper and 4 Gigabit Combo ports to deliver multi-rate transmission speeds for enterprise and FTTX networks. Using its Fiber ports, the MEN-5428 quickly uplinks to the aggregation switches in the network to provide high bandwidth uplinks over variable distances. Thereby, service providers can take advantage of the switch's high port density to extend their reach within metro areas and also offer high-speed connectivity to their subscribers.



**RoHS**  
CE FC



#### Features Highlight

##### Faster Data Transmissions

Providing faster data transmissions over the network is no longer a difficult task to service providers. The MEN-5428 offers a best solution to improve the responsiveness of applications and increase file transfer speeds with its features that deliver high performance. Its high port density provides a 56Gbps non-blocking switching capacity that reduces transmission bottlenecks and increases the bandwidth. Service providers can create a high-performance network infrastructure using the MEN-5428 and fuel their businesses.

##### 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-5428. IGMP snooping regulates multicast traffic in a given VLAN and MVR operates with hosts on different VLANs in a Layer 2 network. These features isolate the multicast streams and significantly reduce traffic from streaming media and other bandwidth-intensive IP multicast applications for better bandwidth. Thereby, the MEN-5428 supports applications that use multi-traffic in large scale across the network, saves network bandwidth, reduces operational burden and enhances the overall network performance.

##### 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-5428 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.

##### Robust Network Security

The MEN-5428 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 network. These defence mechanisms of the MEN-5428 deliver robust network security and enables service providers to offer more stable services on a more secure network.

##### Efficient Network Monitoring and Management Tools

Issues that impact network performance can be quickly identify 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

### Fine-grained Service Management

Beside basic port-based VLAN function, the MEN-5428 provides higher and flexible levels of VLAN configuration related to MAC and Protocol-based. While MAC-based comprises of defining a virtual network according to the MAC addresses of stations, the Protocol-based VLAN makes it possible to create a virtual network by protocol type. These features along with VLAN stacking enable ISPs to flexibly deliver services with extra security and separation. As a result, ISPs using the MEN-5428 can experience fine-grained service management fulfilling the requirements of their subscribers.

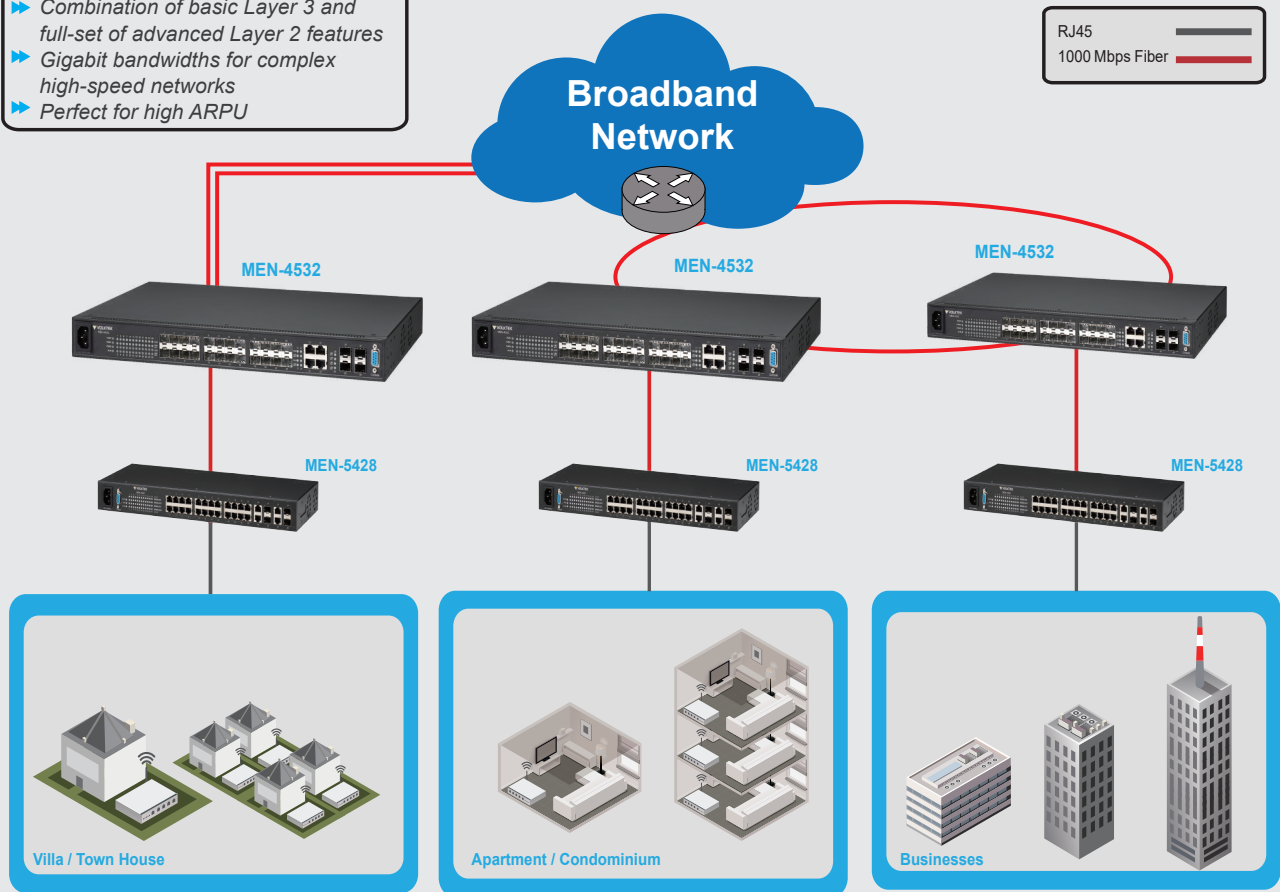
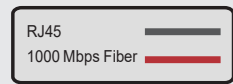
### Proprietary Technology Delivers Redundant Ring and Fast Recovery

Even a few seconds of missed communications due to link failures can cause inconvenience, and recovery can become critical. Volktek's proprietary Xpress Ring in MEN-5428 rapidly reacts to such link failures and recovers in less than 50ms, a much faster fail-over time to support nonstop transmissions. This is critical for networks handling heavy video and data traffic. In addition, Dual Homing, LACP and RSTP provide a highly reliable network with redundancy connections whenever required and guarantee continuous network uptime.

## Applications

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-4532: 20-slot 100FX/Gigabit SFP, 4-port 100/1000 Combo + 4-slot Gigabit SFP Managed L2+ Aggregation Switch

#### Access Level

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

#### CPE

NHL-2140: 1-port 100/1000 WAN + 4-port 10/100/1000 LAN 802.11ac 2T2R Dual-Band Wireless Router



## Specifications

| Standards       |   |
|-----------------|---|
| IEEE 802.3      | 10Base-T  |
| IEEE 802.3u     | 100Base-TX  |
| IEEE 802.3ab    | 1000Base-T  |
| IEEE 802.3z     | 1000Base-SX/LX  |
| 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 802.1ab    | LLDP  |
| IEEE 802.3      | N-way Auto Negotiation  |
| Interface       |   |
| Ports           | 24 x 10/100/1000Mbps (RJ-45)<br>4 x GbE Combo<br>1 x RS-232 Console (DB-9, female)  |
| LED Panel       | PWR, ALARM, POST, 1000M, LNK/ACT  |
| Features        |   |
| Performance     | Jumbo frame Size: 10KBytes<br>MAC Table Entries: 16k<br>Active VLAN: 4K<br>Switch Fabric: 56Gbps<br>L2 Forwarding Rate: 41.7Mpps  |
| Management      | CLI, Telnet/SSH, HTTP/HTTPS, SNMP v1/v2c/v3, SNMP Trap, MVLAN, Firmware Upgradable, Configuration Backup/Restore, Syslog, SNT, PTP, LLDP, UDLD, DHCP Client, DHCP Option 66/67/82, DHCP Relay, PPPoE IA, e-mail Alarm, Server Control, Mirroring, DDM, Dying Gasp |
| Reliability     | STP/RSTP/MSTP, Xpress Ring, ERPS v1/v2, Dual Homing, LACP, Code Redundancy  |
| VLAN            | IEEE 802.1Q, GARP/GVRP, Port-based VLAN, MAC-based VLAN, IP-based VLAN, VLAN Translation, Protocol-based VLAN, QinQ   |
| Traffic Control | IGMP snooping/Throttling/Proxy, MLD, MVR, QoS, Flow Control, Abnormal Traffic Detection, Rate Limit, Storm Control, Traffic Monitor, Port Isolation, Loop Detection, Static Route   |

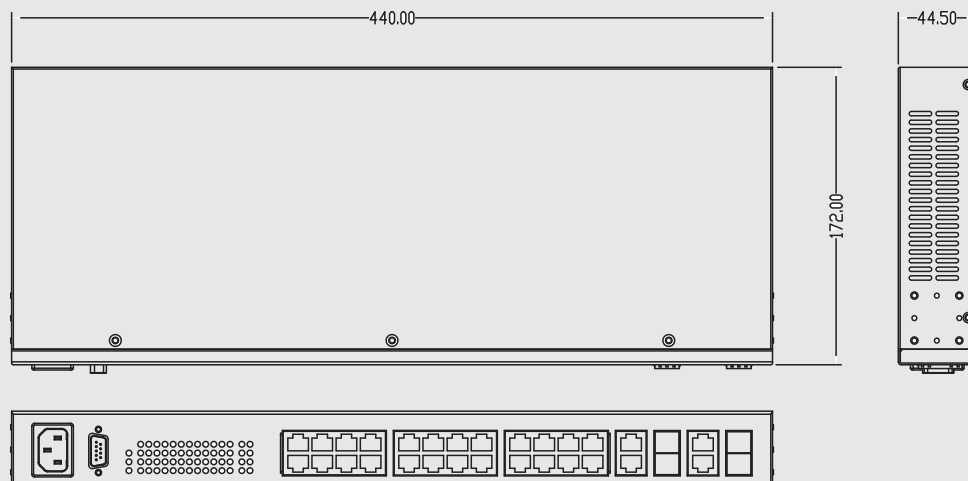
## Note:

\* The SFP communication distance upon the request.

\* Industrial SFP with wide operating temperature from -40°C~85°C is available upon request.

\* Specifications subject to change without notice.

## Dimension



| Features                      |   |
|-------------------------------|---|
| Security                      | ACL, SSH, Port-based 802.1x, TACACS+, Port Security, MAC Search, Refusal MAC, Sticky MAC, Static MAC, DHCP Snooping, DHCP Sever Screening, ARP Inspection, BPDU Guard/Filter, Root Guard, Management Host |
| Power                         |   |
| Input Voltage                 | 100~240V AC, 48V DC optional<br>12VDC Battery Back-up   |
| Power Consumption             | 20W (w/o Battery)   |
| Mechanical and Environment    |   |
| Housing                       | Metal Case  |
| Mounting                      | Rack Mount  |
| Operating Temperature         | 0°C~50°C  |
| Storage Temperature           | -20°C~70°C  |
| Operating Humidity            | 10 to 95% RH (non-condensing)   |
| Storage Humidity              | 5 to 95% RH (non-condensing)  |
| Weight                        | 2.3kg   |
| Dimension (WxHxD)             | 440x44x180mm (173x17.3x70.86 inch)  |
| Certifications                |   |
| Electromagnetic Compatibility | CE Mark<br>FCC Class A<br>EN 55032 (CISRP 32) Class A<br>EN 61000-3-2/3   |
| Ordering Information          |   |
| MEN-5428                      | Managed L2+ 24 x 10/100/1000 RJ45 & 4 x GbE Combo Switch, w/ AC Power Supply with Built-in Battery Charge   |
| MEN-5428D                     | Managed L2+ 24 x 10/100/1000 RJ45 & 4 x GbE Combo Switch, w/ DC Power Supply  |
| Optional Accessories          |   |
| GBM-123TS                     | 1000BASE-LX, Bi-Di SFP TX:1310/RX:1550, Single Mode, 10Km   |
| GBM-123RS                     | 1000BASE-LX, Bi-Di SFP TX:1550/RX:1310, Single Mode, 10Km   |
| GBM-132TS                     | 100BASE-FX, Bi-Di SFP TX:1310/RX:1550, Single mode, 20Km  |
| GBM-132RS                     | 100BASE-FX, Bi-Di SFP TX:1550/RX:1310, Single mode, 20Km  |