



## IP67 Rated Industrial Ethernet Switches

Fieldbus-style, real-time Ethernet technology that mounts directly onto a machine.

- IP67 waterproof rating
- Direct fieldbus-style installation - No enclosure required.
- Real-time 10/100BaseT auto-detecting operation
- Auto-MDI/MDIX crossover on all 8 ports
- Compatible with Fieldbus H2, Ethernet IP, Modbus Open and all other Ethernet fieldbus networks.
- UL 508, CSA, CE and Zone 2 rated
- Certified for marine and offshore use
- Supports ALL standard IEEE 802.3 Ethernet protocols
- Extended power model (-1EP) meets military standard MIL-STD-1275



# Introducing Etherbus™

direct machine-mountable Ethernet technology

Mount an IP67 Industrial Switch directly onto a machine or convenient wall in any harsh industrial environment. SIXNET Industrial Switches insure real-time deterministic performance. The rugged packaging is IP67 rated against water, oil and dust.

Now you can have the convenience of durable Fieldbus packaging coupled with the open systems flexibility that only Ethernet provides.

- Reduce installation cost
- Mount anywhere - save space
- Insure real-time operation
- Allow for Deterministic Control



## SIXNET switches eliminate collisions

Unlike a hub, SIXNET Switches buffer and intelligently transmit network packets in an orderly sequence. Since each network segment is now a controlled one-on-one link, Ethernet message collisions are completely eliminated.

## Real-time deterministic performance

SIXNET Industrial Ethernet Switches automatically determine and remember where an Ethernet device is located and routes messages only through the appropriate port. This minimizes network loading, giving your deterministic software the open communications channels it needs.

## The Fieldbus Direct-mount Advantage

IP67 rated packaging transforms Ethernet into a Fieldbus by enabling you to mount our industrial switch directly onto a machine or an exposed wall in a harsh environment. This saves space and money by eliminating the need for environmentally rated electrical enclosures and expensive fittings for signal cables that enter the protected enclosure. Maintenance time is also reduced because you have direct access to the cable connections on this Industrial Ethernet Switch.

## Compatible with standard RJ45 cables

These switches use the ingenious Woodhead RJL<sub>n</sub>xx environmental connectors (patent pending). These waterproof and vibration-protected connectors have a standard RJ45 core enabling you to plug a standard RJ45 cable in for bench testing and temporary field connection with a laptop computer.

## Industrial switches survive heat & cold

SIXNET industrial switches work reliably through the dead of winter and those hot summer days. Unlike office-grade switches that are intended only for use in air conditioned offices, SIXNET industrial switches are designed for those places that you don't want to be.

## Minimize your wiring headaches

Eliminate unwieldy bundles of ethernet cables by placing these efficient wiring concentrators right on the plant floor. Simpler and shorter cabling means higher reliability, too!

**SIXNET**

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## Performance Specifications

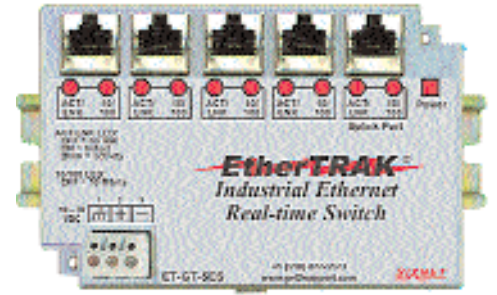
Ethernet switch type	Unmanaged, store & forward	
RJ45 ports (shielded)	10/100BaseT(x) / Auto-MDI/MDIX	
RJ45 speed (auto-negotiating)	10 Mbps or 100 Mbps	
Ethernet protocols supported	All standard IEEE 802.3	
Broadcast storm protection	5% of bandwidth	
Memory bandwidth	2 Gbps	
Completely compliant	IEEE 802.3 & IEEE 802.3u	
Full or half duplex operation	Auto-sensing on RJ45 ports	
MAC addresses supported	1K (automatic learning, aging, and migration)	
Ethernet isolation	1500 VRMS 1 minute	
Required supply voltage	10-30 VDC (-1 standard model); +/-16-40 VDC (-1EP model)	
Power consumption (typical)	4 W (165 mA @ 24 VDC)	
Maximum voltage surge	100 volts for 1 sec. (-1EP model)	
Maximum voltage spike	250 volts for 100 usec. (-1EP model)	
Operating temperature	-40 to +70 °C (for -1 model) -40 to +60 °C (for -1EP model)	
Storage temperature	-40 to +85 °C	
Humidity	100% RH	
Flammability	UL 94V-0 materials	
Electrical safety	UL 508, CSA C22/14 EN61010-1 (IEC1010)	CE
EMI emissions	FCC part 15, ICES 003, EN55022, Class B	CE
EMC immunity	EN61326-1 (EN61000-4- 2, 3, 4, and 6)	CE
Surge withstand	IEEE-472	
Vibration	IEC68-2-6	
Hazardous locations	UL 1604, CSA C22.2/213 (Class 1, Div. 2), Cenelec EN50021 (Zone 2)	
Environmental rating	IEC IP67	



## Ordering Information

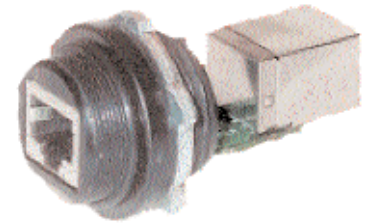
Part	Description
EB-GT-8ES-1	8 port IP67 rated Ethernet switch
EB-GT-8ES-1EP	8 port IP67 switch with extended power
EB-CC-PS-F1	Field-installable IP67 rated DC power input connector (1 included with each switch)
EB-CC-CAT5-M4	Field-installable IP67 rated RJ45 connector (4 piece pack)
EB-CC-CAP-L4	Watertight Ethernet receptacle closure cap with tether (4 piece pack)
EB-CP-RJ45-F1	IP67 rated bulkhead connector with tethered cap (for making waterproof connections to the outside of electrical enclosures)

## Other SIXNET Industrial Switches



5 port, 9 port, dual fiber ports, and copper to fiber converter models available

## IP67 Waterproof Accessories



**EB-CP-RJ45-F1**  
IP67 rated bulkhead connector



**EB-CC-CAT5-M1**  
Field-installable IP67 rated RJ45 connector

## Complete Documentation

is provided on the SIXNET CD or may be downloaded from [www.get2support.com](http://www.get2support.com). Includes applications help for many common situations.

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# A Complete Family of I/O Solutions

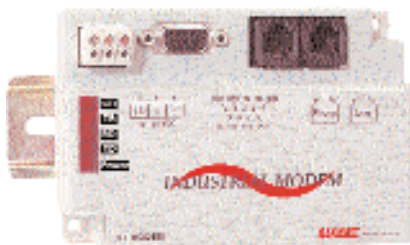
## Ethernet I/O



## Remote Terminal Unit



## Industrial Phone Modems



## Ethernet and RS485 I/O

SIXNET can provide you the building blocks for the open systems you are looking for. Three complementary families of modular DIN rail mounted I/O provide local, remote, enterprise level, or Internet I/O solutions.

## Ethernet-Ready RTU

VersaTRAK is a versatile RTU with powerful 32-bit programming, discrete and analog I/O, datalogging and communications, including support for Ethernet, radios and telephones integrated into a single compact package.

## Industrial Modems

SIXNET rugged industrial modems eliminate the hassles of mounting a telephone modem in an industrial enclosure. These robust modems are rated for -30 to +70 °C industrial operation.

## TrakPAK Packaged Systems

SIXNET delivers complete I/O cabinets that come to you designed; built; tested; and ready for installation.



**Contact your SIXNET  
Applications Engineer today!**

For the instant availability  
or the latest information  
please check out  
[www.sixnetswitch.com](http://www.sixnetswitch.com)

Switch Datasheet REV 0204

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