

Features

- Provides 4 modular slots for user-selection of 100 Mb, 10 Mb, Gigabit ports and 10/100 copper ports with optional PoE
- Up to 8 Gigabit ports, choice of SFP or GBIC or auto-negotiating copper connectors
- Compact 1U rack-mount package, metal case, regular or "reverse" case
- Options include 24VDC, -48VDC, 125VDC, and 250VDC power, dual source, or AC
- Feature-rich MNS-6K managed switch software with choice of GUI or CLI



Magnum™ 6K25e enhanced Managed Switches provide greater configurability in a rack-mount package, with up to 8 gigabit ports and/or choices of both 100 Mb fiber and copper ports or 10 Mb fiber and copper ports. High-capacity and high-performance Ethernet switching services are delivered in a robust 1U rack-mount package designed for the most demanding Industrial Networking and Carrier Class applications.

The port modules allow user-selection of mixed-media fiber (all connector types, multi- and single-mode) and 10/100 Mb RJ-45 ports, even Power-over-Ethernet (PoE). Standard SFP or GBIC ports can be configured for a variety of Gigabit fiber cabling types and distances, as well as 10/100/1000 copper.

A group of Magnum 6K25e Switches are ideal for the core Ethernet services in Industrial Networks. The advanced software with security and redundancy and ease-of-use serves applications that include other networking products such as WAN routers, small edge switches, and Serial Device Routers. Designed for use in Industrial Plantwide LAN centers with numerous fiber segments requiring Gigabit backbone interconnections among network centers, the Magnum 6K25e is easy to install and operate.

High performance hardware features include non-blocking speed on all ports and 802.1p QoS Traffic Prioritization. Software includes comprehensive security for network access and for data traffic, GarrettCom's IGMP-L2 multicast traffic management, and a choice of redundancy options. Magnum 6K25e's are "plug-and-play" ready for use as backbone switches where a mix of bursty data traffic and priority streaming traffic for video surveillance, VoIP and even attached PoE devices are present.

The Magnum 6K25e Switches are provided with LAN software support including SNMP management control via command line interface, RMON, SNMPc™ and Openview™ for Windows, Secure Web Management GUI, and many security features. See the Managed Networks Software (MNS) datasheet for additional details on the comprehensive set of software packages and options.

Magnum 6K25e Managed Switches have rugged metal cases and Internal AC or DC power supplies, with DC dual source and dual power supply optional. The 6K25e's and all other Magnum products are designed and manufactured in the USA and backed by a three year warranty.



GarrettCom[®]
Industrial Networking at Its Best™

Specifications

Configurable Managed Switch

PERFORMANCE:

Gigabit Ports, 1000 Mb: Configurable, selection of standard SFP or GBIC or fixed copper or fiber transceiver modules, up to 8 ports total
Fiber Ports, 100 Mb (multi-mode and single-mode): Configurable in modules, up to 24 ports total, each FDX or HDX. Default is FDX mode.
Fiber Ports, 10 Mb: Configurable, 4 ST ports per slot. Each port may be FDX or HDX, default is HDX mode up to 12 ports total.
RJ-45 Ports: 100 or 10 Mb speed, full- or half-duplex mode, per port, individually determined. 10/100 auto-negotiating and auto-cross, 24 max.
PoE RJ-45 Ports: 100 or 10 Mb speed, full- or half-duplex mode, per port, individually determined. PoE is per IEEE 802.1af. Up to 8 ports max.
For more information, see garrettcom.com/6k_modules_poe.htm.

All Ports non-blocking

Processing type: Store and Forward with IEEE 802.3x fdx flow control
System aggregate forward and filter rate 11.9Mpps
(24ports @ 100Mb speed, 8 ports @ Gb)
Address table: 4K nodes, self-learning, with address aging
Packet buffers: 240 KB for 10/100 and 120KB for 1000 Mb
Latency: 6µs + packet time max (TX - TX, TX - FX, FX - FX, TX-G, G-G)

NETWORK STANDARDS:

IEEE 802.3z, 802.3ab, 802.1p: 100BASE-TX, -FX, 1000BASE-SX, -LX
IEEE 802.3u Auto-negotiation on TP, IEEE802.3af on PoE
See MNS-6K datasheet for software network standards and features

OPERATING ENVIRONMENT:

IEC 60068 Operating temp. per "Type Test" -40° to 185°F (-40° to 85°C)
UL 60950 "Component Parts" temperature rating: 130°F (55°C)
Storage: -40° to 185°F (-40° to 85°C),
Ambient relative humidity: 5% to 95% (non-condensing)
Altitude: -200 to 13000ft (-60 to 4000m)
Conformal coating (humidity protection) option: Request quote

RELAY CONTACT FOR ALARMS (OPTIONAL):

Form C, one NC indicating internal power, one NC software controllable.

NETWORK CABLE CONNECTORS:

1000 Mb ports: all standard SFP, GBIC and fixed types supported
100 Mb Copper: Category 5 UTP/STP; 10 Mb: Cat. 3, 4, 5 UTP/STP
100 Mb Fiber ports connector options: multi-mode FX-MTRJ, LC, ST, SC;
single-mode LC, 20Km SC, and 40Km "long reach" single-mode SC.
10 Mb Fiber port connector: multi-mode ST

AC POWER SUPPLY (INTERNAL):

AC Power Connector: IEC-type, male recessed, ON/OFF switch (optional)
Power Input, AC: 100 to 240 VAC, 47 to 63 Hz (auto ranging)
Power Consumption: 60 watts typical for a fully-loaded fiber model
30 watts typical for copper-only models

Ordering Information

Magnum 6K25e

Magnum 6K25e Managed Switch, base unit. May be configured with a selection of 10/100/1000 Mb fiber and copper connector types, 26 ports max or 8 gig ports max. A family of 38 port modules is available for essentially unlimited configuration flexibility. Wire-speed filtering and forwarding across all ports. For licensed management software, see applicable datasheets.

Magnum 6K25Re

"Reverse" model, same as Model 6K25e except user ports and the power input connectors are in the rear. Two sets of LEDs (both rear and front) provide duplicate status data for viewing from either side.

Configuration Options: Each Magnum 6K25e and 6K25Re base unit has four port module slots. Three (A, B, C) may be one of the modules below, one (slot D) may only be Gb modules. Select up to 4 modules per base unit. See Configuration Guide for additional details.

6KP8-45MT

"4+4" module for 6Ks, w/four 10/100 RJ-45 and four 100 Mb 2km multi-mode FX MTRJ connectors

6KP8-SLC

SFF Fiber module for 6K Switches, w/eight 100 Mb 15km single-mode FX LC connectors

6KP8-RJ45

TP Module for 6K Switches, w/eight 10/100 Mb auto-negotiating RJ-45 ports

6KP8-MTRJ

SFF Fiber module for 6K Switches, w/eight 100 Mb 2km multi-mode FX MTRJ connectors

6KP8-45SLC

"4+4" module for 6Ks, w/four 10/100 RJ-45 and four 100 Mb 20km single-mode FX LC connectors

6KP6-RJMST

"4+2" module for 6Ks, w/four 10/100 RJ-45 and two 100 Mb 2km multi-mode FX ST connectors

6KP4-F10ST

"2+2" 10 Mb fiber module for 6K Switches, with four 10 Mb 2km FL ST connectors

6KP6-RJSSC

"4+2" module for 6Ks, w/four 10/100 RJ-45 and two 100 Mb 20km single-mode FX SC connectors

6KP6-RJSSCL

"4+2" module for 6Ks, w/four 10/100 RJ-45 and two 100 Mb 40km single-mode FX SC connectors

6KP6-RJ10ST

"4+2" module for 6Ks, w/four 10/100 RJ-45 and two 10 Mb 2km FL ST connectors

6KP4-FXSC

"2+2" 100 Mb Fiber module for 6K Switches, w/four 100 Mb FX SC connectors.

6KP4-F10ST

"2+2" 10 Mb fiber module for 6K Switches, w/four 10Mb 2km FL ST connectors

Note: Several other Port Module types are available. See Configuration Guide.

6KP7-1GSFP6RJ

"G+6" module for 6Ks, w/one SFP Gigabit Port and six 10/100 Mb RJ45 ports

6KP7-1G2RJ4MCL

"G+4+2" module for 6Ks, w/one SFP Gigabit Port, four multi-mode LC fiber ports, and two 10/100 RJ-45

6KP7-1G2RJ4SLC

"G+4+2" module for 6Ks, w/one SFP Gigabit Port, four single-mode LC fiber ports, and two 10/100 RJ-45

6KP7-1G2RJ4SLCL

"G+4+2" module for 6Ks, w/one SFP Gb Port, four sgl-mode long-haul LC fiber ports, and two 10/100 RJ-45

6KP2-2GSX

Two-port one-slot Gigabit 6K module for 6K Switches, uses one 6K slot and provides two Gigabit Fiber SXSC (1000BASE-SX multi-mode) ports. Includes front-panel sheet metal cover.

6KE-2GCU

Two-port one-slot Gigabit 6K module for 6K Switches, uses one 6K slot and provides two Gigabit Copper (1000BASE-T) auto-negotiating ports. Includes front-panel sheet metal cover.

DC POWER SUPPLY OPTIONS:

-48VDC: Input -36 to -70VDC (PoE input range: -44 to -57VDC)

24VDC: Input 20 to 40VDC

125VDC, 250VDC, and 110VDC nominal: Input 88 to 300VDC

Std. Terminal Block: "-", GND, "+", Power Consumption: Same as AC

DC DUAL POWER SOURCE (OPTIONAL)

Magnum 6K25e models may be ordered with optional Dual DC power input, for continuity of operation when either one of the DC input sources is interrupted. Available for -48V, 24V, 125V or 250V.

POWER SUPPLIES FOR PoE (OPTIONAL)

AC, Same as AC internal but with 60 watts output @48VDC for PoE.
125DC, Same as 125DC internal but w/ 60 watts output @48VDC for PoE.

DUAL POWER SUPPLIES (OPTIONAL)

Magnum 6K25e models with 48VDC, 125VDC, 110VDC, 250VDC, and AC power input may be ordered with Dual Power Supplies, load-sharing with software monitoring, for continuity of operation when either one of the two power supplies or their associated power input is inoperative.

MECHANICAL:

Enclosure: Rugged high-strength sheet metal. Suitable for 1U rack-mounting or stand-alone.
Rack-mounting brackets: 19" included; ETSI and 23" Telco optional.
Cooling Method: Fan cooled, internal @ 25cfm
Dimensions: 1.70inHx17.0inWx9.0inD (4.32cmHx 43.2cmW x 22.9cmD)
Weight: rack-mount 5.0 lbs. (2.2 kg)

LED INDICATORS PER RJ-45 PORT:

LK: On when twisted-pair link is operational.
ACT: Blinking with port activity.
FDX/HDX: ON = full-duplex mode, OFF = half-duplex mode.
100/10 ON = 100Mb speed, OFF = 10Mb

LED INDICATORS, 100 Mb and 10 Mb FIBER PORTS:

LK: Steady on when fiber link is operational.
ACT: On with port activity, FDX/HDX

AGENCY APPROVALS AND STANDARDS COMPLIANCE:

UL Listed (UL60950), cUL, CE, Emissions meet FCC Part 15, Class A
IEC 61850 EMC & Operating Conditions Class C for Power Substations
IEEE 1613 Class 2 Environmental Std for Electric Power Substations
NEBS Level 3 and ETSI Compliant; NEMA TS-2 for traffic control.
EN50155 Compliant; DNV certified

WARRANTY:

Three years

Made in USA

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