

Volition™ Networking Mini-Hub

Volition Dual Speed Mini-Hub VOL-2008



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The VOL-2008, is a compact Dual Speed, stackable Mini-Hub designed for work groups or SOHO (small office/home office) LANs. The Mini-Hub offers eight dual speed, auto sensing 10/100T/TX ports and one 100-FX VF-45™ fiber port. The VOL-2008 is an unmanaged Hub with an internal switch engine for seamless operation on speed mixing environments. The unit is powered by an internal auto-ranging power supply and is housed in a rugged metal case for greater reliability. In addition, the VOL-2008 can be stacked up to 4 units high via a DB25 100 Mb connection located in the rear of the unit. The VOL-2008 complies with IEEE 802.3 and 802.3u standards.

Specifications for VOL-2008

Standard Compliance

IEEE 802.3 10Base-T Ethernet™
IEEE 802.3u 100Base-TX/FX Ethernet

Optical Specifications (100-FX, VF-45)

Type	100Base-FX multimode, 1300 nm
Connector	VF-45
Transmission	Half duplex
Transmission power	-20 dBm (minimum)
Sensitivity	-31 dBm (maximum)
Fiber	62.5/125 µm
Distance	See Appendix A

Number of Ports

8 10/100 Mbps auto-sensing RJ-45 Ethernet ports with switch agent.
Selectable 8th port, as 10/100 Mbps twisted pair, or 100 Mbps fiber optic
Port 8 selection done using a selector switch

- TX-N-twisted pair (normal)
- TX-X-twisted pair (crossed)
- VF-45, 100-FX fiber

Number of Segments

2 independent segments 10 Mbps and 100 Mbps

LED Display

Per device	Power Collision indication for 10 Mbps and 100 Mbps segments
Per port	Link/Rx 10 Mbps/100 Mbps

Number of Hubs per Stack

4 Hubs per stack
Dedicated DB-25 stack ports

Port Partitioning

Automatic partition per port

Port Requirements

90-240 VAC, 50-60 Hz (internal auto-ranging power supply)



Features — Benefits

Internal switch agent between 10 Mb and 100 Mb bus
Eight 10/100T/TX auto sensing ports
One 100-FX VF-45 uplink port
Mechanical switch to select 8th port operation (copper or fiber)
Stackable up to 4 units (DB25 connection)
Internal auto-ranging power supply (85-250 VAC, 50/60 Hz)
CE & FCC Class A Mark
IEEE 802.3 and 802.3u compliance

Specifications

Operating temperature	0° to 50°C (-32° to 122°F)
Storage temperature	-30° to 60°C (-22° to 140°F)
Operation humidity	5% to 95% non-condensing
EMI certifications	CE marking FCC Class A
Dimensions	31.1 cm x 11.5 cm x 4.45 cm 12.24 in. x 4.53 in. x 1.75 in.
Weight	1.27 kg (2.8 lbs.) per unit
Shipping weight	1.8 kg (4 lbs.)

Applications

Appendix A – Collision Domain and Distance

In shared fast Ethernet™, the collision domain limits the operating distance of the network. In any collision domain, the round trip propagation delay must not exceed 512 bit times. Each bit time in fast Ethernet is 10 ns. The following table gives typical delays as specified by the IEEE 802.3 standard.

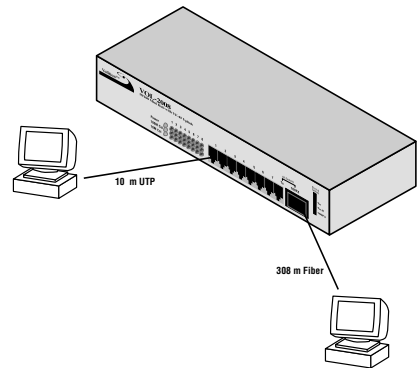
Applications

Component	Round Trip Delay in Bits/Meter	Maximum Delay
Two TX/FX DTE's	N/A	100
Cat 3 Cable Segment	1.14	114 (100 m)
Cat 5 Cable Segment	1.112	111.2 (100 m)
Fiber Cable	1.00	412 (412 m)
Class I Repeater	N/A	140
Class II Repeater TX/FX	N/A	92

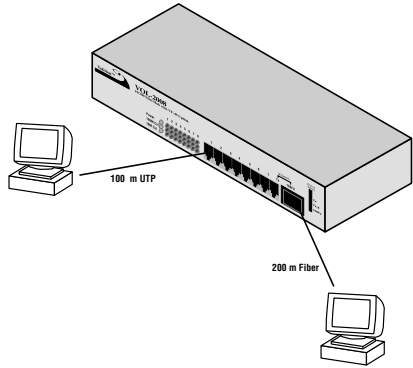
VOL-2008 Mini-Hub

To calculate other distances for fiber use the following formula:
 Fiber distance (m) - 320 - UTP length (m) x 1.112 (all units in meters). The VOL-2008 Mini-Hub is a Class II repeater. The following diagram illustrates some operating distances on fiber and copper.

Example 1

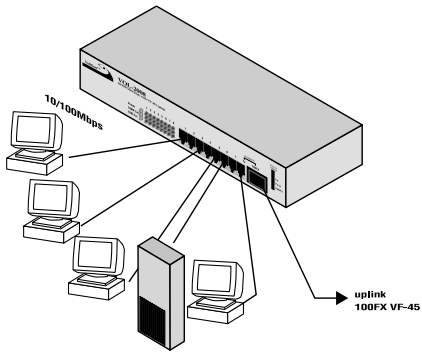


Example 2

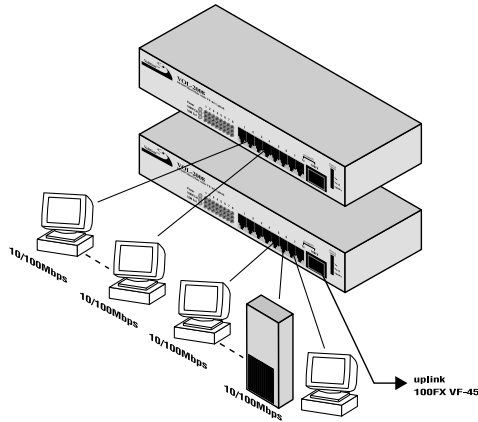


Connecting Workstations

The Mini-Hub can be connected to network a variety of devices while maintaining a connection via fiber to a backbone, workgroup switch and or server.



Computers are connected via copper cabling.



The VOL-2008 may also be stacked to provide higher port density to the work area.

Ordering Information for VOL-2008 Mini-Hub

Product Number	Description	Packaging set/cs.	Min. Order each	UPC 051138
VOL-2008-NA	VOL-2008-NA, Dual Speed, 8 10/100-TX Port, Mini-HUB w/100-FX VF-45 Uplink, North America	1/ca.	1	89294

*For international versions, contact local 3M subsidiary.

VOL-2008 Packing List

VOL-2008 unit
User guide
Stacking cable
AC cord