

## **MRRS-8000G**

### **Rugged Gigabit Ethernet Switch**

#### **FEATURES**

- Eight 10/100/1000Mbps copper-twisted Ethernet ports with non-blocking wire-speed performance
- PC/104 form factor
- Built-in 8051 CPU for configuration management; RS-232 serial port provides out-of-band management interface
- Can operate autonomously or in conjunction with host SBC
- 176KB on-board frame buffer; jumbo frame support at all speeds
- 8K MAC addresses and 4K VLANs (IEEE 802.1Q), as well as 8K IP multicast group support
- Programmable multi-layer classifier with 4 QoS classes
- DSCP remarking for IPv4 and IPv6 frames
- Rapid Spanning Tree Protocol
- Multicast and broadcast storm control, as well as flooding control
- Full-duplex flow control (IEEE 802.3X) and half-duplex backpressure, symmetric and asymmetric
- Flexible link aggregation support based on Layer-2 through Layer-4 information (IEEE802.3ad)
- Multiple protocol support: IEEE 802.1D, IEEE 802.1w, IEEE 802.1s, and IEEE 802.1X



#### **Highly Advanced Gigabit Ethernet Switch**

MRRS-8000G is an 8-port Gigabit Ethernet switch implemented in the compact PC/104 form factor. MRRS-8000G can be used standalone without any connection to a single board computer, or in conjunction with a host CPU.

#### **Layer 2+ Managed Switch**

MRRS-8000G's advanced Ethernet switch chip includes a built-in microcontroller for configuration and management. It can be accessed either out-of-band, through the on-board RS-232 port, or via one of the Ethernet ports.



## Wide Input DC/DC Power Supply

Input power can be provided through the built-in, wide-range +7-36VDC power supply, enabling operation using industrial power sources. Alternatively, MRRS-8000G can be powered from a +5VDC source.

## Rugged Design

Extended temperature operation of -40°C to +85°C is tested and guaranteed. MRRS-8000G was designed with harsh applications in mind

## Innovative Power Management

MRRS-8000G's advanced Ethernet switch controller includes two innovative features that enable automatic power savings. The switch can detect unused Ethernet ports on network devices and power them down or place them in stand-by mode.

Additionally, the switch actively adjusts the power level needed based on cable length, saving energy on links shorter than the 100m maximum specified length.

## Software Support

MRRS-8000G is loaded with all required firmware, enabling its immediate operation without any development effort. The included web interface provides an intuitive GUI for use in configuring and managing switch functionality.

## ENVIRONMENTAL CHARACTERISTICS

### TEMPERATURE

Operating:	-0 - +55 °C
Option:	-30 - +60 °C
Non Operating:	-40 - +71 °C

### HUMIDITY

Operating/Storage	MIL-STD-810C Method 507.1 Proc. I 98% RH (non condensation)
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### SHOCK

Operating:	MIL-STD-810D, Method 516.4, Proc. I, -20g 11ms. Saw Tooth
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### EMI/RFI

MIL-STD-461, Class 3

### DRIP PROOF

MIL-STD-810E

These specifications are subject to change without notice