

Monitored Ethernet Switch

16 port, SNMP, Modbus/TCP

Model SE316-T

B+B SMARTWORX

Powered by

ADVANTECH



SE316-T

eWorX™

Features & Benefits

- Communicates with HMI/SCADA software via Modbus/TCP
- Integrated with iView² - SNMP Management Software (free download)
- Energy Efficient Ethernet (EEE), IEEE 802.3az for low energy consumption
- Wide temperature range -40 to 75°C
- DIN rail or wall/panel mountable
- Redundant dual 12 to 48VDC power inputs
- EMS Level 3 Protection
- Designed for hazardous locations: UL C1D2, ATEX Zone 2 (pending), IECEx (pending)
- Port-based QoS feature for deterministic data transmission
- Loop detection and event alarm
- Power failure indicated by a relay and LED indicator



Modbus

SNMP



CE FCC



Introduction

SE300 series is the industry's first design for Ethernet Green[®], IEEE802.3az - Energy Efficient Ethernet switches that cut power usage by up to 60%, significantly saving energy usage in the field and reducing total cost of ownership over 24/7.

Advantech B+B SmartWorX SE300 series monitored switches can be used as plug-and-play unmanaged switches right out of the box. Installing the iView² Network Management Software gives them basic monitoring and management capabilities as well. They bridge the gap between unmanaged switches and significantly more expensive, fully managed solutions.

When enabled with iView², these switches provide IP address assignment, allowing for a static IP address or an address that is discoverable via DHCP in the network. Then, these switches have the ability to use Modbus/TCP to communicate with HMI/SCADA software and SNMP to communicate with NMS (Networking Management Software) at the same time. This gives full access control to both control engineers and IT managers.

Basic Monitoring & Management Capabilities

iView² gives network managers the ability to monitor and manage eWorX SE300 series switches from a central location. It features an intuitive Graphical User Interface (GUI) that provides a real-life representation of all installed eWorX SE300 Series switches, displaying device functions, port settings, device status information and traffic statistics via SNMP.

iView² can also configure eWorX SE300 series switches monitoring capabilities for automation applications via the popular Modbus TCP/IP protocol. Control engineers can use existing HMI/SCADA software to integrate the network status by creating extra tags for real-time monitoring. iView² is a standalone software that supports multiple platforms and operating systems.

iView² Features for eWorX SE300 series Switches

Monitoring:

- System information (IP/MAC address)
- Port status
- Port speed
- Flow control
- Link up counter
- TX packets counter, RX packets counter
- TX error packets counter, RX error packets counter
- Firmware version
- PoE status (PoE model/s only)

Management:

- Configure IP mode
- Set IP address
- Set TCP Modbus/TCP time-out
- Create Community Strings
- Configure Traps

Specifications

| COMMUNICATIONS | |
|-----------------------|---|
| Standards | IEEE 802.3, 802.3u, 802.3x, 802.1p, 802.3az, 802.3ab |
| LAN | 10/100Base-T(X) |
| Transmission Distance | Up to 100 meters |
| Transmission Speed | 100 Mbps |
| INTERFACE | |
| Connectors | 16 x RJ45 6-pin removable screw terminal (power & relay) |
| Ethernet | Ethernet, Auto Sensing, 10/100BaseTX, Duplex and MDIX |
| LED Indicators | P1, P2, P-Fail, Loop Detection 10/100T (X): Link/Activity, Speed |

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Specifications - continued

| SWITCH PROPERTIES | |
|-----------------------------|---|
| MAC Table Size | 8k |
| Packet Buffer Size | 128K bit |
| Switching Capacity | 3.2 Gbps |
| Jumbo Frame | 2048 bytes |
| POWER | |
| Power Consumption | Max. 3.84W |
| Power Input | 12~48 VDC (8.4~52.8VDC) redundant dual inputs |
| Fault Output | 1 Relay Output |
| Reverse Polarity Protection | Present |
| Overload Current | Present |
| PHYSICAL | |
| Dimensions (WxHxD) | 74 x 120 x 84 mm |
| Enclosure | IP30, metal shell with solid mounting kits |
| Mounting | DIN-Rail, Wall |

Specifications - continued

| ENVIRONMENT | |
|------------------------|--|
| Operating Temperature | -40 ~ 75°C (-40 ~ 167°F) |
| Storage Temperature | -40 ~ 85°C (-40 ~ 185°F) |
| Operating Humidity | 10 ~ 95% (non-condensing) |
| Storage Humidity | 10 ~ 95% (non-condensing) |
| MTBF | 4,653,552 hours |
| CERTIFICATIONS | |
| Hazardous Environments | UL Class 1 Division 2 Groups A,B,C,D; ATEX Zone 2 (pending); IECEx (pending) |
| Safety | UL508 |
| EMI | FCC Part 15 Subpart B Class A, EN 55011/55022, Class A |
| EMS | EN 61000-4-2 (Level 3), EN 61000-4-3 (Level 3) EN 61000-4-4 (Level 3), EN 61000-4-5 (Level 3) EN 61000-4-6 (Level 3), EN 61000-4-8 (Level 3) |
| Shock | IEC 60068-2-27 |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |

SOFTWARE

| | |
|---------------------|--|
| Management | iView ² , LLDP, SNMP v1/v2c, Modbus/TCP |
| Configuration | Static IP address, DHCP Client |
| Monitoring | Port Statistics (Speed/Status), Link Up/Down counter, Error Packet counter, Loop detection |
| Filter | Flow control, IEEE 802.1p QoS(Strict mode), Broadcast storm protection |
| Industrial Profiles | Modbus/TCP profiles included - Configuration and Diagnostic via automation software tools like e.g. Wonderware InTouch, STEP7, InduSoft Web Studio |

IVIEW² - NETWORK MANAGEMENT SOFTWARE - FREE DOWNLOAD

| | |
|-----------------|--|
| Version | iView ² Web-based Application |
| OS Support | 32-bit/64-bit Windows XP/Vista/7, Windows Server 2003/2008/2008 R2 |
| Operation Modes | Local Computer or Remote Server |
| Web Browser | Microsoft® IE, Chrome, Firefox |
| Protocol | SNMPv1 and SNMPv2c |

Product Ordering Information

| MODEL # | DESCRIPTION | OPERATING TEMPERATURE | RJ45 | | FIBER | | | | | |
|---------|---|-----------------------|-------------|---------|-------|------------------|--|------|-----------|---|
| | | | 10/100 MBPS | GIGABIT | 100FX | 100/1000BASE-SFP | COMBO PORT, 10/100/1000BASE-T(X) OR 100/1000BASE-SFP | TYPE | CONNECTOR | |
| SE316-T | 16-port 10/100 Mbps Monitored Ethernet Switch | -40~75°C | 16 | - | - | - | - | - | - | - |

Accessories - optional

| MODEL # | DESCRIPTION |
|-----------|---|
| MDR-40-24 | DIN Rail Power supply, 24VDC 40 Watt |
| CSUMB3FBG | 3 ft. (1 M), Gray, Category 5e UTP Patch Cord |
| CSUMB7FBG | 7 ft. (2 M), Gray, Category 5e UTP Patch Cord |

Package Checklist

Ethernet Switch, Quick Start Guide, DIN-Rail mount bracket (installed), Wall mount bracket

Warranty

Limited lifetime warranty for Advantech B+B designed and/or manufactured products.

Model SE316-T Mechanical Diagram | DIN Rail & Wall Mount Options

Units = [inches] mm

