

SE300 Series Switches

User Manual



B+B SMARTWORX

Powered by

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FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

For further certification information, please go to www.advantech-bb.com

DECLARATION OF CONFORMITY**CE**

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from Advantech. Please contact your local supplier for ordering information.

This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC CLASS A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNINGS FOR CLASS 1 DIVISION 2

The following statements are required to appear for Class 1 Division 2 requirements

These devices are open-type devices that are to be installed in an enclosure with tool removable cover/door that is suitable for the environment.

WARNING - This equipment is suitable for use in Class I, Division 2, Groups A, B, C, and D or non-hazardous locations only.

WARNING - EXPLOSION HAZARD - Do not connect or disconnect equipment unless power has been removed or the area is known to be non-hazardous."

WARNING - EXPLOSION HAZARD - Substitution of any components may impair suitability for Class I, Division 2."

AVERTISSEMENT - Ce équipement est adapté à une utilisation en Classe I, Division 2, Groupes A, B, C, et D ou non dangereux.

AVERTISSEMENT - RISQUE D'EXPLOSION - Ne pas brancher ou débrancher l'équipement que l'alimentation a été retiré ou la région est connue pour être non dangereux ".

AVERTISSEMENT - RISQUE D'EXPLOSION - Remplacement de tous les composants peut nuire à la conformité de Classe I, Division 2."

ATEX INFORMATION

ATEX Directive 94/9/EC (as amended relating to Group II, Category 3 locations) [Certification Pending]



Standard: EN 60079-0:2012+A11:2013; EN 60079-15:2010

Conditions of safe use:

- The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN 60079-15 and accessible only by the use of a tool.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.

SAFETY INSTRUCTIONS

- Read these safety instructions carefully.
- Keep this user manual for later reference.
- Disconnect this equipment from any AC outlet before cleaning. Use damp cloth. Do not use liquid or spray detergents for cleaning.
- For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
- Keep this equipment away from humidity.
- Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
- The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- All cautions and warning on the equipment should be noted.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over voltage.
- Never pour any liquid into an opening. This may cause fire or electrical shock.
- Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user manual
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.

INSTRUCTIONS FOR INSTALLATION IN A POLLUTION DEGREE 2 ENVIRONMENT OR EQUIVALENT STATEMENT.**PoE Requirements**

The equipment is to be connected only to PoE networks without routing to the outside plant.

Do NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -40°C (-40°F) OR ABOVE 75°C (167°F) THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

PRODUCT WARRANTY – LIMITED LIFETIME

Effective for products of Advantech B+B SmartWorx shipped on or after May 1, 2013, Advantech B+B SmartWorx warrants that each such product shall be free from defects in material and workmanship for its lifetime. This limited lifetime warranty is applicable solely to the original user and is not transferable. Power supplies are exempt from the limited lifetime warranty and are covered by a six year warranty.

This warranty is expressly conditioned upon proper storage, installation, connection, operation and maintenance of products in accordance with their written specifications.

Pursuant to the warranty, within the warranty period, Advantech B+B SmartWorx, at its option will:

1. Replace the product with a functional equivalent;
2. Repair the product; or
3. Provide a partial refund of purchase price based on a depreciated value.

Products of other manufacturers sold by Advantech B+B SmartWorx are not subject to any warranty or indemnity offered by Advantech B+B SmartWorx, but may be subject to the warranties of the other manufacturers.

Notwithstanding the foregoing, under no circumstances shall Advantech B+B SmartWorx have any warranty obligations or any other liability for: (i) any defects resulting from wear and tear, accident, improper use by the buyer or use by any third party except in accordance with the written instructions or advice of the Advantech B+B SmartWorx or the manufacturer of the products, including without limitation surge and overvoltage conditions that exceed specified ratings, (ii) any products which have been adjusted, modified or repaired by any party other than Advantech B+B SmartWorx or (iii) any descriptions, illustrations, figures as to performance, drawings and particulars of weights and dimensions contained in the Advantech B+B SmartWorx' catalogs, price lists, marketing materials or elsewhere since they are merely intended to represent a general idea of the products and do not form part of this price quote and do not constitute a warranty of any kind, whether express or implied, as to any of the Advantech B+B SmartWorx's products.

THE REPAIR OR REPLACEMENT OF THE DEFECTIVE ITEMS IN ACCORDANCE WITH THE EXPRESS WARRANTY SET FORTH ABOVE IS ADVANTECH B+B SMARTWORX SOLE OBLIGATION UNDER THIS WARRANTY. THE WARRANTY CONTAINED IN THIS SECTION SHALL EXTEND TO THE ORIGINAL USER ONLY, IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL SUCH WARRANTIES AND INDEMNITIES ARE EXPRESSLY DISCLAIMED, INCLUDING WITHOUT LIMITATION (I) THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY AND (II) ANY WARRANTY THAT THE PRODUCTS ARE DO NOT INFRINGE OR VIOLATE THE INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY. IN NO EVENT SHALL ADVANTECH B+B SMARTWORX BE LIABLE FOR LOSS OF BUSINESS, LOSS OF USE OR OF DATA INTERRUPTION OF BUSINESS, LOST PROFITS OR GOODWILL OR OTHER SPECIAL, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES. ADVANTECH B+B SMARTWORX SHALL DISREGARD AND NOT BE BOUND BY ANY REPRESENTATIONS, WARRANTIES OR INDEMNITIES MADE BY ANY OTHER PERSON, INCLUDING WITHOUT LIMITATION EMPLOYEES, DISTRIBUTORS, RESELLERS OR DEALERS OF ADVANTECH B+B SMARTWORX WHICH ARE INCONSISTENT WITH THE WARRANTY, SET FORTH ABOVE.

RETURNS POLICY

Eligible items returned within 30 days of purchase qualify for a full refund (less shipping charges). Advantech B+B SmartWorx has the option to accept returns of products 30 days after the date of purchase and such returns are subject to a restocking fee of up to 20%. Software is not returnable if opened. Advantech B+B SmartWorx will not

accept returns of products that were modified by a customer. All custom orders are non-returnable and non-cancelable.

REPAIR SERVICE: We offer a repair service for our products. Please call, FAX, or e-mail to request a Return Material Authorization (RMA) number and routing instructions. Shipping charges and any duties, taxes or brokerage fees are the customer's responsibility.

RETURN AND REPAIR CONTACT INFORMATION

Phone: (815) 433-5100 7:00 AM - 7:00 PM CST

Fax: (815) 433-5109

Email: orders@advantech-bb.com

1. PRODUCT OVERVIEW

1.1 SUPPORTED MODELS

| | | |
|---------------|-----------|---------------|
| SEG305-T | SEG308-T | SE305-T |
| SECP306-T | SE308-T | SE316-T |
| SEG316-T | SEGP310-T | SEC310-2SFP-T |
| SEC318-2SFP-T | | |

Table 1. Model Numbers

1.2 SPECIFICATIONS

| | | |
|-------------------|---------------------------|--|
| Interface | I/O Port | SE305-T: 5 x 10/100BaseT(X) SEG305-T: 5 x 10/100/1000BaseT(X) SEG308-T: 8 x 10/100/1000BaseT(X) SE308-T: 8 x 10/100BaseT(X) SE316-T: 16 x 10/100BaseT(X) SEG316-T: 16 x 10/100/1000BaseT(X) SEC310-2SFP-T: 8 x 10/100BaseT(X) + 2 x Combo 10/100/1000 BaseT(X)/SFP SEC318-2SFP-T: 16 x 10/100BaseT(X) + 2 x 10/100/1000Base-T(X) /SFP |
| | Power Connector | 6-pin screw Terminal Block (including relay) |
| Physical | Enclosure | Metal Shell |
| | Protection Class | IP30 |
| | Installation | DIN-Rail and Wall-Mount |
| | Dimensions (W x H x D) | SE305-T: 27mm x 120mm x 84mm SEG305-T: 27mm x 120mm x 84mm SEG308-T: 43mm x 120mm x 84mm SE308-T: 43mm x 120mm x 84mm SE316-T: 74mm x 120mm x 84mm SEG316-T: 74mm x 120mm x 84mm SEC310-2SFP-T: 74mm x 120mm x 84mm SEC318-2SFP-T: 74mm x 120mm x 84mm |
| LED Display | System LED | PWR1, PWR2, P-Fail, Loop detection |
| | Port LED | Link / Speed / Activity |
| Environment | Operating Temperature | <ul style="list-style-type: none"> ● Wide Temperature: -40°C ~ 75°C (-40°F ~ 167°F) ● Standard Temperature: <ul style="list-style-type: none"> ● Non PoE Models: -10°C ~ 60°C (14°F ~ 140°F) ● PoE Models: -25°C ~ 60°C (-4°F ~ 140°F) |
| | Storage Temperature | -40°C ~ 85°C (-40°F ~ 185°F) |
| | Ambient Relative Humidity | 10 ~ 95% (non-condensing) |
| Switch Properties | MAC Address | SE305-T: 2K entries SEG305-T: 2K entries SE308-T: 8K entries |

| | | |
|-------------------|---------------------|--|
| | | <p>SEG308-T: 8K entries SE316-T: 8K entries SEG316-T: 8K entries SEC310-2SFP-T: 8K entries SEC318-2SFP-T: 8K entries</p> |
| Switch Properties | Switching Bandwidth | <p>SE305-T: 1 Gbps SEG305-T: 10 Gbps SE308-T: 1.6 Gbps SEG308-T: 16 Gbps SE316-T: 3.2 Gbps SEG316-T: 32 Gbps SEC310-2SFP-T: 5.6 Gbps SEC318-2SFP-T: 7.2 Gbps</p> |
| Power | Power Consumption | <p>SE305-T: 2 watts SEG305-T: 2 watts SE308-T: 3.6 watts SEG308-T: 5.2 watts SE316-T: 3.84 watts SEG316-T: 8 watts SEC310-2SFP-T: 5.8 watts SEC318-2SFP-T: 8.2 watts</p> |
| | Power Input | 12VDC ~ 48VDC (8.4V ~ 52.8V), redundant dual inputs |
| Certifications | Safety | <p>UL508 Class 1 Division 2 [Group A, B, C, D] IECEx (pending) ATEX Zone 2 (pending)</p> |
| | EMC | CE, FCC |
| | EMI | EN 55011/ 55022 Class A, EN 61000-6-4, FCC Part 15 Subpart B Class A |
| | EMS | <p>EN 55024/ EN 61000-6-2 EN 61000-4-2 (ESD) Level 3 EN 61000-4-3 (RS) Level 3; EN 61000-4-4 (EFT) Level 3 EN 61000-4-5 (Surge) Level 3; EN 61000-4-6 (CS) Level 3 EN 61000-4-8 (Magnetic Field) Level 3</p> |
| | Shock | IEC 60068-2-27 |
| | Freefall | IEC 60068-2-32 |
| | Vibration | IEC 60068-2-6 |

Table 2. Specifications

1.3 HARDWARE VIEWS

1.3.1 FRONT VIEW

The following view applies to SE305-T and SEG305-T.

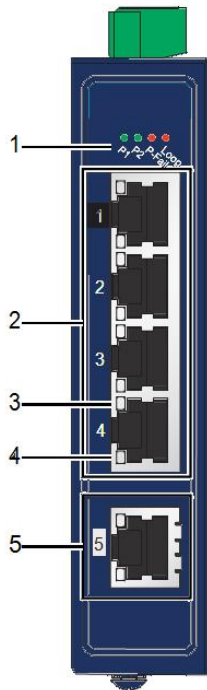


Figure 1. Front View, SE305 series

| | | |
|---|------------------|---|
| 1 | System LED panel | See System LED Panel for further details. |
| 2 | ETH port | SE305-T: Four 10/100BaseT(X) ports. SEG305-T: Four 10/100/1000BaseT(X) ports. Port numbers in black are designated for port based Quality of Service (QoS) functionality. |
| 3 | LNK/ACT LED | Link activity LED. |
| 4 | Speed LED | <ul style="list-style-type: none"> ● Gigabit Ethernet: <ul style="list-style-type: none"> ● Green: 1000M ● Amber: 100M ● Off: 10M ● Fast Ethernet: <ul style="list-style-type: none"> ● Amber: 100M ● Off: 10M |

| | | |
|---|----------|--|
| 5 | ETH port | SE305-T: One 10/100BaseT(X) port. SEG305-T: One 10/100/1000BaseT(X) port. |
|---|----------|--|

Table 3. LEDs SE305/308

The following view applies to SE308-T and SEG308-T.

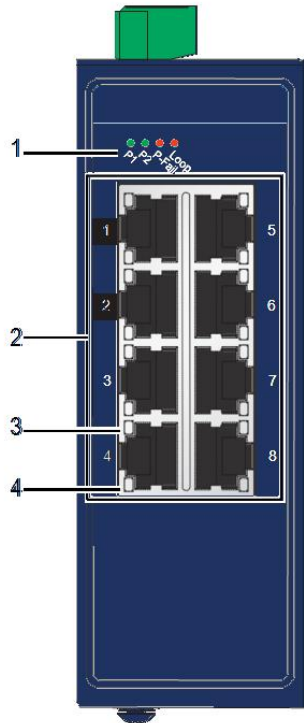


Figure 2. Front View SE308 series

| | | |
|---|------------------|---|
| 1 | System LED panel | See System LED Panel for further details. |
| 2 | ETH port | SE308-T: Eight 10/100BaseT(X) ports. SEG308-T: Eight 10/100/1000BaseT(X) ports. Port numbers in black (actual white) are designated for port based Quality of Service (QoS) functionality. |
| 3 | LNK/ACT LED | Link activity LED. |
| 4 | Speed LED | <ul style="list-style-type: none"> ● Gigabit Ethernet: <ul style="list-style-type: none"> ● Green: 1000M ● Amber: 100M ● Off: 10M ● Fast Ethernet: <ul style="list-style-type: none"> ● Amber: 100M ● Off: 10M |

Table 4. LEDs SE308 series

The following view applies to SE316-T and SEG316-T.

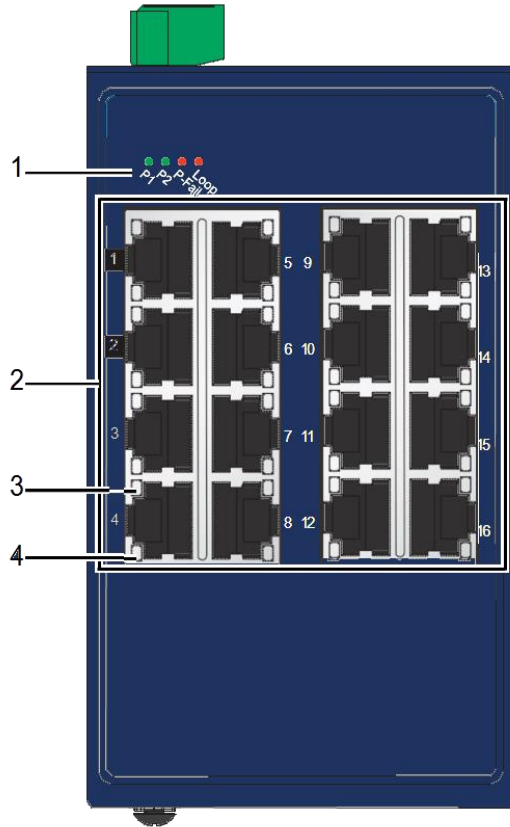


Figure 3. Front View SE316 Series

| | | |
|---|------------------|---|
| 1 | System LED panel | See "System LED Panel" for further details. |
| 2 | ETH port | SE316-T: Sixteen 10/100BaseT(X) ports. SEG316-T: Sixteen 10/100/1000BaseT(X) ports. Port numbers in black (actual white) are designated for port based Quality of Service (QoS) functionality |
| 3 | LNK/ACT LED | Link activity LED. |
| 4 | Speed LED | Fast Ethernet: <ul style="list-style-type: none"> ● Amber: 100M ● Off: 10M |

Table 5. LEDs SE316 series

The following view applies to SEC310-2SFP-T.

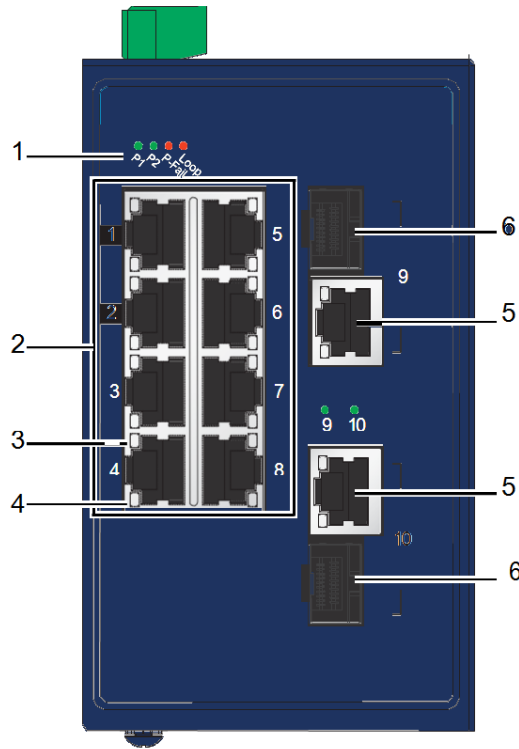


Figure 4. Front View SEC310 series

| No. | Item | Description |
|-----|----------------------|---|
| 1 | System LED panel | See "System LED Panel" for further details |
| 2 | ETH port | Eight 10/100BaseT(X) ports Port numbers in black (actual white) are designated for port based Quality of Service (QoS) functionality |
| 3 | LNK/ACT LED | Link activity LED |
| 4 | Speed LED | Fast Ethernet: <ul style="list-style-type: none"> ● Amber: 100M ● Off: 10M |
| 5 | ETH port (combo) | Two 10/100/1000BaseT(X) combo ports |
| 6 | ETH SFP port (combo) | Two 100/1000Base-FX SFP combo ports |

Table 6. LEDs SE310 series

The following view applies to SEC318-2SFP-T.

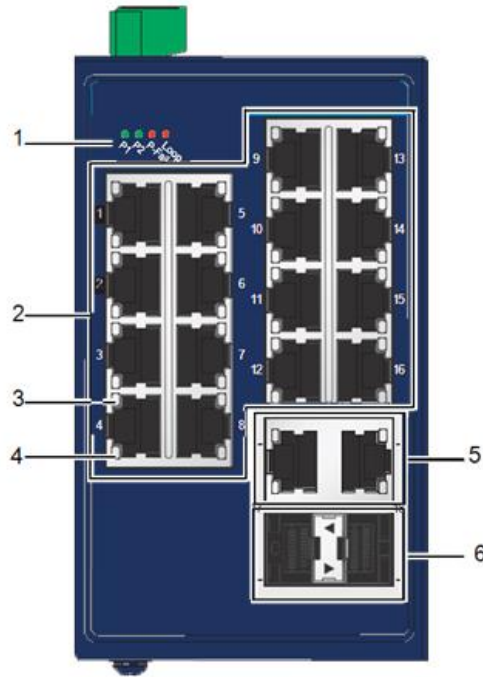


Figure 5. Front View SE318 series

| No. | Item | Description |
|-----|------------------|---|
| 1 | System LED panel | See "System LED Panel" for further details |
| 2 | ETH port | Sixteen 10/100BaseT(X) ports Port numbers in black (actual white) are designated for port based Quality of Service (QoS) functionality |
| 3 | LNK/ACT LED | Link activity LED |
| 4 | Speed LED | Fast Ethernet: <ul style="list-style-type: none"> ● Amber: 100M ● Off: 10M |
| 5 | ETH port (combo) | Two 10/100/1000BaseT(X) combo ports |
| 6 | ETH port (combo) | Two 100/1000Base-FX SFP combo ports |

Table 7. LEDES SE318 series

The following view applies to SECP306-T.

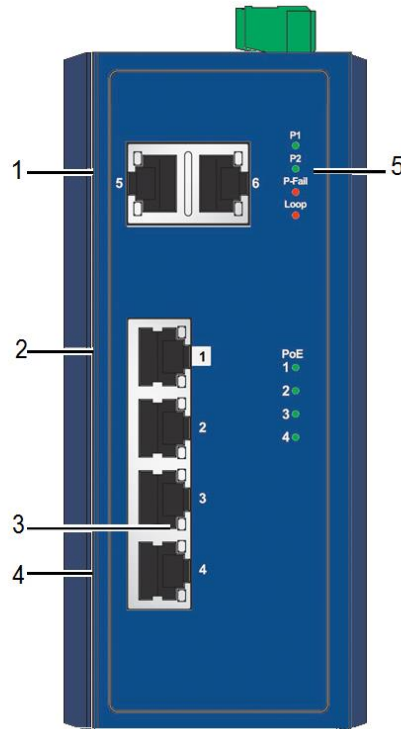


Figure 6. Front View SECP306-T

| No. | Item | Description |
|-----|------------------|---|
| 1 | ETH port | Two 10/100/1000BaseT(X) ports. |
| 2 | ETH port | Four 10/100BaseT(X) with PoE ports. |
| 3 | LNK/ACT LED | Link activity LED. |
| 4 | Speed LED | Fast Ethernet: <ul style="list-style-type: none"> ● Amber: 100M ● Off: 10M |
| 5 | System LED panel | See "System LED Panel" for further details. |

Table 8. LEDS SECP306-T

System LED Panel

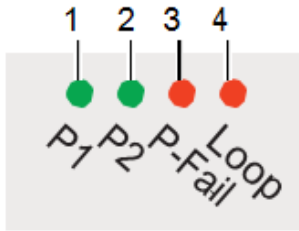


Figure 7. Power/Fail/Loop LED Panel

| No. | LED Name | LED Color | Description |
|-----|----------|-------------|---|
| 1 | PW1 LED | Solid green | Powered up |
| | | Off | Powered down or not installed |
| 2 | PW2 LED | Solid green | Powered up |
| | | Off | Powered down or not installed |
| 3 | P-Fail | Solid red | When PW1 or PW2 is disconnected, the LED lights |
| | | Off | When PW1 and PW2 is connected, the LED is off |
| 4 | Loop | Solid red | When loop detected, the LED lights |
| | | Off | No loop detected |

Table 9. System LED Panel

1.3.2 REAR VIEW

The following view applies to SE305-T and SEG305-T.

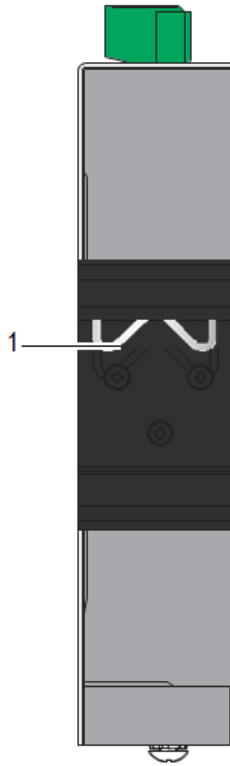


Figure 8. Rear View SE305-T and SEG305-T

| No. | Item | Description |
|-----|-------------------------|---|
| 1 | DIN-Rail mounting plate | Mounting plate used for the installation to a standard DIN rail |

Table 10. Rear View SE305-T and SEG305-T

The following view applies to SEG305-T and SE308-T.

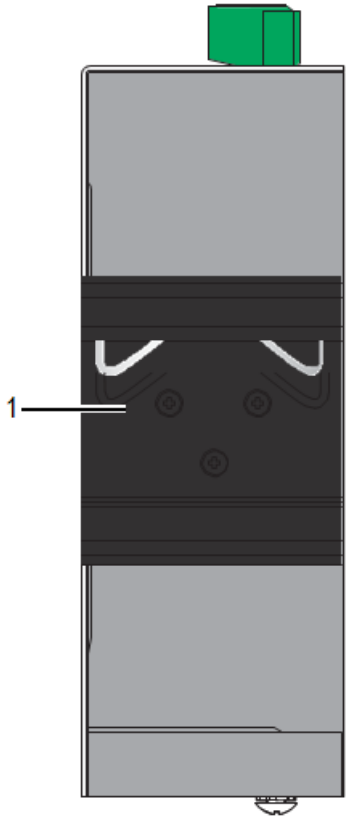


Figure 9. Rear View SEG308-T and SE308-T

| No. | Item | Description |
|-----|-------------------------|---|
| 1 | DIN-Rail mounting plate | Mounting plate used for the installation to a standard DIN rail |

Table 11. Rear View SEG305-T and SE308-T

The following view applies to SE316-T, SEC310-2SFP-T, SEC318-2SFP-T, and SEG316-T.

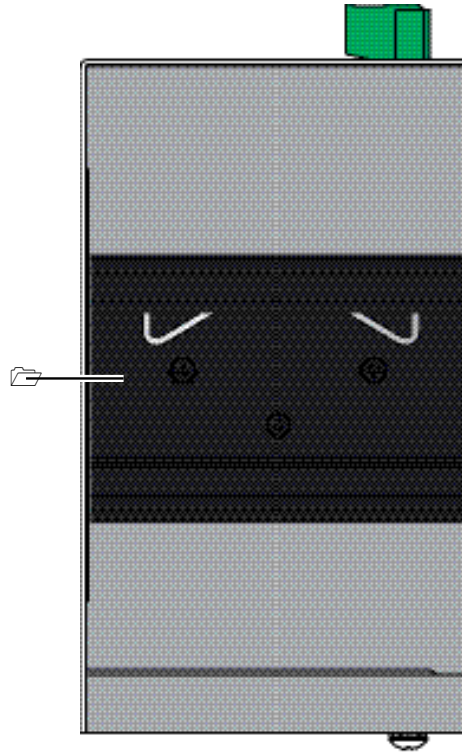


Figure 10. Rear View SE316-T, SEG316-T, SEC310-2SFP-T and SEC318-2SFP-T

| No. | Item | Description |
|-----|-------------------------|---|
| 1 | DIN-Rail mounting plate | Mounting plate used for the installation to a standard DIN rail |

Table 12. Rear View SE316-T, SEG316-T, SEC310-2SFP-T and SEC318-2SFP-T

1.3.3 TOP VIEW

The following view applies to SE305-T and SEG305-T.

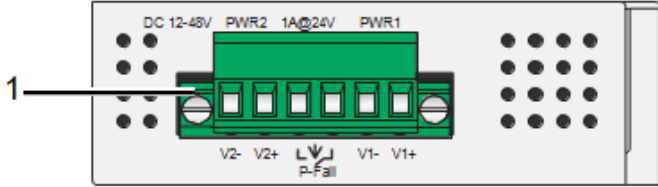


Figure 11. Top View SE305-T and SEG305-T

| No. | Item | Description |
|-----|----------------|--|
| 1 | Terminal block | Connect cabling for power and alarm wiring |

Table 13. Top View SE305-T and SEG305-T

The following view applies to SEG308-T and SE308-T.

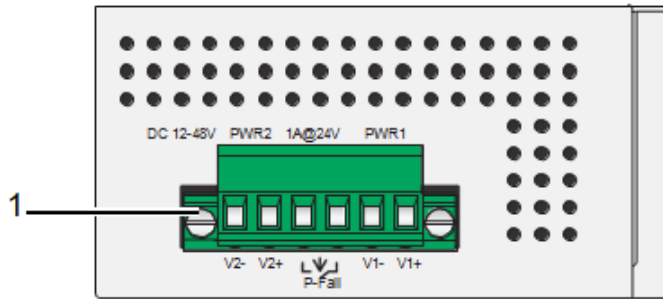


Figure 12. Top View SEG308-T and SE308-T

| No. | Item | Description |
|-----|----------------|--|
| 1 | Terminal block | Connect cabling for power and alarm wiring |

Table 14. Top View SEG308-T and SE308-T

The following view applies to SE316-T, SEC310-2SFP-T, and SEC318-2SFP-T.

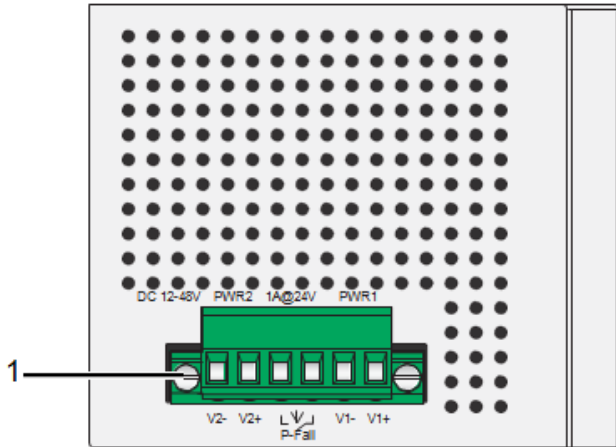


Figure 13. Top View SE316-T, SEC310-2SFP-T, and SEC318-2SFP-T

| No. | Item | Description |
|-----|----------------|--|
| 1 | Terminal block | Connect cabling for power and alarm wiring |

Table 15. Terminal Block SE316-T, SEC310-2SFP-T, and SEC318-2SFP-T

The following view applies to SEG316-T and SEG316-T.

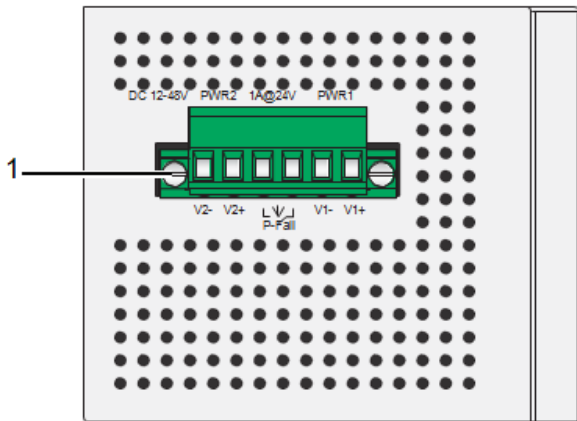


Figure 14. Terminal block SEG316-T

| No. | Item | Description |
|-----|----------------|--|
| 1 | Terminal block | Connect cabling for power and alarm wiring |

Table 16. Terminal block SEG316-T

1.3.4 BOTTOM VIEW FOR GROUND SCREW

The following view applies to SE305-T and SEG305-T.

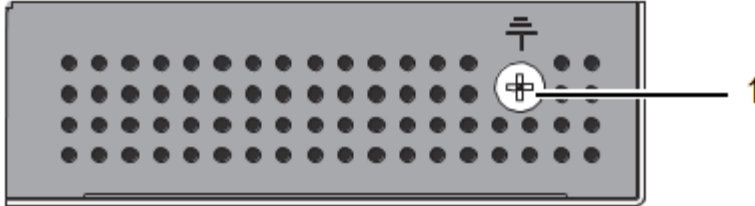


Figure 15. Bottom View

| No. | Item | Description |
|-----|-----------------|---------------------------------------|
| 1 | Ground terminal | Screw terminal used to ground chassis |

Table 17. Bottom View ground screw SE305-T and SEG305-T

The following view applies to SEG308-T, and SE308-T.

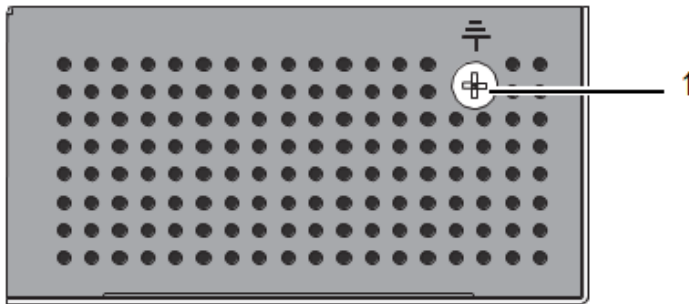


Figure 16. Ground screw SEG308-T, and SE308-T

| No. | Item | Description |
|-----|-----------------|---------------------------------------|
| 1 | Ground terminal | Screw terminal used to ground chassis |

Table 18. Bottom View- ground screw SEG308-T, and SE308-T

The following view applies to SE316-T, SEG316-T, SEC310-2SFP-T, and SEC318-2SFP-T.

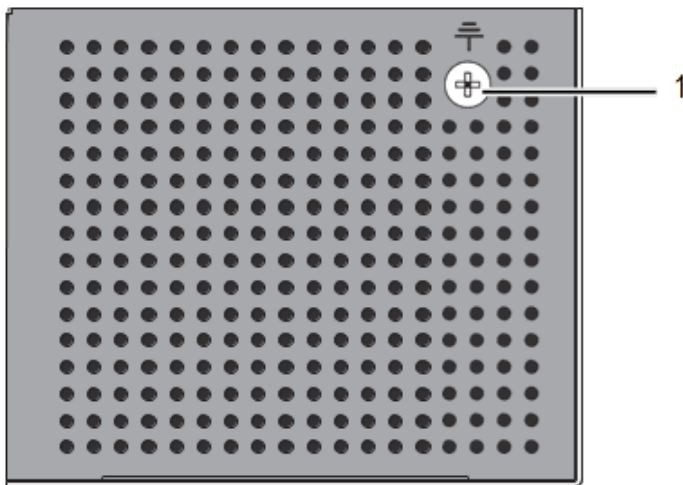


Figure 17. Bottom View ground screw SE316-T, SEG316-T, SEC310-2SFP-T, and SEC318-2SFP-T

| No. | Item | Description |
|-----|-----------------|--|
| 1 | Ground terminal | Screw terminal used to ground chassis. |

Table 19. Bottom View ground screw SE316-T, SEC310-2SFP-T, SEC318-2SFP-T, and SEG316-T

1.4 PACKING LIST

The product package you have received should contain the following items. If any of them are not included or damaged, please contact your local vendor for support.

- 1 x Industrial Ethernet Switch
- 1 x Wall-mounting Bracket
- 1 x DIN-Rail mounting Bracket and Screws
- 1 x Quick Start Guide
-

iView² Webserver is downloadable from the website: www.advantech-bb.com

2. SWITCH INSTALLATION

2.1 INSTALLATION GUIDELINES

The following guidelines are provided to optimize the device performance. Review the guidelines before installing the device.

- Make sure cabling is away from sources of electrical noise. Radios, power lines, and fluorescent lighting fixtures can interference with the device performance.
- Make sure the cabling is positioned away from equipment that can damage the cables.
- Operating environment is within the ranges listed range, see “Specifications”.
- Relative humidity around the switch does not exceed 95 percent (noncondensing).
- Altitude at the installation site is not higher than 10,000 feet.
- In 10/100 and 10/100/1000 fixed port devices, the cable length from the switch to connected devices cannot exceed 100 meters (328 feet).
- Make sure airflow around the switch and respective vents is unrestricted. Without proper airflow the switch can overheat. To prevent performance degradation and damage to the switch, make sure there is clearance at the top and bottom and around the exhaust vents.

2.1.1 CONNECTING HARDWARE

Finding a proper location for your Modbus Gateways, connecting to the network, hooking up the power cable, and connecting to the SE300 Series.

2.2 VERIFYING SWITCH OPERATION

Before installing the device in a rack or on a wall, power on the switch to verify that the switch passes the power-on self-test (POST). To connect the cabling to the power source see “Power Supply Installation”. At startup (POST), the System LED blinks green, while the remaining LEDs are a solid green. Once the switch passes POST self-test, the System LED turns green. The other LEDs turn off and return to their operating status. If the switch fails POST, the System LED switches to an amber state. After a successful self-test, power down the switch and disconnect the power cabling. The switch is now ready for installation at its final location.

2.3 INSTALLING THE SWITCH

2.3.1 DIN RAIL MOUNTING

The DIN rail mount option is the quickest installation option. Additionally, it optimizes the use of rail space.

The metal DIN rail kit is secured to the rear of the switch. The device can be mounted onto a standard 35mm (1.37") x 75 mm (3") height DIN rail. The devices can be mounted vertically or horizontally. Refer to the following guidelines for further information.

A corrosion-free mounting rail is advisable.

When installing, make sure to allow for enough space to properly install the cabling.

Installing the DIN-Rail Mounting Kit

- Insert the top back of the mounting bracket over the DIN rail.
- Push the bottom of the switch towards the DIN rail until it snaps into place.

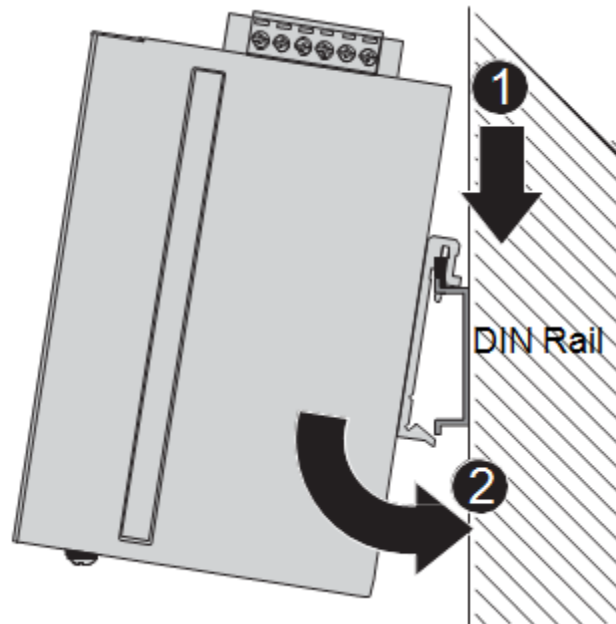


Figure 18. Installing the DIN-Rail Mounting Kit

Removing the DIN-Rail Mounting Kit

- Push the switch down to free the bottom of the plate from the DIN rail.
- Rotate the bottom of the device towards you and away from the DIN rail.
- Once the bottom is clear of the DIN rail, lift the device straight up to unhook it from the DIN rail.

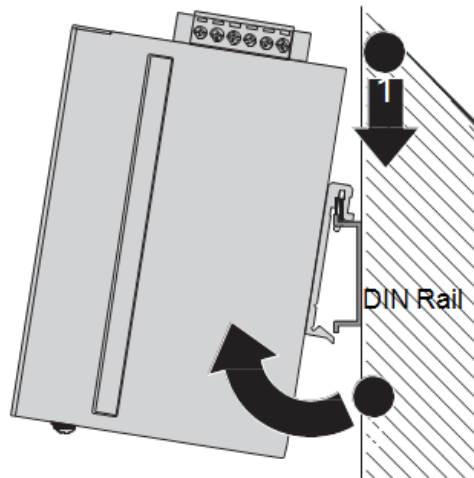


Figure 19. Removing the DIN-Rail

2.3.2 WALL-MOUNTING

The wall mounting option provides better shock and vibration resistance than the DIN rail vertical mount.

When installing, make sure to allow for enough space to properly install the cabling.

Before the device can be mounted on a wall, you will need to remove the DIN rail plate.

- Rotate the device to the rear side and locate the DIN mounting plate.
- Remove the screws securing the DIN mounting plate to the rear panel of the switch.
- Remove the DIN mounting plate. Store the DIN mounting plate and provided screws for later use.
- Align the wall mounting plates on the rear side. The screw holes on the device and the mounting plates must be aligned. See the following illustration.
- Secure the wall mount plates with M3 screws. See the following figure.

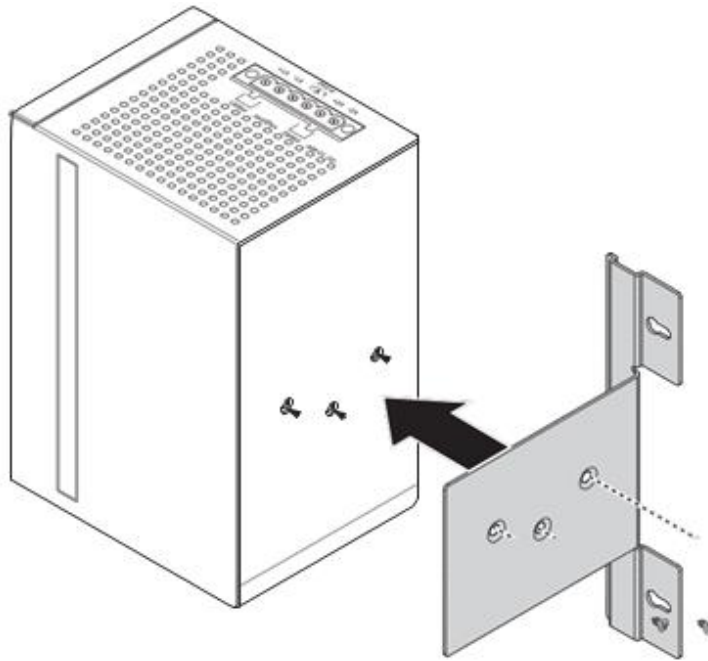


Figure 20. Installing Wall Mount Plates

Once the wall mounting plates are secure on the device you will need to attach the wall screws (x3).

- Locate the installation site and place the switch against the wall, making sure it is the final installation location.
- Use the wall mount plates as a guide to mark the locations of the screw holes.
- Drill four holes over the four marked locations on the wall, keeping in mind that the holes must accommodate wall sinks in addition to the screws.
- Insert the wall sinks into the walls.
- Insert the screws into the wall sinks. Leave a 2 mm gap between the wall and the screw head to allow for wall mount plate insertion.



Figure 21. Securing Wall Mounting Screws

Make sure the screws dimensions are suitable for use with the wall mounting plate.

Do not completely tighten the screws into the wall. A final adjustment may be needed before fully securing the wall mounting plates on the wall.

Align the wall mount plate over the screws on the wall.

Install the wall mount plate on the screws and slide it forward to lock in place. See the following figure.

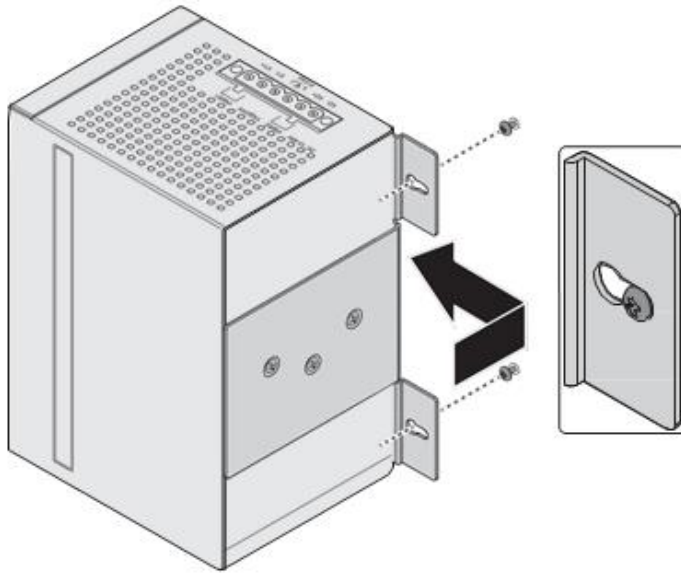


Figure 22. Wall Mount installation

Once the device is installed on the wall, tighten the screws to secure the device.

2.4 INSTALLING AND REMOVING SFP MODULES

Up to two fiber optic ports are available (dependent on model) for use in the switch. Refer to the technical specifications for details.

The Gigabit Ethernet ports on the switch are 100/1000Base SFP Fiber ports, which require using 100M or 1G mini-GBIC fiber transceivers to work properly. Advantech B+B SmartWorx provides completed transceiver models for different distance requirement.

The concept behind the LC port and cable is quite straight forward. Suppose that you are connecting devices I and II. Unlike electrical signals, optical signals do not require a circuit in order to transmit data. Consequently, one of the optical lines is used to transmit data from device I to device II, and the other optical line is used transmit data from device II to device I, for full-duplex transmission.

Remember to connect the Tx (transmit) port of device I to the Rx (receive) port of device II, and the Rx (receive) port of device I to the Tx (transmit) port of device II. If you make your own cable, we suggest labeling the two sides of the same line with the same letter (A-to-A and B-to-B, or A1-to-A2 and B1-to-B2).

This is a Class 1 Laser/LED product. However, it is not recommended to stare directly into the Laser Beam.

2.4.1 INSTALLING SFP MODULES

To connect the fiber transceiver and LC cable, use the following guidelines:

- Remove the dust plug from the fiber optic slot chosen for the SFP transceiver.

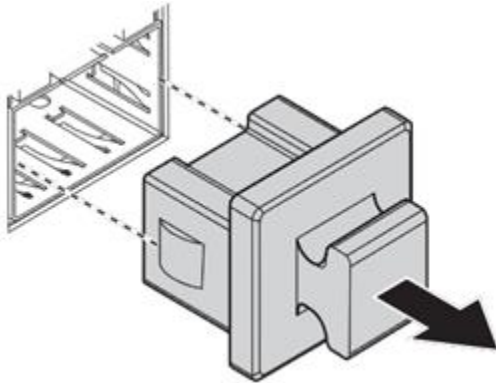


Figure 23. Removing the Dust Plug from an SFP Slot

Do not remove the dust plug from the SFP slot if you are not installing the transceiver at this time. The dust plug protects hardware from dust contamination.

- Position the SFP transceiver with the handle on top. See the following figure.
- Locate the triangular marking in the slot and align it with the bottom of the transceiver.
- Insert the SFP transceiver into the slot until it clicks into place.
- Make sure the module is seated correctly before sliding the module into the slot. A click sounds when it is locked in place.

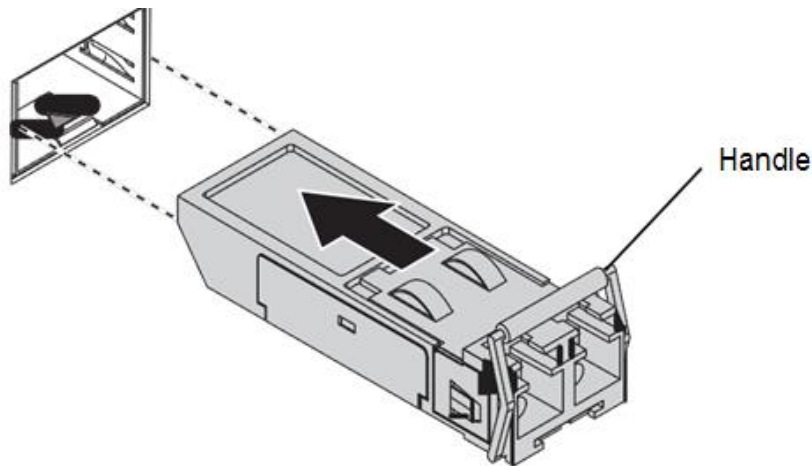


Figure 24. Installing an SFP Transceiver

Remove the protective plug from the SFP transceiver.

Do not remove the dust plug from the transceiver if you are not installing the fiber optic cable at this time. The dust plug protects hardware from dust contamination

Insert the fiber cable into the transceiver. The connector snaps into place and locks.

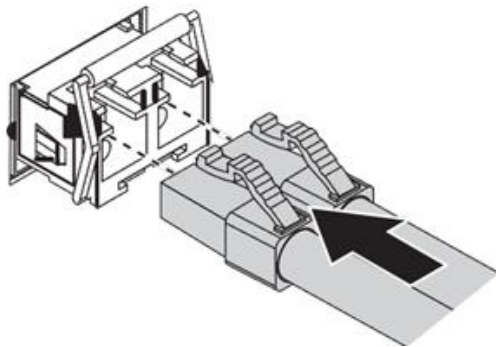


Figure 25. Attaching a fiber optic cable to a transceiver

Repeat the previous procedures to install any additional SFP transceivers in the switch.

The fiber port is now set up.

2.4.2 REMOVING SFP MODULES

To disconnect an LC connector, use the following guidelines:

- Press down and hold the locking clips on the upper side of the optic cable.
- Pull the optic cable out to release it from the transceiver.

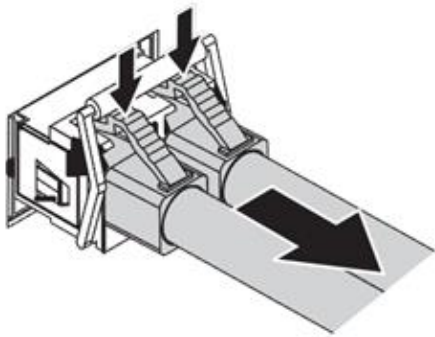


Figure 26. Removing a fiber optic cable to a transceiver

- Hold the handle on the transceiver and pull the transceiver out of the slot.

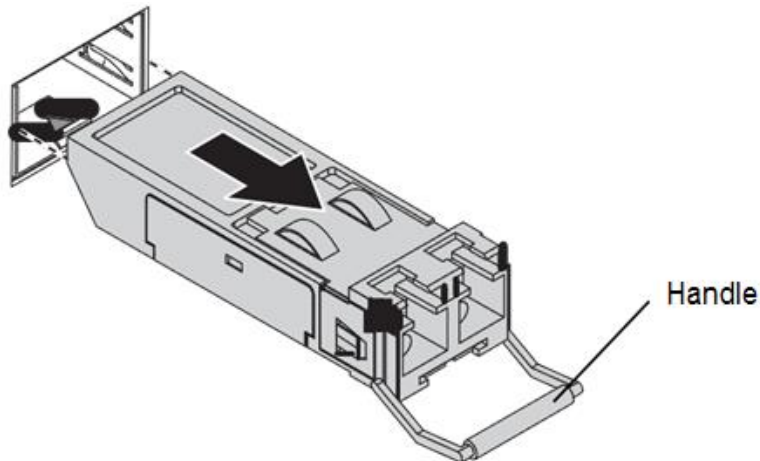


Figure 27. Removing an SFP transceiver

Replace the dust plug on the slot if you are not installing a transceiver. The dust plug protects hardware from dust contamination.

2.5 CONNECTING THE SWITCH TO ETHERNET PORTS

2.5.1 RJ45 ETHERNET CABLE WIRING

For RJ45 connectors, data-quality, twisted pair cabling (rated CAT5 or better) is recommended. The connector bodies on the RJ45 Ethernet ports are metallic and connected to the GND terminal. For best performance, use shielded cabling. Shielded cabling may be used to provide further protection.

| Straight-thru Cable Wiring | | Cross-over Cable Wiring | |
|----------------------------|-------|-------------------------|-------|
| Pin 1 | Pin 1 | Pin 1 | Pin 3 |
| Pin 2 | Pin 2 | Pin 2 | Pin 6 |
| Pin 3 | Pin 3 | Pin 3 | Pin 1 |
| Pin 6 | Pin 6 | Pin 6 | Pin 2 |

Table 20. RJ45 Ethernet wiring for reference

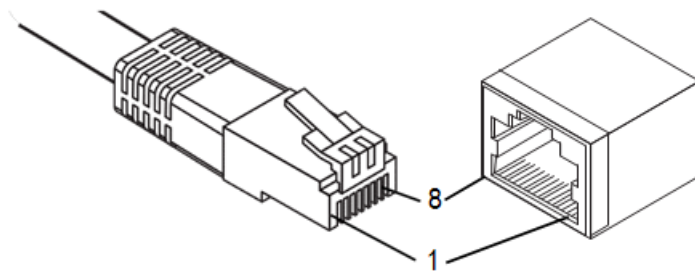


Figure 28. Ethernet plug & connector pin position

Maximum cable length: 100 meters (328 ft.) for 10/100/1000BaseT.

2.6 POWER SUPPLY INSTALLATION

2.6.1 OVERVIEW

POWER DOWN AND DISCONNECT THE POWER CORD BEFORE SERVICING OR WIRING THE SWITCH.

Do not disconnect modules or cabling unless the power is first switched off.

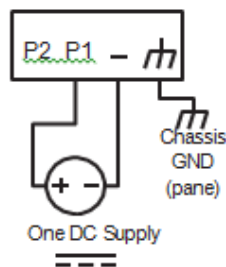
The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the switch device

Disconnect the power cord before installation or cable wiring

The switches can be powered by using the same DC source used to power other devices. A DC voltage range of 12 to 48 VDC must be applied between the V1+ terminal and the V1- terminal (PW1), as in the following illustrations. A Class 2 power supply is required to maintain a UL60950 panel listing. The chassis ground screw terminal should be tied to the panel or chassis ground. A redundant power configuration is supported through a secondary power supply unit to reduce network down time as a result of power loss.

SE300 SERIES support 12 and 48 VDC. Dual power inputs are supported and allow you to connect a backup power source.

Single DC Power



Redundant DC Power

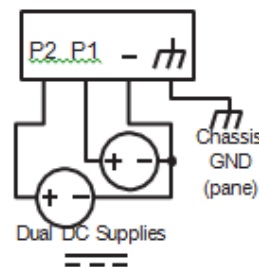


Figure 29. Power wiring for SE300 series

2.6.2 CONSIDERATIONS

Consider the following guidelines before wiring the device:

- The Terminal Block (CN1) is suitable for 12-24 AWG (3.31 - 0.205 mm²). Torque value 7 lb-in.
- The cross sectional area of the earthing conductors shall be at least 3.31 mm².
- Calculate the maximum possible current for each power and common wire. Make sure the power draw is within limits of local electrical code regulations.
- For best practices, route wiring for power and devices on separate paths.
- Do not bundle together wiring with similar electrical characteristics.
- Make sure to separate input and output wiring.
- Label all wiring and cabling to the various devices for more effective management and servicing.

Routing communications and power wiring through the same conduit may cause signal interference. To avoid interference and signal degradation, route power and communications wires through separate conduits.

2.6.3 GROUNDING THE DEVICE

- ***Do not disconnect modules or cabling unless the power is first switched off.***

The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the switch device.

- ***Before connecting the device properly ground the device. Lack of a proper grounding setup may result in a safety risk and could be hazardous.***
- ***Do not service equipment or cables during periods of lightning activity.***
- ***Do not service any components unless qualified and authorized to do so.***
- ***Do not block air ventilation holes.***

Electromagnetic Interference (EMI) affects the transmission performance of a device. By properly grounding the device to earth ground through a drain wire, you can setup the best possible noise immunity and emissions.

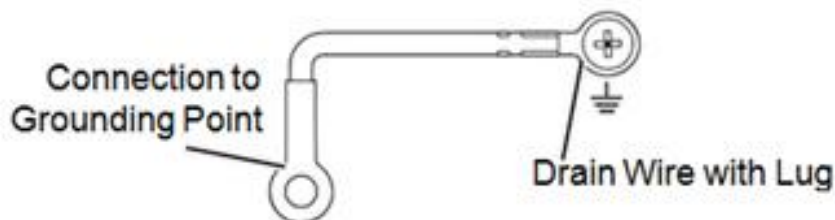


Figure 30. Grounding connection

By connecting the ground terminal by drain wire to earth ground the switch and chassis can be ground.

Before applying power to the grounded switch, it is advisable to use a volt meter to ensure there is no voltage difference between the power supply's negative output terminal and the grounding point on the switch.

2.6.4 WIRING A RELAY CONTACT

The following section details the wiring of the relay output. The terminal block on the SE300 Series is wired and then installed onto the terminal receptor located on the SE300 Series.

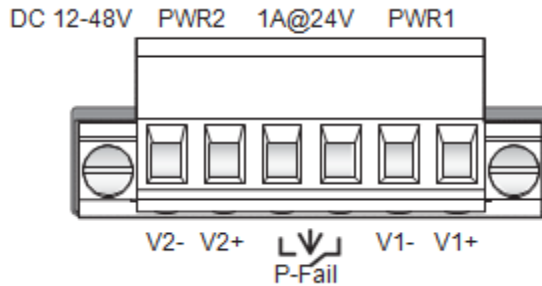


Figure 31. Terminal receptor: relay contact

The terminal receptor includes a total of six pins: two for PWR1, two for PWR2 and two for a fault circuit.

2.6.5 WIRING THE POWER INPUTS

- **Do not disconnect modules or cabling unless the power is first switched off.**
- **The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the switch device.**
- **Power down and disconnect the power cord before servicing or wiring the switch**

There are two power inputs for normal and redundant power configurations. The power input 2 is used for wiring a redundant power configuration. See the following for terminal block connector views.

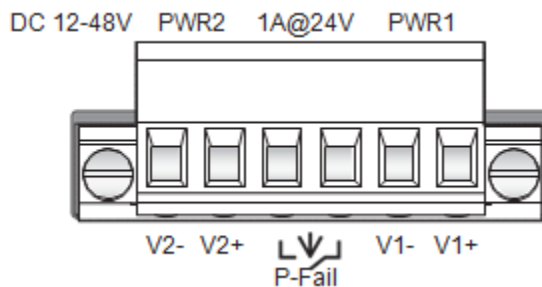


Figure 32. Terminal receptor: power input contacts

To wire the power inputs:

Make sure the power is not connected to the switch or the power converter before proceeding.

- Loosen the screws securing terminal block to the terminal block receptor.
- Remove the terminal block from the switch.

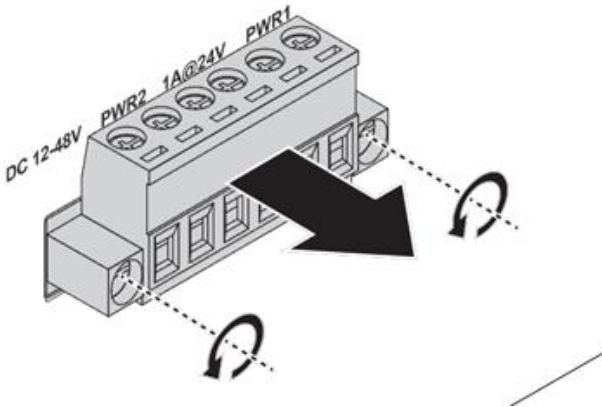


Figure 33. Removing a terminal block

- Insert a small flat-bladed screwdriver in the V1+/V1- wire-clamp screws, and loosen the screws.
- Insert the negative/positive DC wires into the V+/V- terminals of PW1. If setting up power redundancy, connect PW2 in the same manner.
- Tighten the wire-clamp screws to secure the DC wires in place.

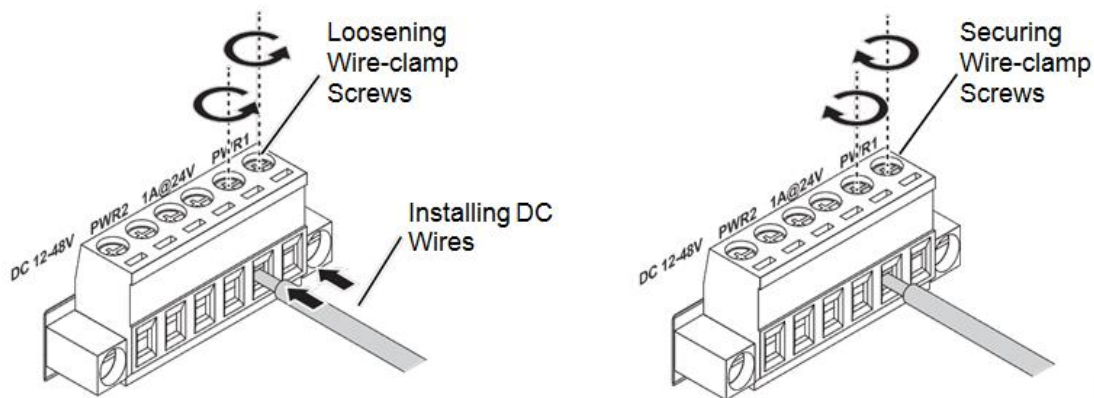


Figure 34. Installing DC wires in a terminal block

- Align the terminal block over the terminal block receptor on the switch.
- Insert the terminal block and press it in until it is flush with the terminal block receptor.
- Tighten the screws on the terminal block to secure it to the terminal block receptor.
If there is no gap between the terminal block and the terminal receptor, the terminal block is seated correctly.

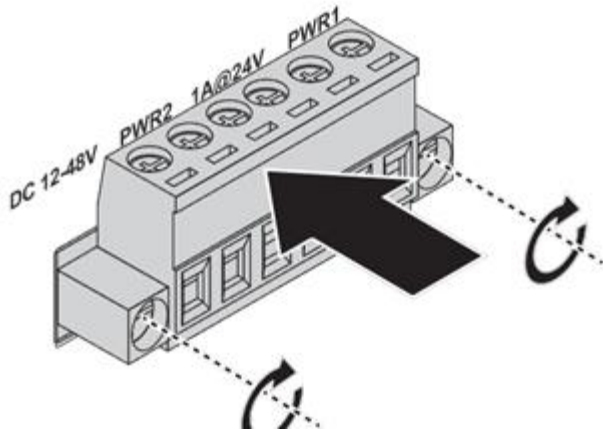


Figure 35. Securing a terminal block to a receptor

3. IVIEW² FOR SE300 EWORX SWITCHES

3.1 PURPOSE

iView² is the Network Management System (NMS) for SNMP-based configuration and management of Advantech/B+B SmartWorx managed Fiber Products and SE300 Series switches. The purpose of this document is to identify the main features of the iView² web-based application. Once enabled using iView², these switches can also be managed via Modbus TCP/IP for SCADA.

3.2 GETTING STARTED WITH iView²

1. User must install the software, a free download from our website
 - a. First time users MUST install **Full Installation** of the iView² WebServer Software
 - b. iView² WebServer Software Application is to be **only** be used when upgrading to a newer revision on previous installation of the iView²
2. Follow the installation instructions listed in iView_Installation_Instructions.doc (included in the downloaded installation package).
3. iView² application must be started (automatically started in previous step) see iView_Installation_Instructions.doc)
4. Using Web Browser, type:
 - a. Server Deployments: <http://youriViewServerIPAddress:8080/iView3> OR
 - b. Directly Connected or Accessing Devices locally: <http://localhost:8080/iView3>
5. Login with default user name and default password. (We recommend changing the default user and default password upon initial login)
 - a. User Name: **admin**
 - b. Password: **password**

B+B SMARTWORX

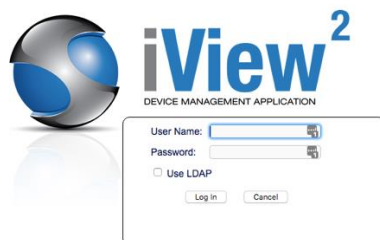


Figure 36: iView² screenshot

6. Enable SNMP or Modbus/TCP Monitoring: Add the Switch (See [section 3.7.1 Add New Device](#))
7. Previously enabled devices or switches for SNMP or Modbus/TCP Monitoring, will be auto discovered and displayed under Segment.

**REQUIRED step to start monitoring switch devices

3.3 SNMP NMS INSTALLATION REQUIREMENTS

The following requirements must be met before iView² can be installed:

- The Java J2SE runtime environment version 1.5 or greater must be installed
- The Apache\Tomcat 6 or greater http server and servlet container must be installed
- The MySQL 5.1 or greater relational database management system (rdms) must be installed

NOTES:

- All the requirement applications are included in the iView² installation release.
- Detailed installation instructions are included in the iView² installation package. Refer to **iView_Installation_Instructions.doc** included in the installation package.
- The desktop version of iView² is not supported.
- iView² is a Java-based solution and requires a different web container environment than Microsoft Internet Information Server (IIS). We will be recommending the Apache/Tomcat HTTP and Servlet Container. Apache/Tomcat 6 was used during development and testing.
- iView² uses a database for all configuration information and report data. We will be recommending the MySQL database system. MySQL 5.1 was used during development and testing.
- iView² is an Internet-based application so the main user GUI is through a web browser.
- The following browsers are supported:
 - MS Internet Explorer v6, v7, v8, v9
 - Mozilla Firefox v3.x – 7.0

3.4 MAIN FEATURES

The SE300 Series switches will support the following features in iView²:

- Vendor Name
- Production Name
- Firmware Version
- Ethernet MAC Address
- IP Address
- Port Status
- Port Speed
- Flow Control
- Port Description
- Link Up Counter

- PoE Status
- Detect and identify SE300 series switches
- Create Community Strings
- Set IP address
- Configure IP mode
- Set IP address
- Set TCP Modbus time out
- Configure Traps
- Monitor Link Status
- View System Information
- Combo models (models offering ports with different speeds and capability)
- Tx Packets Counter
- Rx Packets Counter
- Tx Error Packets Counter
- Rx Error Packets Counter
- SECx SEGx with more than 8 ports

3.5 UNDERSTANDING THE LAYOUT OF iView²

There are 3 main sections to the iView² default view:

- Header Section
- Network Segment List Section
- Content Area Section

3.5.1 HEADER SECTION



Figure 37. iView² header area

The header consists of a top banner section and a Toolbar/Menu section.

3.5.2 NETWORK SEGMENT LIST SECTION

The Network Segment List (NSL) section is located on the left side of the application just below the Header Section. The NSL is always available. The NSL can be minimized by using the mouse to click the arrow image on the top left side of the chassis tree control.

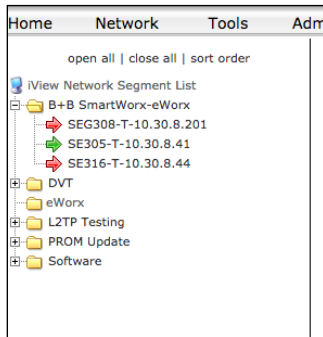


Figure 38. iView² network segment list section

3.5.3 CONTENT SECTION

The content section is located to the right of the Network Segment List Section. This is the section of the application where most of the user interaction will be performed. The default display in the content area is an iView² splash panel.



Figure 39. iView² default display for SNMP/Modbus TCP/IP

3.6 USERS

3.6.1 USER LOGIN

Access to iView² is controlled by a User Authentication process. By default there is a single login account created during installation with a User Name of **“admin”** and a Password of **“password”**.

3.6.2 USER LOGOUT

When a user has completed their work with iView² they are encouraged to logout of the application using the **“Logout”** selection located in right-hand side the header of the main page.



Figure 40. User logout command

3.6.3 USER AUTHORIZATION – ACCESS LIST

iView² supports 3 different levels of user access: “User”, “Operator”, and “Administrator”.

- “User” has the minimal level of access to the system consisting of read-only access to the network components.
- “Operator” has the next level of access to the system consisting of read/write access to the network components.
- “Administrator” has the highest level of access to the system consisting of read/write access to the network components and the ability to add users and change user passwords.

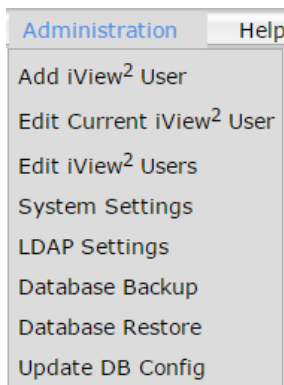


Figure 41. Administrator menu

3.6.4 ADD USER

For users with an “Administrator” user access level, the “**Add User**” command is available under the “**Administration**” menu command. Selecting the “**Add User**” command will display the dialog as shown below.

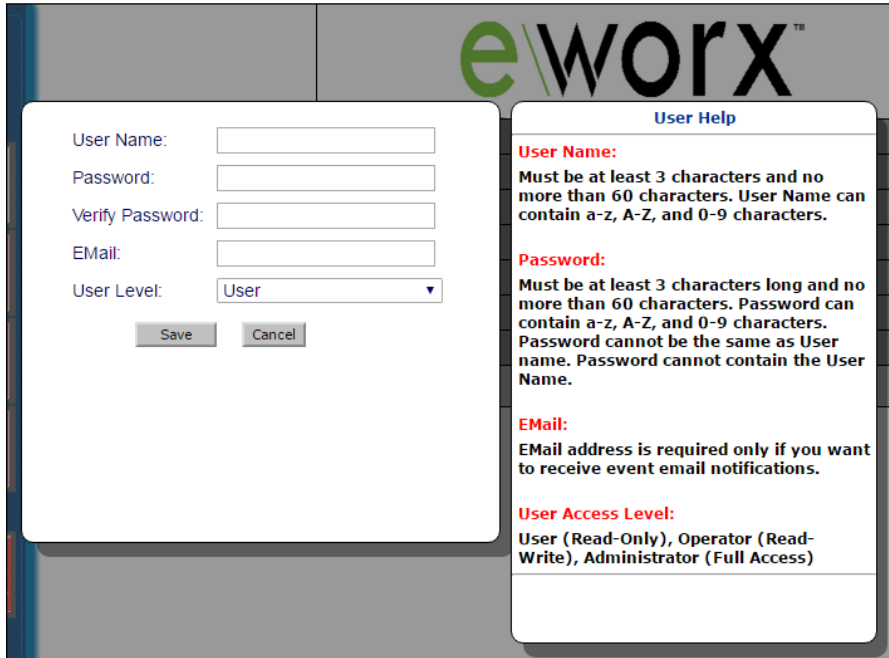


Figure 42. Add User display

3.6.5 EDIT CURRENT USER

For users with an “Administrator” user access level, the “Edit Current User” command is available under the “Administration” menu command. Selecting the “Edit Current User” command will display the dialog as shown below.

The screenshot shows the 'Edit Current User' dialog box in the eWorX interface. The dialog is titled 'eWorX' and contains the following fields and controls:

- User Name:** Input field containing 'admin'.
- Password:** Input field with masked characters (dots).
- Verify Password:** Empty input field.
- Email:** Empty input field.
- User Level:** Dropdown menu currently set to 'Administrator'.
- Buttons:** 'Save' and 'Cancel' buttons.

The 'User Help' panel on the right provides the following instructions:

- User Name:** Must be at least 3 characters and no more than 60 characters. User Name can contain a-z, A-Z, and 0-9 characters.
- Password:** Must be at least 3 characters long and no more than 60 characters. Password can contain a-z, A-Z, and 0-9 characters. Password cannot be the same as User name. Password cannot contain the User Name.
- Email:** Email address is required only if you want to receive event email notifications.
- User Access Level:** User (Read-Only), Operator (Read-Write), Administrator (Full Access)

Figure 43. Edit Current User display

3.6.6 EDIT USERS

For users with an “Administrator” user access level, the “Edit Users” command is available under the “Administration” menu command. Selecting the “Edit Users” command will display the dialog as shown below.

Figure 44. Edit Users display

The screenshot shows the 'Edit Users' dialog box in the eWorx interface. The dialog is titled 'eWorx' and contains the following fields and buttons:

- User Name:** Input field containing 'admin'.
- Password:** Input field with masked characters (dots).
- Verify Password:** Empty input field.
- Email:** Empty input field.
- User Level:** Dropdown menu set to 'Administrator'.
- Buttons:** 'Save' and 'Cancel' buttons.

The 'User Help' panel on the right provides the following instructions:

- User Name:** Must be at least 3 characters and no more than 60 characters. User Name can contain a-z, A-Z, and 0-9 characters.
- Password:** Must be at least 3 characters long and no more than 60 characters. Password can contain a-z, A-Z, and 0-9 characters. Password cannot be the same as User name. Password cannot contain the User Name.
- Email:** EMAIL address is required only if you want to receive event email notifications.
- User Access Level:** User (Read-Only), Operator (Read-Write), Administrator (Full Access)

3.7 ADDING DEVICES

3.7.1 ADD A NEW DEVICE

The “Add Device” menu selection located in the “Network” menu commands controls the ability to add new devices. Adding a new device is a 2-step process:

- 1) Search for the eWorx switches or add devices using the IP Address
- 2) Inserting the device information into the iView² database.

3.7.2 ADDING A DEVICE

Access “**Add Device**” Menu under “**Network**” Tab

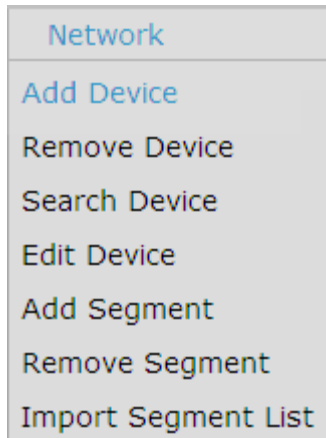


Figure 45. Add Device menu

3.7.3 ADDING DEVICE USING A KNOWN IP ADDRESS

In the “Device IP Address” input area of the “Add Device Display” you can enter the IP Address. Duplicate IP Addresses are not allowed.

Figure 46. Add Device Display using IP Address

Found Devices (total = 1)

| Device Type | SysName | MAC Address | IP Address |
|---|---------|-------------------|------------|
| <input checked="" type="checkbox"/> SE305-T | SE305-T | 00:0b:ab:ec:5a:b8 | 10.30.8.41 |

Save Cancel

Figure 47. Add Device Display using IP Address

Press the **“Search”** button to once you have entered your IP Address. The **“Search”** function will validate the format and contents of the IP Address. A valid IP Address will then be searched for and the results displayed to the user.

3.7.4 ADDING DEVICE USING AUTOSCAN FEATURE

Simply click **“Search For eWorx Devices”** (as displayed below), and Press the **“Search”** button.

The screenshot shows a web form titled "Add Device". It contains two input fields: "Device IP Address:" with an empty text box, and "Device Domain Name:" with a greyed-out text box. Below these fields is the text "OR". There are two radio buttons: "Search For B&B Devices" (unselected) and "Search For eworx Devices" (selected). Below the radio buttons are two buttons: "Search" and "Cancel". At the bottom of the form, there is a section labeled "Results:" followed by a horizontal line.

Figure 48. Add Device Display using Auto Search Feature for eWorx

Check the device that needs to be added

| Found Devices (total = 1) | | | | |
|---------------------------|---------|-------------------|------------|------|
| Device Type | SysName | MAC Address | IP Address | |
| SE305-T | SE305-T | 00:0b:ab:ec:5a:b8 | 10.30.8.41 | Edit |

Save Cancel

Results:
Figure 49. Successful search result - Click device to be added

3.7.5 UPDATE DEVICE CONFIGURATION

You can update the following:

- System Name
- Change Network Segment you want to add this device for efficient monitoring
- Update IP Address
- Update Modbus/TCP Host Idle Time (default = 10 seconds)

Device Configuration Settings

Segment: B+B SmartWorx-eWorx

SysName: SE305-T

IP Address: 10.30.8.41 Edit

Get Community: public

Set Community: public

Modbus/TCP Host Idle Time: 10 (seconds)

Apply Cancel

Figure 50. Device Configuration settings

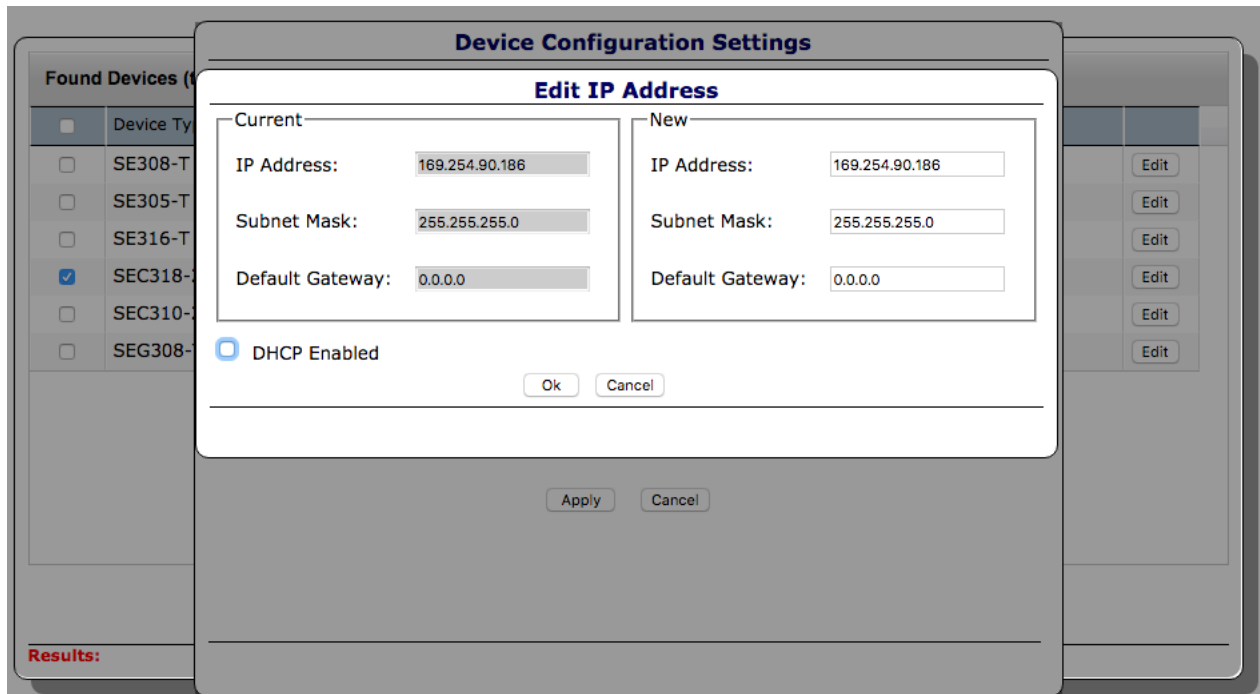


Figure 51. Update IP address of the discovered device

3.7.6 ADD DEVICE INFORMATION INTO THE iView² DATABASE

The “**Segment**” is a dropdown selection. The user can select the segment they want the new device placed. The values for “**Get Community**” and “**Set Community**” are defaulted to “public” and “public”. The user can modify the “**Description**”, “**Get Community**” and “**Set Community**” items.

Check the “**Save as Default Community Strings for New Devices**” to change the default values for “**Get Community**” and “**Set Community**” to something other than “public” and “public”. These values will be stored on a per user basis.

Press the “**Apply**” button to store your information in the database and update the **Network Segment List** display.

Press the “**Cancel**” button to erase your input and prepare for a new entry.

Device Configuration Settings

| | | |
|-----------------------------------|--|-------------------------------------|
| Segment: | <input type="text" value="B+B SmartWorx-eWorx"/> | <input type="button" value="v"/> |
| SysName: | <input type="text" value="SE305-T"/> | |
| IP Address: | <input type="text" value="10.30.8.41"/> | <input type="button" value="Edit"/> |
| Get Community: | <input type="text" value="public"/> | |
| Set Community: | <input type="text" value="public"/> | |
| Modbus/TCP Host Idle Time: | <input type="text" value="10"/> | (seconds) |

Figure 52. Successful Device Addition display

3.8 REMOVE A DEVICE

The “**Remove Device**” menu selection located in the “**Network**” menu commands controls the ability to remove devices. Devices are associated with the categories are used to organize your IMC network device selections.

Removing device is a 3-step process:

- 1) Select the Segment containing the device
- 2) Select the device(s) you want to remove

3) Remove the device information from the iView² database

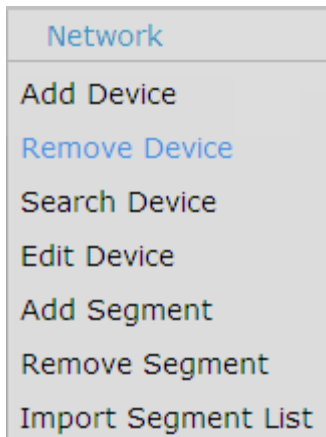
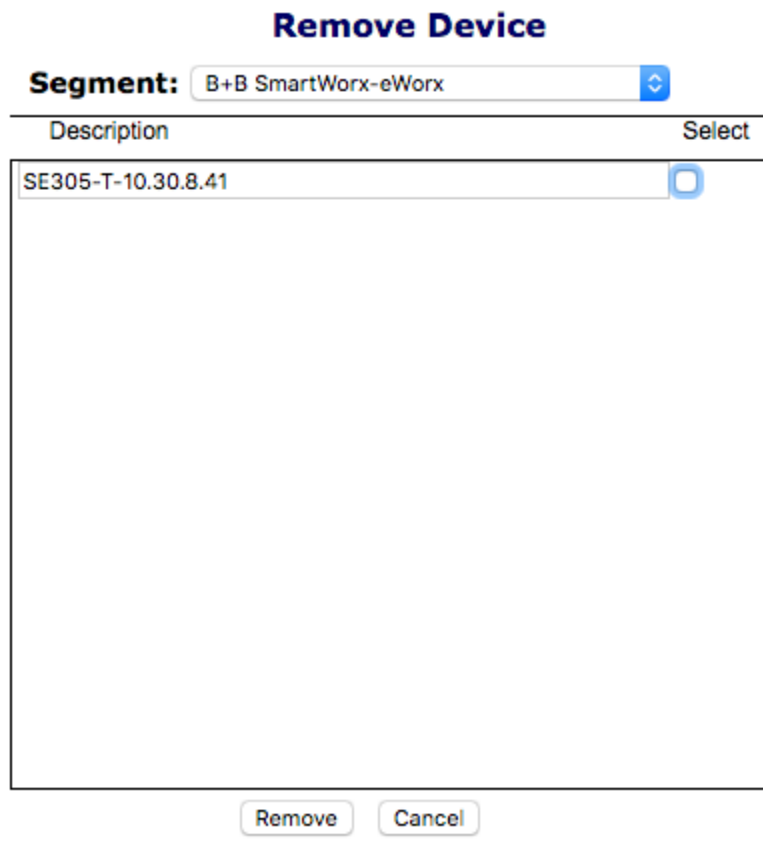


Figure 53. Remove Device Menu command

Select the Segment containing the device – The **Remove Device** dialog contains a dropdown list containing all the Segments in your **Network Segment List**. Selecting a Segment will display all the devices associated with that Segment under the “**Description**”.

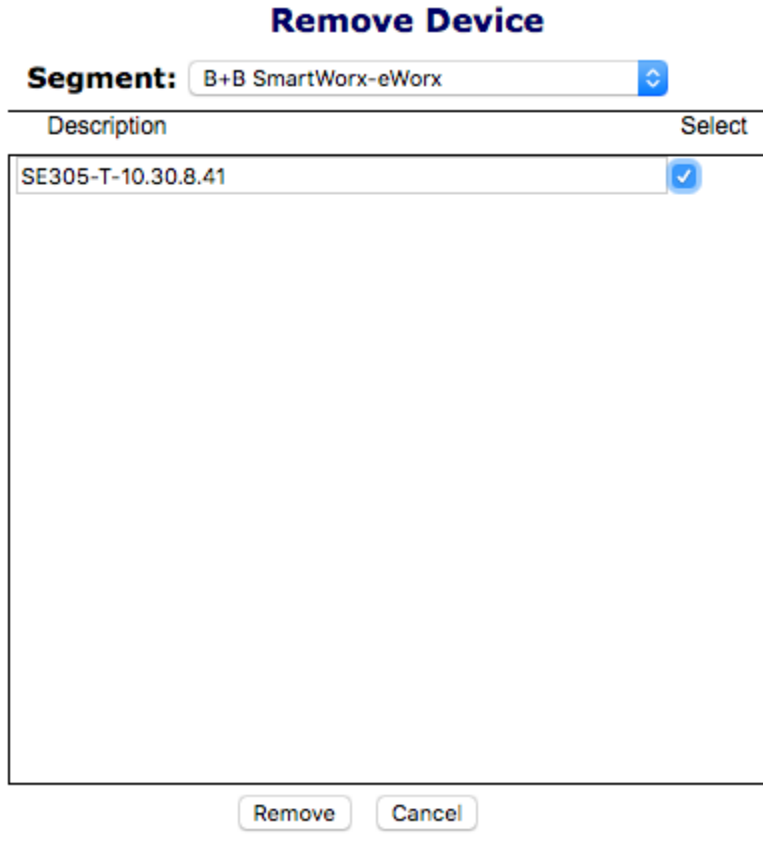


Results:

Figure 54. Remove Device Menu command

Select the device(s) you want to remove – Use the mouse to click in the “**Select**” square to the right of the device description information. Every device with the “**Select**” square checked will be subject to removal.

Remove the device information from the iView² database – After you have completed selecting the devices to remove press the “**Remove**” button. This will display a message box listing your selections and ask you if you are sure you want to remove the device(s). Pressing the “**OK**” button will execute the device removal process. Pressing the “**Cancel**” button will bring you back to the main **Remove Device** display.



Results:

Figure 55. Remove device

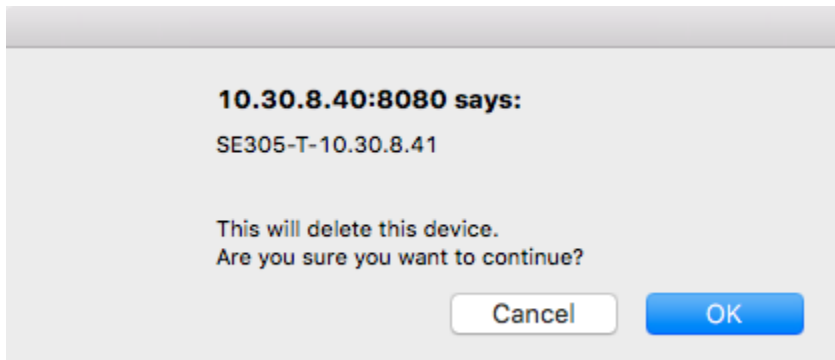


Figure 56. Remove Device Confirmation

3.9 DETECTION OF THE NETWORK DEVICES

To automatically discover all the devices that have SNMP or MODBUS/TCP enabled.

Go to **“Tools”** and click **“Refresh Device Tree”**. iView² will discover all SNMP enabled devices on the network.

Remember: Out of the box the switches are pure unmanaged switches with management disabled.

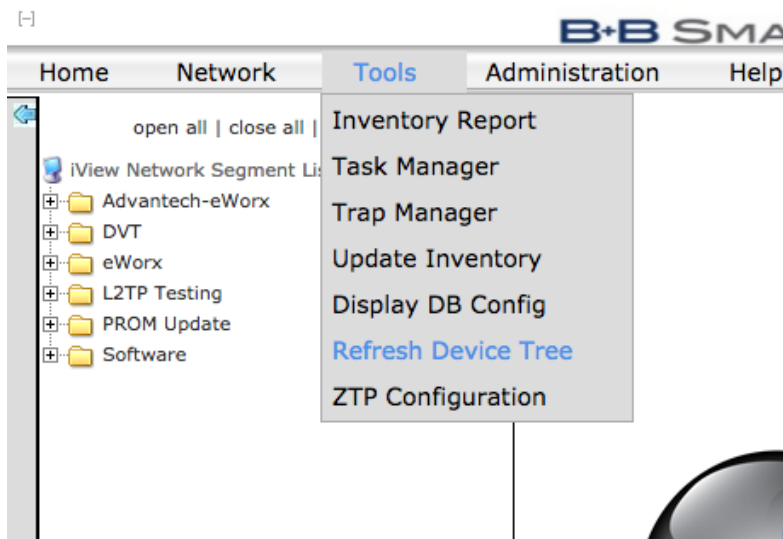


Figure 57. Tools -> “Refresh Device Tree”

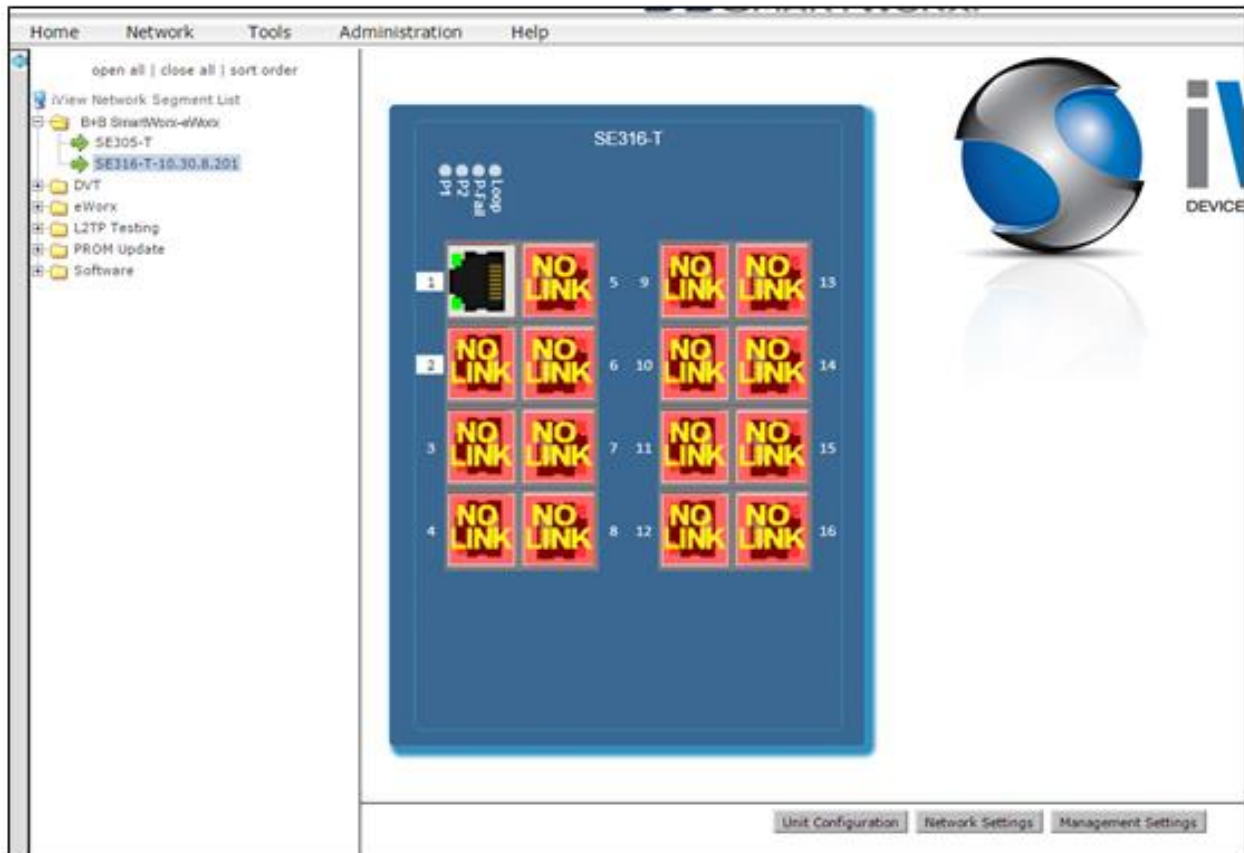


Figure 58. Results display eWorx SE316-T

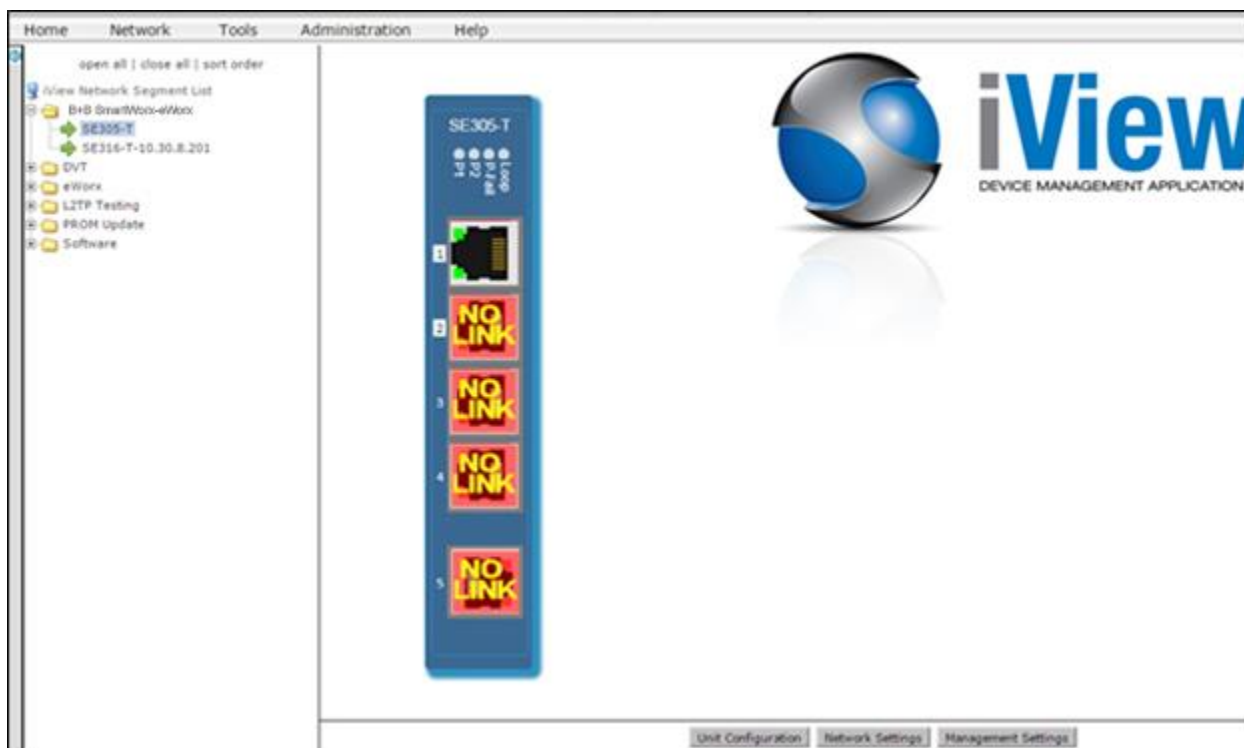


Figure 59. Results display eWorx Switch SE305-T

3.10 CONFIGURATION

3.10.1 UNIT CONFIGURATION

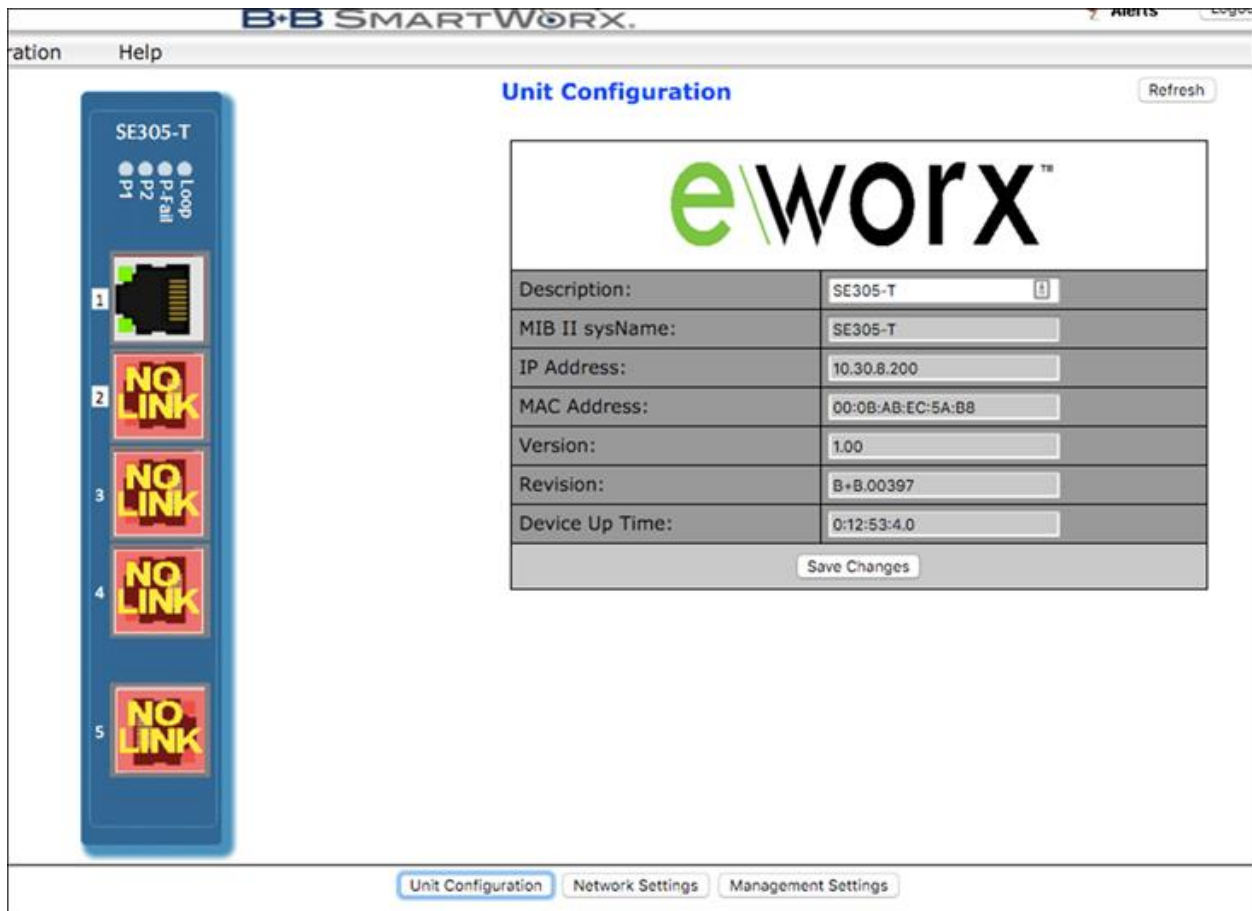


Figure 60. Unit Configuration eWorx switch SE305-T

In **Unit Configuration**, the end user can enter a **Description** name for the switch, and **MIB II sysName**. The IP address, already entered through the **Edit IP** address section, will be shown, as well as the MAC address for the switch. The version, revision and device **Up Time** are static values reflecting the programmed switch.

3.10.2 NETWORK SETTINGS

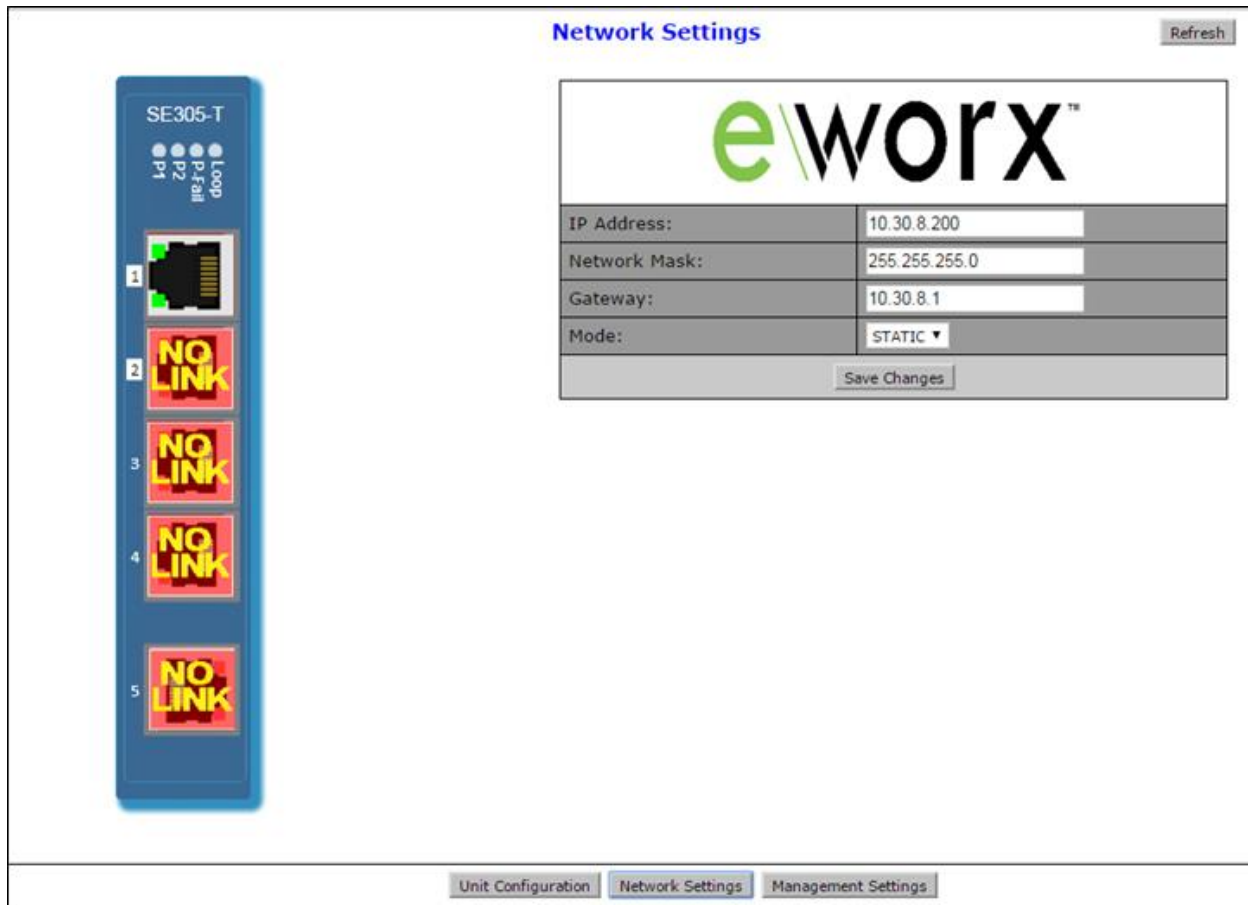


Figure 61. Network Settings for SE305-T Switch

In the **Network Settings**, the end user can edit the IP address, Subnet Mast and Default Gateway. The mode for the IP address can be set to STATIC or DHCP. Once the **Save Changes** button is selected, the settings remain so until the admin wishes to change them.

3.10.3 MANAGEMENT SETTINGS

In the Management Settings, the end user can choose:

- The SNMP version
- Set up Community Strings.

By default, the Community Strings are set to public/public

- The IP address for a Trap server can also be entered
- Update LLDP interval (default 30 seconds)

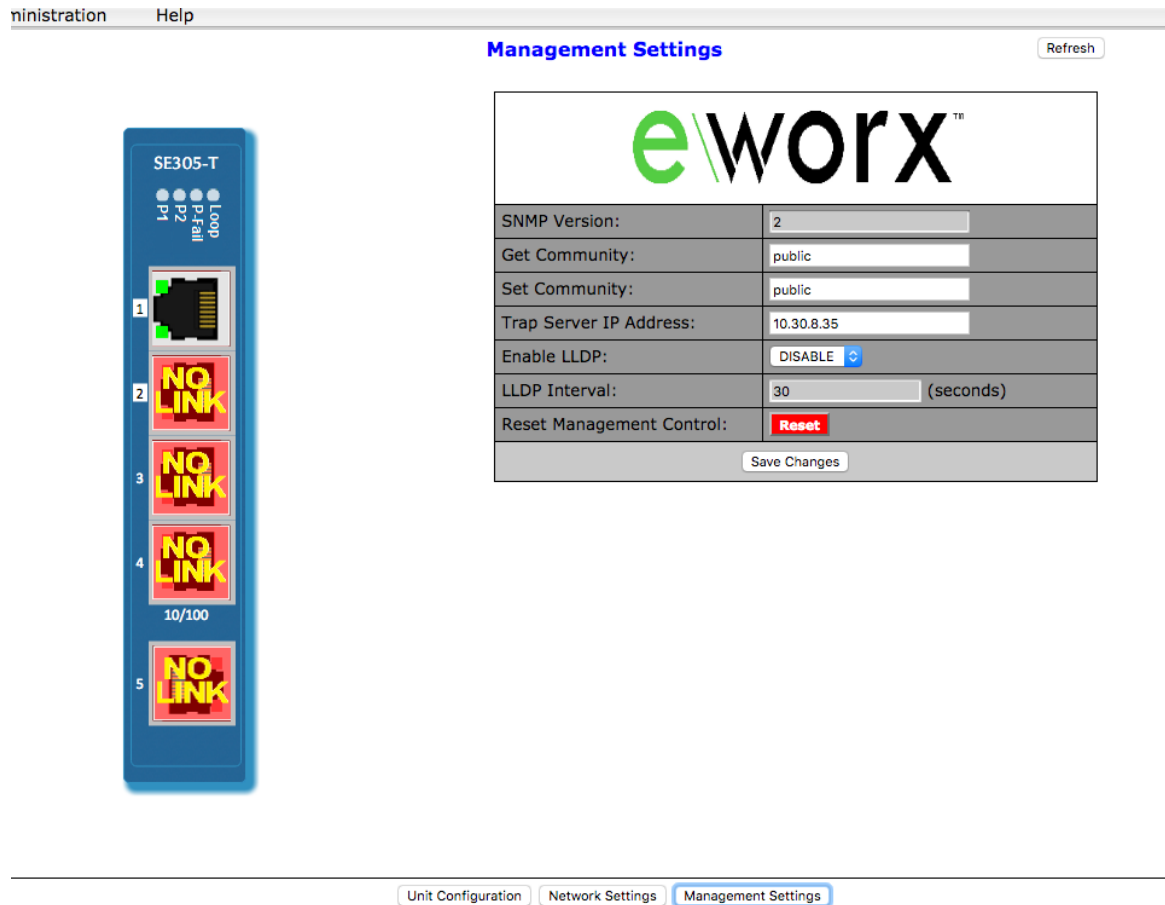


Figure 62. Network Management tab of eWorx switch SE305-T

3.10.3.1 RESTORE TO FACTORY SETTINGS

- Press red “Reset” button and the device will restore to factory, out of the box settings
- Management of SNMP or Modbus will be turned off. The device will no longer be available on iView. User must add the device as a new device to iView to enable SNMP monitoring and/or enable Modbus/TCP Monitoring.

3.10.4 ADD A NEW SEGMENT

The “Add Segment” menu selection located in the “Network” menu commands controls the ability to add new segments. Segments are used to organize your IMC network device selections. You must enter at least 1 segment before you can add any devices.

- On the main toolbar, select **Network**
- In the drop down list, select **Add Segment**
- A dialog box will appear and allow the end user to enter a Segment name.
- Select the **Add** button at the bottom and it will be added to the Network list. You can add as many new segments as you want.

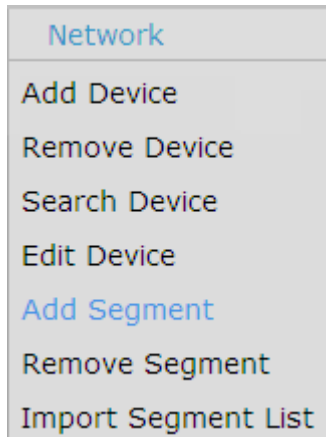
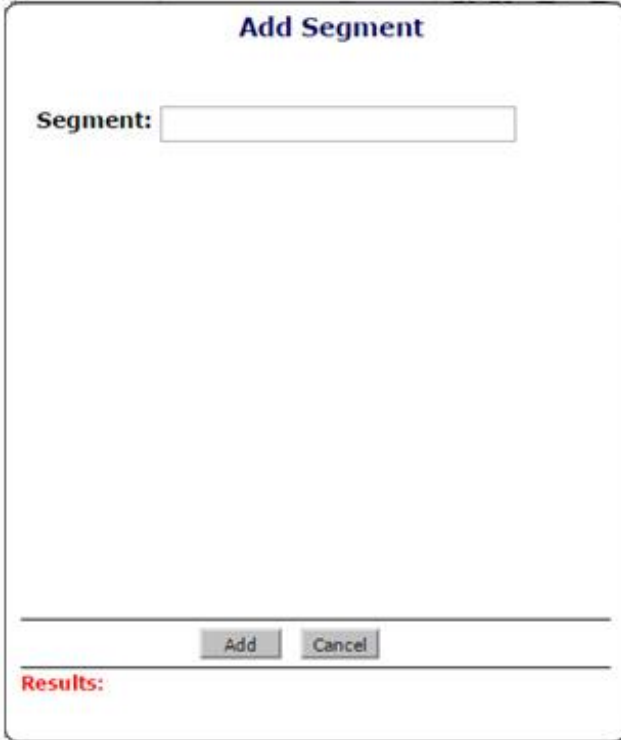


Figure 63. Add Segment Menu command

In the “**Segment**” input area of the “**Add Segment Display**” you can enter your segment identification information. This can consist of up to 50 alphanumeric characters. Duplicate segments are not allowed.



Add Segment

Segment:

Results:

Figure 64. Add Segment display

Press the “**Add**” button to store your information in the database and update the **Network Segment List** display. Press the “**Cancel**” button to erase your input and prepare for a new entry.

Add Segment

Segment:

Results:

Figure 65. Successful Segment Addition display

3.10.5 REMOVE A SEGMENT

The “**Remove Segment**” menu selection located in the “**Network**” menu commands controls the ability to remove segments. Segments are used to organize your IMC network device selections. Removing a segment is a 2-step process: 1) Select the Segment(s) for deletion and 2) Remove the Segment information into the iView² database.

NOTE: Removing a segment will also remove any devices associated with that Segment.

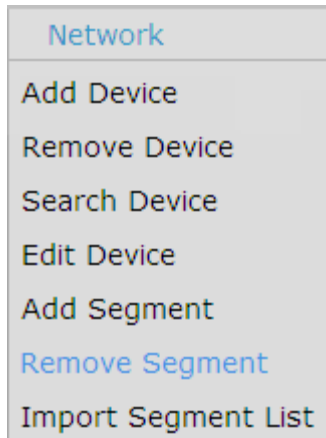


Figure 66. Remove Segment Menu command

1) Select the Segment(s) for deletion – Selections are made with **Remove Segment**. Each Segment in the **Segment Network List** is displayed using the Segment description. Use the mouse to click in the **Select** square to the right of the device description information. Every device with the **Select** square checked will be subject to removal.

Remove Segment

| Segment | Select |
|---------------------|--------------------------|
| B+B SmartWorx-eWorx | <input type="checkbox"/> |
| DVT | <input type="checkbox"/> |
| eWorx | <input type="checkbox"/> |
| L2TP Testing | <input type="checkbox"/> |
| PROM Update | <input type="checkbox"/> |
| Software | <input type="checkbox"/> |

Results:

Figure 67. Remove Segment dialog

2) Remove the Segment information from the iView² database – After you have completed selecting the Segments to remove press the **“Remove”** button. This will display a message box listing your selections and ask you if you are sure you want to remove the Segments(s). Pressing the **“OK”** button will execute the device removal process. Pressing the **“Cancel”** button will bring you back to the main **Remove Segment** display.

NOTE: Removing a segment will also remove any devices associated with that Segment

Remove Segment

| Segment | Select |
|---------------------|-------------------------------------|
| B+B SmartWorx-eWorx | <input type="checkbox"/> |
| DVT | <input type="checkbox"/> |
| eWorx | <input type="checkbox"/> |
| L2TP Testing | <input type="checkbox"/> |
| PROM Update | <input type="checkbox"/> |
| Software | <input checked="" type="checkbox"/> |

Results:

Figure 68. Remove Segment Confirmation display

xxx.xxx.xxx.xxx says: ✕

Software

This will delete this segment and its devices.
Are you sure you want to continue?

Figure 69. Remove Segment Confirmation display

3.10.6 SEARCH DEVICE

The “**Search Device**” menu selection located in the “**Network**” menu commands and provides the user with the ability to search for Advantech B+B SmartWorx Fiber network devices and the eWorx devices using IP Addresses and Community strings to temporarily monitor a device.

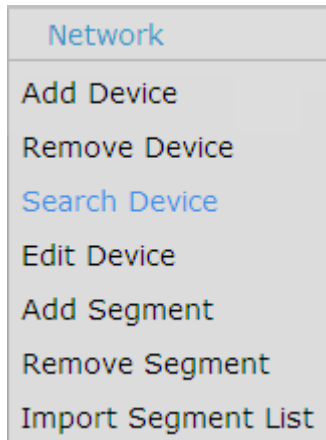


Figure 70. Search Device Menu command

- 1) Enter the **IP Address**, **Get Community**, and **Set Community** in the **Search Device** dialog display.
- 2) Press the “**Search**” button to start the device search.
- 3) A successful search will display the device.

Search Device

Device IP Address:

Device Domain Name:

Get Community:

Set Community:

SNMPv1 SNMPv2c

Results:

Figure 71. Search Device Dialog display

3.10.7 EDIT DEVICE

The “**Edit Device**” menu selection is located in the “**Network**” menu commands. This provides the user the ability to modify the “**Description**” for a device or update the “**PROM Version**”.

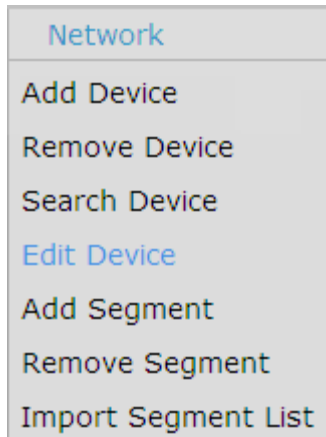


Figure 72. Edit Device Menu command

Edit Device

Segment:

Device:

| | | |
|------------------------|--|-------------------------------------|
| MIB II sysName: | <input type="text" value="No such instance"/> | <input type="button" value="Edit"/> |
| Description: | <input type="text" value="SE305-T"/> | <input type="button" value="Edit"/> |
| MAC Address: | <input type="text" value="00:0b:ab:ec:5a:b8"/> | |
| IP Address: | <input type="text" value="10.30.8.200"/> | <input type="button" value="Edit"/> |
| Get Community: | <input type="text" value="public"/> | <input type="button" value="Edit"/> |
| Set Community: | <input type="text" value="public"/> | <input type="button" value="Edit"/> |
| PROM Version: | <input type="text" value="Unknown"/> | |

Results:

Figure 73. Edit Device Dialog display

3.10.8 EDIT DESCRIPTION

To change the device description enter the new device description in the “**Description**” field and press the “**Save**” button. A successful operation will display “**Operation Completed Successfully**” in the “**Results**” section and the new description will display in the “**iView Network Segment List**”.

Edit Device

Segment:

Device:

| | | |
|------------------------|--|-------------------------------------|
| MIB II sysName: | <input type="text" value="eworx switch"/> | <input type="button" value="Edit"/> |
| Description: | <input type="text" value="SE305-T"/> | <input type="button" value="Edit"/> |
| MAC Address: | <input type="text" value="00:0b:ab:ec:5a:b8"/> | |
| IP Address: | <input type="text" value="10.30.8.200"/> | <input type="button" value="Edit"/> |
| Get Community: | <input type="text" value="public"/> | <input type="button" value="Edit"/> |
| Set Community: | <input type="text" value="public"/> | <input type="button" value="Edit"/> |
| PROM Version: | <input type="text" value="Unknown"/> | |

Results:

Figure 74. Edit Device description

3.10.9 IMPORT SEGMENT LIST

The “**Import Segment List**” menu selection located in the “**Network**” menu commands controls the ability to import existing segment and device information. Please refer to the **Getting Started Document** that details all features and functionality. This document is included with the software file.

The screenshot shows a window titled "Inventory Report" with a table of device data. The table has five columns: Device Type, Serial Number, DNS, IPAddress, and Prom Version. The data rows include several MultiWay devices and some SE300 series devices with missing or unknown information.

| Device Type | Serial Number | DNS | IPAddress | Prom Version |
|-------------|-----------------|-----|-------------|--------------|
| MultiWay | 99999903 | | 10.30.8.230 | mwy_f040 |
| MultiWay | 00000973 | | 10.30.8.229 | 123-00A9 |
| MultiWay | 00001755 | | 10.30.8.232 | 123-00A8 |
| MultiWay | 00001755 | | 10.30.8.243 | mwy_f041 |
| MultiWay | 99999902 | | 10.30.8.236 | mwy_f040 |
| SE305-T | No such instanc | | 10.30.8.200 | Unknown |
| SE308-T | | | 10.30.8.199 | Unknown |
| SE316-T | No such instanc | | 10.30.8.201 | Unknown |

At the bottom of the window, there is a pagination control showing "Devices Per Page: 10", "Page 4 of 4", and "Displaying 31 to 36 of 38 items".

Figure 75. Display Inventory Report

The “**Inventory Report**” menu selection is located in the “**Tools**” menu commands. This command will display a list of the devices contained in the “**iView Network Segment List**”.

| Device Type | Serial Number | DNS | IP Address | Prom Version |
|-------------|-----------------|-----|-------------|--------------|
| MultiWay | 99999903 | | 10.30.8.230 | mwy_f040 |
| MultiWay | 00000973 | | 10.30.8.229 | 123-00A9 |
| MultiWay | 00001755 | | 10.30.8.232 | 123-00A8 |
| MultiWay | 00001755 | | 10.30.8.243 | mwy_f041 |
| MultiWay | 99999902 | | 10.30.8.236 | mwy_f040 |
| SE305-T | No such instanc | | 10.30.8.200 | Unknown |
| SE308-T | | | 10.30.8.199 | Unknown |
| SE316-T | No such instanc | | 10.30.8.201 | Unknown |

Devices Per Page: 10 Page 4 of 4 Displaying 31 to 38 of 38 items

Figure 76. Inventory Report example

3.11 TRAP MANAGEMENT

3.11.1 TRAP MANAGEMENT CONFIGURATION

Users can configure their trap functionality by choosing the “Trap Manager” menu item under the “Tools” menu category.

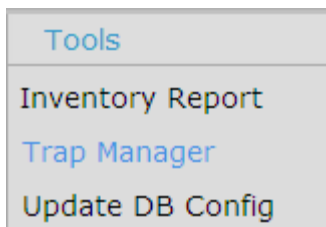


Figure 77. Trap Manager menu item

The “Trap Manager” allows a user to Enable or Disable trap listening and to choose the types of traps they want to receive. The user can navigate through their various network segments by using the “Segment” dropdown list. When a different network segment is selected the “Devices” dropdown list will also update.

Trap Manager

Segment:

Devices:

Listening Enabled: **Listening Disabled:**

Community String:

Username: (iConfig User Name)

Password: (iConfig Password)

Traps:

| | |
|---|--|
| <input type="text" value="Cold Start"/> <input checked="" type="checkbox"/> | <input type="text" value="Warm Start"/> <input checked="" type="checkbox"/> |
| <input type="text" value="Link Down"/> <input checked="" type="checkbox"/> | <input type="text" value="Link Up"/> <input checked="" type="checkbox"/> |
| <input type="text" value="Authentication Failure"/> <input checked="" type="checkbox"/> | <input type="text" value="Enterprise Specific"/> <input checked="" type="checkbox"/> |

Trap Forwarding Settings

Forward Traps:

Forward IP Address:

Forward Community:

Results:

Figure 78. Default Trap Manager user interface

3.11.2 TRAP MANAGEMENT REPORTING

Once a user has configured the trap management they can view received trap information using the trap reporting functionality. The trap reporting functionality is accessed by clicking on the “Alerts” image, which is located in the header area. When traps are reported on an active device the “Alerts” image will flash.



Figure 79. Example “Alerts” flash image

Using the mouse to click on the “Alerts” image will display the trap reporting dialog. The standard trap information displayed for an individual trap includes the received date and time, the host sending the trap information, and a description of the trap. Users can use the checkbox at the beginning of each trap row to select that trap for archiving. Users can use the “Select All” option to select all the listed traps for archiving.

NOTE: Choosing to archive a trap does not remove it from the database. It will only cause the trap information not to be displayed.

| Trap Id | Receive Time | Host Name | Description | Details |
|-------------------------------|---------------------|---------------------------|--|-------------------------|
| <input type="checkbox"/> 1462 | 2010-10-29 09:22:26 | TP Office iMediaChassis20 | Specific: 1 - IMC - Link Down | Details |
| <input type="checkbox"/> 1461 | 2010-10-29 09:22:26 | TP Office iMediaChassis20 | Generic: LINKDOWN | Details |
| <input type="checkbox"/> 1460 | 2010-10-29 09:22:11 | TP Office iMediaChassis20 | Specific: 5 - IMC - Link Came Up | Details |
| <input type="checkbox"/> 1459 | 2010-10-29 09:22:10 | TP Office iMediaChassis20 | Generic: LINKUP | Details |
| <input type="checkbox"/> 1458 | 2010-10-29 09:21:55 | TP Office iMediaChassis20 | Generic: COLDSTART | Details |
| <input type="checkbox"/> 1457 | 2010-10-28 16:27:12 | TP Office iMediaChassis20 | Specific: 15 - IMC - Chassis Unit Down | Details |
| <input type="checkbox"/> 1456 | 2010-10-28 15:48:12 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |
| <input type="checkbox"/> 1455 | 2010-10-28 15:48:09 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |
| <input type="checkbox"/> 1454 | 2010-10-28 15:47:48 | TP Office iMediaChassis20 | Specific: 1 - IMC - Link Down | Details |
| <input type="checkbox"/> 1453 | 2010-10-28 15:47:47 | TP Office iMediaChassis20 | Generic: LINKDOWN | Details |
| <input type="checkbox"/> 1452 | 2010-10-28 15:47:35 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |
| <input type="checkbox"/> 1451 | 2010-10-28 15:47:29 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |

At the bottom of the table, there are controls for archiving and pagination: 'Select All', 'Archive', navigation arrows, a page number '1' out of '100' of '2001301' total items, 'Alerts Per Page: 100', and a 'Search' button.

Figure 80. Trap Reporting dialog with example trap information



3.11.3 DISPLAY TRAP DETAILS:

Selecting the “Details” option for a particular trap will display the “Variable Bindings” details for a trap.

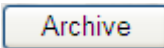
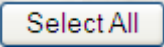

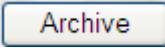
| Trap Id | Receive Time | Host Name | Description | Details |
|--|--------------------------------|--------------------------------|---|---------|
| Details - Specific: 21 - IMC - Chassis Module Found | | | | |
| Received: 2010-10-28 15:46:18 | | | | |
| From: TP Office iMediaChassis20 | | | | |
| Trap Community: trap_alerts_193 | | | | |
| System Up Time: 0:1:35.8:56 | | | | |
| Variable Bindings: | | | | |
| Trap Id | Binding Number | Binding Description | Binding Value | |
| 1440 | 1.3.6.1.4.1.661.6.1.1.0 | Product Name | IMC Networks, Intelligent Media Converter | |
| 1440 | 1.3.6.1.4.1.661.6.1.4.1.1.1 | Chassis Unit Index | 1 | |
| 1440 | 1.3.6.1.4.1.661.6.1.5.1.2.1.19 | Module Slot Index in Chassis | 19 | |
| 1440 | 1.3.6.1.4.1.661.6.1.5.1.4.1.19 | Type of Module in Chassis Slot | iMcV-FiberLinX-II | |
| 1440 | 1.3.6.1.4.1.661.6.1.5.1.7.1.19 | Module Description | iMcV-FiberLinXII | |
| Close Details Display | | | | |

Figure 81. Trap Bindings reporting (example)

3.11.4 PAGING THROUGH TRAPS

Users can navigate through their trap listings using the Page Previous  and Page Next  buttons. Press either of these navigation buttons will display the next or previous page of alert data.

3.11.5 ARCHIVE TRAPS

Users can use the  button to remove traps from being displayed in the “Alerts” dialog box. To select a trap for archiving the user can either individually choose the traps by clicking the checkbox to the left of the “Trap Id” or they can press the  button to choose all the traps in the current display. A trap that has been selected for archiving will have a green checkmark  in the trap checkbox. Once they have selected the traps they want to archive they will press the  button and the system will update the database to mark those traps are archived. Archived traps will no longer be displayed in the “Alerts” dialog box but will remain in the database.

3.11.6 SETTING ALERTS PER PAGE

Users can change the number of traps that are displayed per page using the “Alerts Per Page” dropdown selector. Available selections are 10, 100, 500, and 1000. Changing the default selection will cause the list to be refreshed.

| Trap Id | Receive Time | Host Name | Description | Details |
|-------------------------------|---------------------|---------------------------|--|-------------------------|
| <input type="checkbox"/> 1462 | 2010-10-29 09:22:26 | TP Office iMediaChassis20 | Specific: 1 - IMC - Link Down | Details |
| <input type="checkbox"/> 1461 | 2010-10-29 09:22:26 | TP Office iMediaChassis20 | Generic: LINKDOWN | Details |
| <input type="checkbox"/> 1460 | 2010-10-29 09:22:11 | TP Office iMediaChassis20 | Specific: 5 - IMC - Link Came Up | Details |
| <input type="checkbox"/> 1459 | 2010-10-29 09:22:10 | TP Office iMediaChassis20 | Generic: LINKUP | Details |
| <input type="checkbox"/> 1458 | 2010-10-29 09:21:55 | TP Office iMediaChassis20 | Generic: COLDSTART | Details |
| <input type="checkbox"/> 1457 | 2010-10-28 16:27:12 | TP Office iMediaChassis20 | Specific: 15 - IMC - Chassis Unit Down | Details |
| <input type="checkbox"/> 1456 | 2010-10-28 15:48:12 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |
| <input type="checkbox"/> 1455 | 2010-10-28 15:48:09 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |
| <input type="checkbox"/> 1454 | 2010-10-28 15:47:48 | TP Office iMediaChassis20 | Specific: 1 - IMC - Link Down | Details |
| <input type="checkbox"/> 1453 | 2010-10-28 15:47:47 | TP Office iMediaChassis20 | Generic: LINKDOWN | Details |
| <input type="checkbox"/> 1452 | 2010-10-28 15:47:35 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |
| <input type="checkbox"/> 1451 | 2010-10-28 15:47:29 | OAM AH Configuration | Specific: 2 - OAM Non-Threshold Event | Details |

to of

 Alerts Per Page:

Figure 82. Alerts Per Page display (example)

3.1.1.7 TRAP SEARCH

Using the Trap Search functionality the user can refine the number of traps that are displayed. To access the Trap Search functionality press the button. This will display the “Alerts Search Settings” dialog. Here the user can enter information that will refine the default search algorithm. For example, enter a “Host Name” to see the traps associated with only that host.

Host Name – Entering a host name will cause the search to only return traps generated by that particular host.

Trap Id – Entering a trap id will cause the search to only return that particular trap.

Description – Selecting a trap description will cause the search to return traps that have that trap description.

Date From – Selecting a “Date From” will cause the search to return traps that were received from that date forward.

Date To – Selecting a “Date To” along with a “Date From” will cause the search to return traps that were received during that time period.

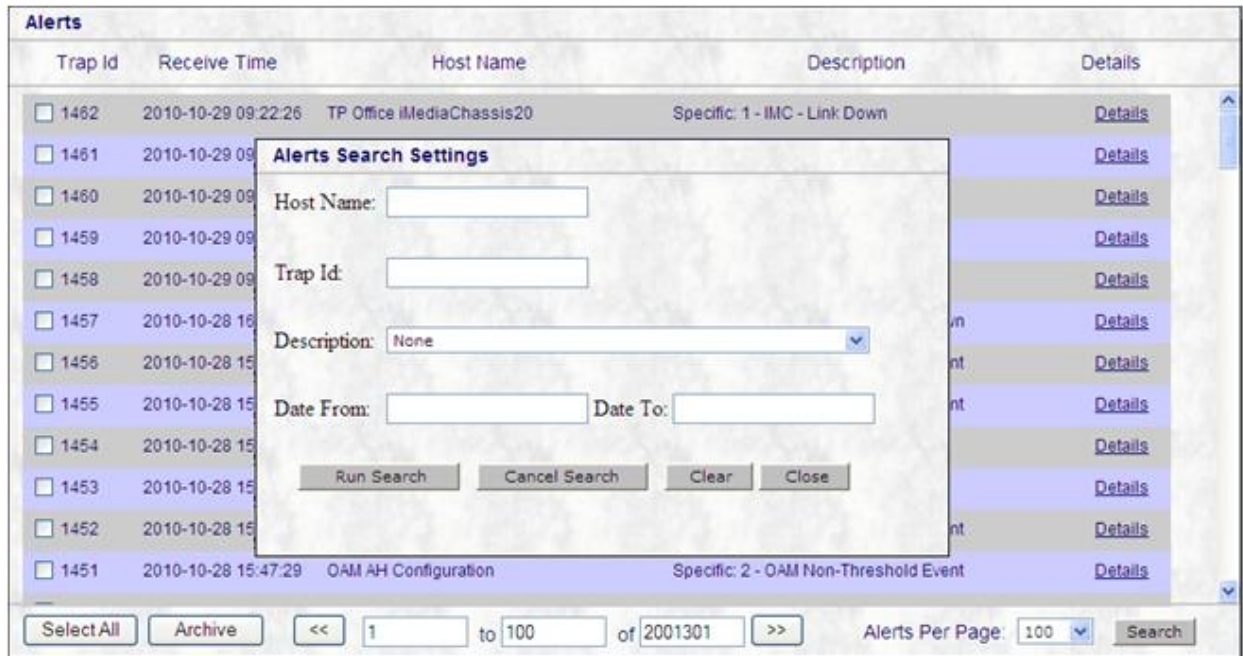


Figure 83. Trap Search display (example)

Once the user has entered their search criteria, press the **Run Search** to execute the search.

Pressing the **Cancel Search** will cancel the search and refresh the display using the default search algorithm.

Pressing the **Clear** will clear the current search criteria.

Pressing the **Close** will close the “Alerts Search Settings” dialog without running the search.

4. MODBUS TCP/IP CONFIGURATION WITHIN iView²

In addition to monitoring the SE300 Series Switches via SNMP, Modbus TCP/IP can be used to view the settings of the switches. A SCADA system will be necessary to manage and monitor the switches.

4.1 DEVICE CONFIGURATION: MODBUS/TCP TIMEOUT

You can update the following:

- System Name
- Change Network Segment you want to add this device for efficient monitoring
- Update IP Address
- Update Modbus/TCP Host Idle Time (default = 10 seconds)

Search the device using iView² (refer to Add Device Section) and check the device from results list.

Found Devices (total = 1)

| Device Type | SysName | MAC Address | IP Address | |
|-------------|---------|-------------------|------------|------|
| SE305-T | SE305-T | 00:0b:ab:ec:5a:b8 | 10.30.8.41 | Edit |

Save Cancel

Results:

Figure 84. Successful search result - Click device to be added

Device Configuration Settings

Segment: B+B SmartWorx-eWorx

SysName: SE305-T

IP Address: 10.30.8.41 Edit

Get Community: public

Set Community: public

Modbus/TCP Host Idle Time: 10 (seconds)

Apply Cancel

Figure 85. Device Configuration settings

4.2 MODBUS/TCP MAPPING

The data map addresses of Advantech B+B SmartWorx switches shown in the following table start from Modbus address 30001 for function code 4.

In the given example, the address offset 0x1000 (hex) equals Modbus address 34097, while the address offset 0x1100 (hex) equals Modbus address 34353.

The following tables are shown in hex mode.

Modbus/TCP Mapping Table

| Catalog | Name | Data Type | | Interpretation | Address Offset (Hex) | Address 3X | Description |
|-------------|---|-----------|----------|----------------|----------------------|------------|--|
| System Info | Vendor ID = 0x'13FE | 1 word | 16 bits | HEX | 0x0000 | 30001 | Vendor ID = 0x13FE |
| | Unit ID = 0xFF | 1 word | 16 bits | HEX | 0x0001 | 30002 | Unit ID = 0xFF |
| | Product Code | 1 word | 16 bits | HEX | 0x0002 | 30003 | Product Code |
| System Info | Vendor Name = "Advantech B+B SmartWorx" | 16 words | 32 chars | ASCII | 0x0010 | 30017 | Vendor Name = "Advantech" Word 0 Hi byte = 'A' Word 0 Lo byte = 'd' Word 1 Hi byte = 'v' Word 1 Lo byte = 'a' Word 2 Hi byte = 'n' Word 2 Lo byte = 't' Word 3 Hi byte = 'e' Word 3 Lo byte = 'c' Word 4 Hi byte = 'h' Word 4 Lo byte = '' Word 5 Hi byte = 'B' Word 5 Lo byte = '+' Word 6 Hi byte = 'B' Word 6 Lo byte = '' Word 7 Hi byte = 'S' Word 7 Lo byte = 'm' Word 8 Hi byte = 'a' Word 8 Lo byte = 'r' Word 9 Hi byte = 't' Word 9 Lo byte = 'W' Word 10 Hi byte = 'o' Word 10 Lo byte = 'r' Word 11 Hi byte = 'x' Word 11 Lo byte = '\0' |
| | Product Name = "SE- yyyyyyyyyy" y= model number | 16 words | 32 chars | ASCII | 0x0020 | 30033 | Product Name = "SEyyyyyyyyyyyyyy" Word 0 Hi byte = 'S' Word 0 Lo byte = 'E' Word 1 Hi byte = 'y' Word 1 Lo byte = 'y' Word 2 Hi byte = 'y' Word 2 Lo byte = 'y' Word 3 Hi byte = 'y' Word 3 Lo byte = 'y' |

| | | | | | | | |
|-------------|----------------------|----------|----------|-------|--------------------|------------------|---|
| | | | | | | | Word 4 Hi byte = '\0' |
| | Firmware Version | 2 words | 32 bits | HEX | 0x020A | 30523 | Firmware Version Word 0 Hi byte = major Word 0 Lo byte = minor Word 1 Hi byte = release Word 1 Lo byte = build |
| | Ethernet MAC Address | 3 words | 48 bits | HEX | 0x020E | 30527 | Ethernet MAC Address Ex: MAC = 00-19-CB-01-02-03 Word 0 Hi byte = 0x00 Word 0 Lo byte = 0x19 Word 1 Hi byte = 0xCB Word 1 Lo byte = 0x01 Word 2 Hi byte = 0x02 Word 2 Lo byte = 0x03 |
| System Info | Revision Number | 16 words | 32 chars | ASCII | 0x0211 | 30530 | Product Name = "YYY.xxxxx" Word 0 Hi byte = 'Y' Word 0 Lo byte = 'Y' Word 1 Hi byte = 'Y' Word 1 Lo byte = '.' Word 2 Hi byte = 'x' Word 2 Lo byte = 'x' Word 3 Hi byte = 'x' Word 3 Lo byte = 'x' Word 4 Hi byte = 'x' Word 4 Lo byte = '\0' |
| | IP Address | 2 words | 32 bits | HEX | 0x0400 | 31025 | IP Address Ex: IP = 192.168.1.1 Word 0 Hi byte = 0xC0 Word 0 Lo byte = 0xA8 Word 1 Hi byte = 0x01 Word 1 Lo byte = 0x01 |
| Port Info | Port Status | 1 word | 16 bits | HEX | 0x1000 ~ 0x101F | 34097 ~ 34128 | Port Status 0x0000: Link down 0x0001: Link up 0xFFFF: No port |
| | Port 1 Status | 1 word | 16 bits | HEX | 0x1000 | 34097 | |
| | Port 2 Status | 1 word | 16 bits | HEX | 0x1001 | 34098 | |
| | Port 3 Status | 1 word | 16 bits | HEX | 0x1002 | 34099 | |
| | Port 4 Status | 1 word | 16 bits | HEX | 0x1003 | 34100 | |
| | Port 5 Status | 1 word | 16 bits | HEX | 0x1004 | 34101 | |

| | | | | | | | |
|-----------|----------------|--------|---------|-----|--------|-------|--|
| | Port 6 Status | 1 word | 16 bits | HEX | 0x1005 | 34102 | |
| | Port 7 Status | 1 word | 16 bits | HEX | 0x1006 | 34103 | |
| | Port 8 Status | 1 word | 16 bits | HEX | 0x1007 | 34104 | |
| | Port 9 Status | 1 word | 16 bits | HEX | 0x1008 | 34105 | |
| | Port 10 Status | 1 word | 16 bits | HEX | 0x1009 | 34106 | |
| | Port 11 Status | 1 word | 16 bits | HEX | 0x100A | 34107 | |
| | Port 12 Status | 1 word | 16 bits | HEX | 0x100B | 34108 | |
| Port Info | Port 13 Status | 1 word | 16 bits | HEX | 0x100C | 34109 | |
| | Port 14 Status | 1 word | 16 bits | HEX | 0x100D | 34110 | |
| | Port 15 Status | 1 word | 16 bits | HEX | 0x100E | 34111 | |
| | Port 16 Status | 1 word | 16 bits | HEX | 0x100F | 34112 | |
| | Port 17 Status | 1 word | 16 bits | HEX | 0x1010 | 34113 | |
| | Port 18 Status | 1 word | 16 bits | HEX | 0x1011 | 34114 | |
| | Port 19 Status | 1 word | 16 bits | HEX | 0x1012 | 34115 | |
| | Port 20 Status | 1 word | 16 bits | HEX | 0x1013 | 34116 | |
| | Port 21 Status | 1 word | 16 bits | HEX | 0x1014 | 34117 | |
| | Port 22 Status | 1 word | 16 bits | HEX | 0x1015 | 34118 | |
| | Port 23 Status | 1 word | 16 bits | HEX | 0x1016 | 34119 | |
| | Port 24 Status | 1 word | 16 bits | HEX | 0x1017 | 34120 | |
| | Port 25 Status | 1 word | 16 bits | HEX | 0x1018 | 34121 | |
| | Port 26 Status | 1 word | 16 bits | HEX | 0x1019 | 34122 | |
| | Port 27 Status | 1 word | 16 bits | HEX | 0x101A | 34123 | |
| | Port 28 Status | 1 word | 16 bits | HEX | 0x101B | 34124 | |
| | Port 29 Status | 1 word | 16 bits | HEX | 0x101C | 34125 | |
| | Port 30 Status | 1 word | 16 bits | HEX | 0x101D | 34126 | |
| | Port 31 Status | 1 word | 16 bits | HEX | 0x101E | 34127 | |
| | Port 32 Status | 1 word | 16 bits | HEX | 0x101F | 34128 | |

| | | | | | | | |
|-----------|---------------|--------|---------|-----|--------------------|------------------|---|
| Port Info | Port Speed | 1 word | 16 bits | HEX | 0x1100 ~ 0x111F | 34353 ~ 34384 | Port Speed 0x0000: 10M-Half 0x0001: 10M-Full 0x0002: 100M-Half 0x0003: 100M-Full 0x0004: 1000M-Half 0x0005: 1000M-Full 0xFFFF: No port |
| | Port 1 Speed | 1 word | 16 bits | HEX | 0x1100 | 34353 | |
| | Port 2 Speed | 1 word | 16 bits | HEX | 0x1101 | 34354 | |
| | Port 3 Speed | 1 word | 16 bits | HEX | 0x1102 | 34355 | |
| | Port 4 Speed | 1 word | 16 bits | HEX | 0x1103 | 34356 | |
| | Port 5 Speed | 1 word | 16 bits | HEX | 0x1104 | 34357 | |
| | Port 6 Speed | 1 word | 16 bits | HEX | 0x1105 | 34358 | |
| | Port 7 Speed | 1 word | 16 bits | HEX | 0x1106 | 34359 | |
| | Port 8 Speed | 1 word | 16 bits | HEX | 0x1107 | 34360 | |
| | Port 9 Speed | 1 word | 16 bits | HEX | 0x1108 | 34361 | |
| | Port 10 Speed | 1 word | 16 bits | HEX | 0x1109 | 34362 | |
| | Port 11 Speed | 1 word | 16 bits | HEX | 0x110A | 34363 | |
| | Port 12 Speed | 1 word | 16 bits | HEX | 0x110B | 34364 | |
| | Port 13 Speed | 1 word | 16 bits | HEX | 0x110C | 34365 | |
| | Port 14 Speed | 1 word | 16 bits | HEX | 0x110D | 34366 | |
| | Port 15 Speed | 1 word | 16 bits | HEX | 0x110E | 34367 | |
| | Port 16 Speed | 1 word | 16 bits | HEX | 0x110F | 34368 | |
| | Port 17 Speed | 1 word | 16 bits | HEX | 0x1110 | 34369 | |
| | Port 18 Speed | 1 word | 16 bits | HEX | 0x1111 | 34370 | |
| | Port 19 Speed | 1 word | 16 bits | HEX | 0x1112 | 34371 | |
| Port Info | Port 20 Speed | 1 word | 16 bits | HEX | 0x1113 | 34372 | |
| | Port 21 Speed | 1 word | 16 bits | HEX | 0x1114 | 34373 | |
| | Port 22 Speed | 1 word | 16 bits | HEX | 0x1115 | 34374 | |

| | | | | | | | |
|-----------|---------------------|--------|---------|-----|--------------------|------------------|--|
| | Port 23 Speed | 1 word | 16 bits | HEX | 0x1116 | 34375 | |
| | Port 24 Speed | 1 word | 16 bits | HEX | 0x1117 | 34376 | |
| | Port 25 Speed | 1 word | 16 bits | HEX | 0x1118 | 34377 | |
| | Port 26 Speed | 1 word | 16 bits | HEX | 0x1119 | 34378 | |
| | Port 27 Speed | 1 word | 16 bits | HEX | 0x111A | 34379 | |
| | Port 28 Speed | 1 word | 16 bits | HEX | 0x111B | 34380 | |
| | Port 29 Speed | 1 word | 16 bits | HEX | 0x111C | 34381 | |
| | Port 30 Speed | 1 word | 16 bits | HEX | 0x111D | 34382 | |
| | Port 31 Speed | 1 word | 16 bits | HEX | 0x111E | 34383 | |
| | Port 32 Speed | 1 word | 16 bits | HEX | 0x111F | 34384 | |
| | Flow Control | 1 word | 16 bits | HEX | 0x1200 ~ 0x121F | 34609 ~ 34640 | Flow Control 0x0000: Off 0x0001: On 0xFFFF: No port |
| | Port 1 Flow Control | 1 word | 16 bits | HEX | 0x1200 | 34609 | |
| | Port 2 Flow Control | 1 word | 16 bits | HEX | 0x1201 | 34610 | |
| | Port 3 Flow Control | 1 word | 16 bits | HEX | 0x1202 | 34611 | |
| | Port 4 Flow Control | 1 word | 16 bits | HEX | 0x1203 | 34612 | |
| | Port 5 Flow Control | 1 word | 16 bits | HEX | 0x1204 | 34613 | |
| Port Info | Port 6 Flow Control | 1 word | 16 bits | HEX | 0x1205 | 34614 | |
| | Port 7 Flow Control | 1 word | 16 bits | HEX | 0x1206 | 34615 | |
| | Port 8 Flow Control | 1 word | 16 bits | HEX | 0x1207 | 34616 | |
| | Port 9 Flow Control | 1 word | 16 bits | HEX | 0x1208 | 34617 | |

| | | | | | | | |
|-----------|----------------------|--------|---------|-----|--------|-------|--|
| | Port 10 Flow Control | 1 word | 16 bits | HEX | 0x1209 | 34618 | |
| | Port 11 Flow Control | 1 word | 16 bits | HEX | 0x120A | 34619 | |
| | Port 12 Flow Control | 1 word | 16 bits | HEX | 0x120B | 34620 | |
| | Port 13 Flow Control | 1 word | 16 bits | HEX | 0x120C | 34621 | |
| | Port 14 Flow Control | 1 word | 16 bits | HEX | 0x120D | 34622 | |
| | Port 15 Flow Control | 1 word | 16 bits | HEX | 0x120E | 34623 | |
| | Port 16 Flow Control | 1 word | 16 bits | HEX | 0x120F | 34624 | |
| | Port 17 Flow Control | 1 word | 16 bits | HEX | 0x1210 | 34625 | |
| | Port 18 Flow Control | 1 word | 16 bits | HEX | 0x1211 | 34626 | |
| | Port 19 Flow Control | 1 word | 16 bits | HEX | 0x1212 | 34627 | |
| | Port 20 Flow Control | 1 word | 16 bits | HEX | 0x1213 | 34628 | |
| | Port 21 Flow Control | 1 word | 16 bits | HEX | 0x1214 | 34629 | |
| | Port 22 Flow Control | 1 word | 16 bits | HEX | 0x1215 | 34630 | |
| | Port 23 Flow Control | 1 word | 16 bits | HEX | 0x1216 | 34631 | |
| | Port 24 Flow Control | 1 word | 16 bits | HEX | 0x1217 | 34632 | |
| | Port 25 Flow Control | 1 word | 16 bits | HEX | 0x1218 | 34633 | |
| Port Info | Port 26 Flow Control | 1 word | 16 bits | HEX | 0x1219 | 34634 | |

| | | | | | | | |
|-----------|----------------------|----------|----------|-------|-----------------|---------------|--|
| | Port 27 Flow Control | 1 word | 16 bits | HEX | 0x121A | 34635 | |
| | Port 28 Flow Control | 1 word | 16 bits | HEX | 0x121B | 34636 | |
| | Port 29 Flow Control | 1 word | 16 bits | HEX | 0x121C | 34637 | |
| | Port 30 Flow Control | 1 word | 16 bits | HEX | 0x121D | 34638 | |
| | Port 31 Flow Control | 1 word | 16 bits | HEX | 0x121E | 34639 | |
| | Port 32 Flow Control | 1 word | 16 bits | HEX | 0x121F | 34640 | |
| | Port Description | 20 words | 40 chars | ASCII | 0x1400 ~ 0x166C | 35121 ~ 35741 | Port Description Port Description = "100RX,RJ45." Word 0 Hi byte = '1' Word 0 Lo byte = '0' Word 1Hi byte = '0' Word 1 Lo byte = 'R' Word 2 Hi byte = 'X' Word 2 Lo byte = ';' Word 3 Hi byte = 'R' Word 3 Lo byte = 'J' Word 4 Hi byte = '4' Word 4 Lo byte = '5' Word 5 Hi byte = '.' Word 5 Lo byte = '\0' |
| | Port 1 Description | 20 words | 40 chars | ASCII | 0x1400 | 35121 | |
| | Port 2 Description | 20 words | 40 chars | ASCII | 0x1414 | 35141 | |
| | Port 3 Description | 20 words | 40 chars | ASCII | 0x1428 | 35161 | |
| | Port 4 Description | 20 words | 40 chars | ASCII | 0x143C | 35181 | |
| | Port 5 Description | 20 words | 40 chars | ASCII | 0x1450 | 35201 | |
| Port Info | Port 6 Description | 20 words | 40 chars | ASCII | 0x1464 | 35221 | |

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|------------------------|----------|----------|-------|--------|-------|--|
| Port 7 Description | 20 words | 40 chars | ASCII | 0x1478 | 35241 | |
| Port 8 Description | 20 words | 40 chars | ASCII | 0x148C | 35261 | |
| Port 9 Description | 20 words | 40 chars | ASCII | 0x14A0 | 35281 | |
| Port 10 Description | 20 words | 40 chars | ASCII | 0x14B4 | 35301 | |
| Port 11 Description | 20 words | 40 chars | ASCII | 0x14C8 | 35321 | |
| Port 12 Description | 20 words | 40 chars | ASCII | 0x14DC | 35341 | |
| Port 13 Description | 20 words | 40 chars | ASCII | 0x14F0 | 35361 | |
| Port 14 Description | 20 words | 40 chars | ASCII | 0x1504 | 35381 | |
| Port 15 Description | 20 words | 40 chars | ASCII | 0x1518 | 35401 | |
| Port 16 Description | 20 words | 40 chars | ASCII | 0x152C | 35421 | |
| Port 17 Description | 20 words | 40 chars | ASCII | 0x1540 | 35441 | |
| Port 18 Description | 20 words | 40 chars | ASCII | 0x1554 | 35461 | |
| Port 19 Description | 20 words | 40 chars | ASCII | 0x1568 | 35481 | |
| Port 20 Description | 20 words | 40 chars | ASCII | 0x157C | 35501 | |
| Port 21 Description | 20 words | 40 chars | ASCII | 0x1590 | 35521 | |
| Port 22 Description | 20 words | 40 chars | ASCII | 0x15A4 | 35541 | |
| Port 23 Description | 20 words | 40 chars | ASCII | 0x15B8 | 35561 | |

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|----------------|------------------------|----------|----------|--------|-----------------|---------------|--|
| | Port 24 Description | 20 words | 40 chars | ASCII | 0x15CC | 35581 | |
| | Port 25 Description | 20 words | 40 chars | ASCII | 0x15E0 | 35601 | |
| Port Info | Port 26 Description | 20 words | 40 chars | ASCII | 0x15F4 | 35621 | |
| | Port 27 Description | 20 words | 40 chars | ASCII | 0x1608 | 35641 | |
| | Port 28 Description | 20 words | 40 chars | ASCII | 0x161C | 35661 | |
| | Port 29 Description | 20 words | 40 chars | ASCII | 0x1630 | 35681 | |
| | Port 30 Description | 20 words | 40 chars | ASCII | 0x1644 | 35701 | |
| | Port 31 Description | 20 words | 40 chars | ASCII | 0x1658 | 35721 | |
| | Port 32 Description | 20 words | 40 chars | ASCII | 0x166C | 35741 | |
| | Link Up Counter | 1 word | 16 bits | HEX | 0x1700 ~ 0x171F | 35889 ~ 35920 | Link Up Counter Ex: port link up counter = 13 Received MODBUS response: 0x000D |
| | Port 1 Link Up Counter | 1 word | 16 bits | HEX | 0x1700 | 35889 | |
| | Port 2 Link Up Counter | 1 word | 16 bits | HEX | 0x1701 | 35890 | |
| | Port 3 Link Up Counter | 1 word | 16 bits | HEX | 0x1702 | 35891 | |
| | Port 4 Link Up Counter | 1 word | 16 bits | HEX | 0x1703 | 35892 | |
| | Port 5 Link Up Counter | 1 word | 16 bits | HEX | 0x1704 | 35893 | |
| | Port 6 Link Up Counter | 1 word | 16 bits | HEX | 0x1705 | 35894 | |
| Port 7 Link Up | 1 word | 16 bits | HEX | 0x1706 | 35895 | | |

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|-----------|-------------------------|--------|---------|-----|--------|-------|--|
| | Counter | | | | | | |
| | Port 8 Link Up Counter | 1 word | 16 bits | HEX | 0x1707 | 35896 | |
| | Port 9 Link Up Counter | 1 word | 16 bits | HEX | 0x1708 | 35897 | |
| | Port 10 Link Up Counter | 1 word | 16 bits | HEX | 0x1709 | 35898 | |
| | Port 11 Link Up Counter | 1 word | 16 bits | HEX | 0x170A | 35899 | |
| Port Info | Port 12 Link Up Counter | 1 word | 16 bits | HEX | 0x170B | 35900 | |
| | Port 13 Link Up Counter | 1 word | 16 bits | HEX | 0x170C | 35901 | |
| | Port 14 Link Up Counter | 1 word | 16 bits | HEX | 0x170D | 35902 | |
| | Port 15 Link Up Counter | 1 word | 16 bits | HEX | 0x170E | 35903 | |
| | Port 16 Link Up Counter | 1 word | 16 bits | HEX | 0x170F | 35904 | |
| | Port 17 Link Up Counter | 1 word | 16 bits | HEX | 0x1710 | 35905 | |
| | Port 18 Link Up Counter | 1 word | 16 bits | HEX | 0x1711 | 35906 | |
| | Port 19 Link Up Counter | 1 word | 16 bits | HEX | 0x1712 | 35907 | |
| | Port 20 Link Up Counter | 1 word | 16 bits | HEX | 0x1713 | 35908 | |
| | Port 21 Link Up Counter | 1 word | 16 bits | HEX | 0x1714 | 35909 | |
| | Port 22 Link Up Counter | 1 word | 16 bits | HEX | 0x1715 | 35910 | |
| | Port 23 Link Up Counter | 1 word | 16 bits | HEX | 0x1716 | 35911 | |
| | Port 24 Link | 1 word | 16 bits | HEX | 0x1717 | 35912 | |

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|-----------|-------------------------|--------|---------|-----|--------------------|------------------|---|
| | Up Counter | | | | | | |
| | Port 25 Link Up Counter | 1 word | 16 bits | HEX | 0x1718 | 35913 | |
| | Port 26 Link Up Counter | 1 word | 16 bits | HEX | 0x1719 | 35914 | |
| | Port 27 Link Up Counter | 1 word | 16 bits | HEX | 0x171A | 35915 | |
| | Port 28 Link Up Counter | 1 word | 16 bits | HEX | 0x171B | 35916 | |
| | Port 29 Link Up Counter | 1 word | 16 bits | HEX | 0x171C | 35917 | |
| | Port 30 Link Up Counter | 1 word | 16 bits | HEX | 0x171D | 35918 | |
| | Port 31 Link Up Counter | 1 word | 16 bits | HEX | 0x171E | 35919 | |
| Port Info | Port 32 Link Up Counter | 1 word | 16 bits | HEX | 0x171F | 35920 | |
| | PoE Voltage | 1 word | 16 bits | HEX | 0x1800 ~ 0x181F | 36145 ~ 36176 | PoE Voltage (V) Ex: poe voltage = 5 Received MODBUS response: 0x0005 |
| | Port 1 PoE Voltage | 1 word | 16 bits | HEX | 0x1800 | 36145 | |
| | Port 2 PoE Voltage | 1 word | 16 bits | HEX | 0x1801 | 36146 | |
| | Port 3 PoE Voltage | 1 word | 16 bits | HEX | 0x1802 | 36147 | |
| | Port 4 PoE Voltage | 1 word | 16 bits | HEX | 0x1803 | 36148 | |
| | Port 5 PoE Voltage | 1 word | 16 bits | HEX | 0x1804 | 36149 | |
| | Port 6 PoE Voltage | 1 word | 16 bits | HEX | 0x1805 | 36150 | |
| | Port 7 PoE Voltage | 1 word | 16 bits | HEX | 0x1806 | 36151 | |

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|-----------|---------------------|--------|---------|-----|--------|-------|--|
| | Port 8 PoE Voltage | 1 word | 16 bits | HEX | 0x1807 | 36152 | |
| | Port 9 PoE Voltage | 1 word | 16 bits | HEX | 0x1808 | 36153 | |
| | Port 10 PoE Voltage | 1 word | 16 bits | HEX | 0x1809 | 36154 | |
| | Port 11 PoE Voltage | 1 word | 16 bits | HEX | 0x180A | 36155 | |
| | Port 12 PoE Voltage | 1 word | 16 bits | HEX | 0x180B | 36156 | |
| | Port 13 PoE Voltage | 1 word | 16 bits | HEX | 0x180C | 36157 | |
| | Port 14 PoE Voltage | 1 word | 16 bits | HEX | 0x180D | 36158 | |
| | Port 15 PoE Voltage | 1 word | 16 bits | HEX | 0x180E | 36159 | |
| | Port 16 PoE Voltage | 1 word | 16 bits | HEX | 0x180F | 36160 | |
| | Port 17 PoE Voltage | 1 word | 16 bits | HEX | 0x1810 | 36161 | |
| Port Info | Port 18 PoE Voltage | 1 word | 16 bits | HEX | 0x1811 | 36162 | |
| | Port 19 PoE Voltage | 1 word | 16 bits | HEX | 0x1812 | 36163 | |
| | Port 20 PoE Voltage | 1 word | 16 bits | HEX | 0x1813 | 36164 | |
| | Port 21 PoE Voltage | 1 word | 16 bits | HEX | 0x1814 | 36165 | |
| | Port 22 PoE Voltage | 1 word | 16 bits | HEX | 0x1815 | 36166 | |
| | Port 23 PoE Voltage | 1 word | 16 bits | HEX | 0x1816 | 36167 | |
| | Port 24 PoE Voltage | 1 word | 16 bits | HEX | 0x1817 | 36168 | |

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| | Port 25 PoE Voltage | 1 word | 16 bits | HEX | 0x1818 | 36169 | |
| | Port 26 PoE Voltage | 1 word | 16 bits | HEX | 0x1819 | 36170 | |
| | Port 27 PoE Voltage | 1 word | 16 bits | HEX | 0x181A | 36171 | |
| | Port 28 PoE Voltage | 1 word | 16 bits | HEX | 0x181B | 36172 | |
| | Port 29 PoE Voltage | 1 word | 16 bits | HEX | 0x181C | 36173 | |
| | Port 30 PoE Voltage | 1 word | 16 bits | HEX | 0x181D | 36174 | |
| | Port 31 PoE Voltage | 1 word | 16 bits | HEX | 0x181E | 36175 | |
| | Port 32 PoE Voltage | 1 word | 16 bits | HEX | 0x181F | 36176 | |
| | PoE Current | 1 word | 16 bits | HEX | 0x1820 ~ 0x183F | 36177 ~ 36208 | PoE Current (mA) Ex: poe current = 13 Received MODBUS response: 0x000D |
| | Port 1 PoE Current | 1 word | 16 bits | HEX | 0x1820 | 36177 | |
| | Port 2 PoE Current | 1 word | 16 bits | HEX | 0x1821 | 36178 | |
| | Port 3 PoE Current | 1 word | 16 bits | HEX | 0x1822 | 36179 | |
| Port Info | Port 4 PoE Current | 1 word | 16 bits | HEX | 0x1823 | 36180 | |
| | Port 5 PoE Current | 1 word | 16 bits | HEX | 0x1824 | 36181 | |
| | Port 6 PoE Current | 1 word | 16 bits | HEX | 0x1825 | 36182 | |
| | Port 7 PoE Current | 1 word | 16 bits | HEX | 0x1826 | 36183 | |
| | Port 8 PoE | 1 word | 16 bits | HEX | 0x1827 | 36184 | |

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|-----------|---------------------|--------|---------|-----|--------|-------|--|
| | Current | | | | | | |
| | Port 9 PoE Current | 1 word | 16 bits | HEX | 0x1828 | 36185 | |
| | Port 10 PoE Current | 1 word | 16 bits | HEX | 0x1829 | 36186 | |
| | Port 11 PoE Current | 1 word | 16 bits | HEX | 0x182A | 36187 | |
| | Port 12 PoE Current | 1 word | 16 bits | HEX | 0x182B | 36188 | |
| | Port 13 PoE Current | 1 word | 16 bits | HEX | 0x182C | 36189 | |
| | Port 14 PoE Current | 1 word | 16 bits | HEX | 0x182D | 36190 | |
| | Port 15 PoE Current | 1 word | 16 bits | HEX | 0x182E | 36191 | |
| | Port 16 PoE Current | 1 word | 16 bits | HEX | 0x182F | 36192 | |
| | Port 17 PoE Current | 1 word | 16 bits | HEX | 0x1830 | 36193 | |
| | Port 18 PoE Current | 1 word | 16 bits | HEX | 0x1831 | 36194 | |
| | Port 19 PoE Current | 1 word | 16 bits | HEX | 0x1832 | 36195 | |
| | Port 20 PoE Current | 1 word | 16 bits | HEX | 0x1833 | 36196 | |
| | Port 21 PoE Current | 1 word | 16 bits | HEX | 0x1834 | 36197 | |
| | Port 22 PoE Current | 1 word | 16 bits | HEX | 0x1835 | 36198 | |
| | Port 23 PoE Current | 1 word | 16 bits | HEX | 0x1836 | 36199 | |
| Port Info | Port 24 PoE Current | 1 word | 16 bits | HEX | 0x1837 | 36200 | |
| | Port 25 PoE | 1 word | 16 bits | HEX | 0x1838 | 36201 | |

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|---------------------|--------|---------|-----|--------------------|------------------|--|--|
| Current | | | | | | | |
| Port 26 PoE Current | 1 word | 16 bits | HEX | 0x1839 | 36202 | | |
| Port 27 PoE Current | 1 word | 16 bits | HEX | 0x183A | 36203 | | |
| Port 28 PoE Current | 1 word | 16 bits | HEX | 0x183B | 36204 | | |
| Port 29 PoE Current | 1 word | 16 bits | HEX | 0x183C | 36205 | | |
| Port 30 PoE Current | 1 word | 16 bits | HEX | 0x183D | 36206 | | |
| Port 31 PoE Current | 1 word | 16 bits | HEX | 0x183E | 36207 | | |
| Port 32 PoE Current | 1 word | 16 bits | HEX | 0x183F | 36208 | | |
| PoE Power | 1 word | 16 bits | HEX | 0x1840 ~ 0x185F | 36209 ~ 36240 | PoE Power (W) Ex: poe power = 10 Received MODBUS response: 0x000A | |
| Port 1 PoE Power | 1 word | 16 bits | HEX | 0x1840 | 36209 | | |
| Port 2 PoE Power | 1 word | 16 bits | HEX | 0x1841 | 36210 | | |
| Port 3 PoE Power | 1 word | 16 bits | HEX | 0x1842 | 36211 | | |
| Port 4 PoE Power | 1 word | 16 bits | HEX | 0x1843 | 36212 | | |
| Port 5 PoE Power | 1 word | 16 bits | HEX | 0x1844 | 36213 | | |
| Port 6 PoE Power | 1 word | 16 bits | HEX | 0x1845 | 36214 | | |
| Port 7 PoE Power | 1 word | 16 bits | HEX | 0x1846 | 36215 | | |
| Port 8 PoE Power | 1 word | 16 bits | HEX | 0x1847 | 36216 | | |

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|-----------|-------------------|--------|---------|-----|--------|-------|--|
| | Port 9 PoE Power | 1 word | 16 bits | HEX | 0x1848 | 36217 | |
| Port Info | Port 10 PoE Power | 1 word | 16 bits | HEX | 0x1849 | 36218 | |
| | Port 11 PoE Power | 1 word | 16 bits | HEX | 0x184A | 36219 | |
| | Port 12 PoE Power | 1 word | 16 bits | HEX | 0x184B | 36220 | |
| | Port 13 PoE Power | 1 word | 16 bits | HEX | 0x184C | 36221 | |
| | Port 14 PoE Power | 1 word | 16 bits | HEX | 0x184D | 36222 | |
| | Port 15 PoE Power | 1 word | 16 bits | HEX | 0x184E | 36223 | |
| | Port 16 PoE Power | 1 word | 16 bits | HEX | 0x184F | 36224 | |
| | Port 17 PoE Power | 1 word | 16 bits | HEX | 0x1850 | 36225 | |
| | Port 18 PoE Power | 1 word | 16 bits | HEX | 0x1851 | 36226 | |
| | Port 19 PoE Power | 1 word | 16 bits | HEX | 0x1852 | 36227 | |
| | Port 20 PoE Power | 1 word | 16 bits | HEX | 0x1853 | 36228 | |
| | Port 21 PoE Power | 1 word | 16 bits | HEX | 0x1854 | 36229 | |
| | Port 22 PoE Power | 1 word | 16 bits | HEX | 0x1855 | 36230 | |
| | Port 23 PoE Power | 1 word | 16 bits | HEX | 0x1856 | 36231 | |
| | Port 24 PoE Power | 1 word | 16 bits | HEX | 0x1857 | 36232 | |
| | Port 25 PoE Power | 1 word | 16 bits | HEX | 0x1858 | 36233 | |

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| | Port 26 PoE Power | 1 word | 16 bits | HEX | 0x1859 | 36234 | |
| | Port 27 PoE Power | 1 word | 16 bits | HEX | 0x185A | 36235 | |
| | Port 28 PoE Power | 1 word | 16 bits | HEX | 0x185B | 36236 | |
| | Port 29 PoE Power | 1 word | 16 bits | HEX | 0x185C | 36237 | |
| Port Info | Port 30 PoE Power | 1 word | 16 bits | HEX | 0x185D | 36238 | |
| | Port 31 PoE Power | 1 word | 16 bits | HEX | 0x185E | 36239 | |
| | Port 32 PoE Power | 1 word | 16 bits | HEX | 0x185F | 36240 | |
| | PoE Temperature | 1 word | 16 bits | HEX | 0x1860 ~ 0x187F | 36241 ~ 36272 | PoE Temperature (C) Ex: poe temperature = 32 Received MODBUS response: 0x0020 |
| | Port 1 PoE Temperature | 1 word | 16 bits | HEX | 0x1860 | 36241 | |
| | Port 2 PoE Temperature | 1 word | 16 bits | HEX | 0x1861 | 36242 | |
| | Port 3 PoE Temperature | 1 word | 16 bits | HEX | 0x1862 | 36243 | |
| | Port 4 PoE Temperature | 1 word | 16 bits | HEX | 0x1863 | 36244 | |
| | Port 5 PoE Temperature | 1 word | 16 bits | HEX | 0x1864 | 36245 | |
| | Port 6 PoE Temperature | 1 word | 16 bits | HEX | 0x1865 | 36246 | |
| | Port 7 PoE Temperature | 1 word | 16 bits | HEX | 0x1866 | 36247 | |
| | Port 8 PoE Temperature | 1 word | 16 bits | HEX | 0x1867 | 36248 | |
| | Port 9 PoE | 1 word | 16 bits | HEX | 0x1868 | 36249 | |

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|-----------|-------------------------|--------|---------|-----|--------|-------|--|
| | Temperature | | | | | | |
| | Port 10 PoE Temperature | 1 word | 16 bits | HEX | 0x1869 | 36250 | |
| | Port 11 PoE Temperature | 1 word | 16 bits | HEX | 0x186A | 36251 | |
| | Port 12 PoE Temperature | 1 word | 16 bits | HEX | 0x186B | 36252 | |
| | Port 13 PoE Temperature | 1 word | 16 bits | HEX | 0x186C | 36253 | |
| | Port 14 PoE Temperature | 1 word | 16 bits | HEX | 0x186D | 36254 | |
| | Port 15 PoE Temperature | 1 word | 16 bits | HEX | 0x186E | 36255 | |
| Port Info | Port 16 PoE Temperature | 1 word | 16 bits | HEX | 0x186F | 36256 | |
| | Port 17 PoE Temperature | 1 word | 16 bits | HEX | 0x1870 | 36257 | |
| | Port 18 PoE Temperature | 1 word | 16 bits | HEX | 0x1871 | 36258 | |
| | Port 19 PoE Temperature | 1 word | 16 bits | HEX | 0x1872 | 36259 | |
| | Port 20 PoE Temperature | 1 word | 16 bits | HEX | 0x1873 | 36260 | |
| | Port 21 PoE Temperature | 1 word | 16 bits | HEX | 0x1874 | 36261 | |
| | Port 22 PoE Temperature | 1 word | 16 bits | HEX | 0x1875 | 36262 | |
| | Port 23 PoE Temperature | 1 word | 16 bits | HEX | 0x1876 | 36263 | |
| | Port 24 PoE Temperature | 1 word | 16 bits | HEX | 0x1877 | 36264 | |
| | Port 25 PoE Temperature | 1 word | 16 bits | HEX | 0x1878 | 36265 | |
| | Port 26 PoE | 1 word | 16 bits | HEX | 0x1879 | 36266 | |

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|-------------|-------------------------|---------|---------|-----|-----------------|---------------|---|
| | Temperature | | | | | | |
| | Port 27 PoE Temperature | 1 word | 16 bits | HEX | 0x187A | 36267 | |
| | Port 28 PoE Temperature | 1 word | 16 bits | HEX | 0x187B | 36268 | |
| | Port 29 PoE Temperature | 1 word | 16 bits | HEX | 0x187C | 36269 | |
| | Port 30 PoE Temperature | 1 word | 16 bits | HEX | 0x187D | 36270 | |
| | Port 31 PoE Temperature | 1 word | 16 bits | HEX | 0x187E | 36271 | |
| | Port 32 PoE Temperature | 1 word | 16 bits | HEX | 0x187F | 36272 | |
| Packet Info | Tx Packets Counter | 4 words | 64 bits | HEX | 0x2000 ~ 0x207C | 38193 ~ 38317 | Tx Packets Ex: port 1 Tx Packet Amount = 11223344 Received MODBUS response: 0xAB4130 Word 0 = 0x0000 Word 1 = 0x0000 Word 2 = 0x00AB Word 3 = 0x4130 |
| | Port 1 Tx Packets | 4 words | 64 bits | HEX | 0x2000 | 38193 | |
| | Port 2 Tx Packets | 4 words | 64 bits | HEX | 0x2004 | 38197 | |
| | Port 3 Tx Packets | 4 words | 64 bits | HEX | 0x2008 | 38201 | |
| | Port 4 Tx Packets | 4 words | 64 bits | HEX | 0x200C | 38205 | |
| | Port 5 Tx Packets | 4 words | 64 bits | HEX | 0x2010 | 38209 | |
| | Port 6 Tx Packets | 4 words | 64 bits | HEX | 0x2014 | 38213 | |
| | Port 7 Tx Packets | 4 words | 64 bits | HEX | 0x2018 | 38217 | |

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| | Port 8 Tx Packets | 4 words | 64 bits | HEX | 0x201C | 38221 | |
| | Port 9 Tx Packets | 4 words | 64 bits | HEX | 0x2020 | 38225 | |
| | Port 10 Tx Packets | 4 words | 64 bits | HEX | 0x2024 | 38229 | |
| | Port 11 Tx Packets | 4 words | 64 bits | HEX | 0x2028 | 38233 | |
| | Port 12 Tx Packets | 4 words | 64 bits | HEX | 0x202C | 38237 | |
| | Port 13 Tx Packets | 4 words | 64 bits | HEX | 0x2030 | 38241 | |
| | Port 14 Tx Packets | 4 words | 64 bits | HEX | 0x2034 | 38245 | |
| | Port 15 Tx Packets | 4 words | 64 bits | HEX | 0x2038 | 38249 | |
| Packet Info | Port 16 Tx Packets | 4 words | 64 bits | HEX | 0x203C | 38253 | |
| | Port 17 Tx Packets | 4 words | 64 bits | HEX | 0x2040 | 38257 | |
| | Port 18 Tx Packets | 4 words | 64 bits | HEX | 0x2044 | 38261 | |
| | Port 19 Tx Packets | 4 words | 64 bits | HEX | 0x2048 | 38265 | |
| | Port 20 Tx Packets | 4 words | 64 bits | HEX | 0x204C | 38269 | |
| | Port 21 Tx Packets | 4 words | 64 bits | HEX | 0x2050 | 38273 | |
| | Port 22 Tx Packets | 4 words | 64 bits | HEX | 0x2054 | 38277 | |
| | Port 23 Tx Packets | 4 words | 64 bits | HEX | 0x2058 | 38281 | |
| | Port 24 Tx Packets | 4 words | 64 bits | HEX | 0x205C | 38285 | |

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| | Port 25 Tx Packets | 4 words | 64 bits | HEX | 0x2060 | 38289 | |
| | Port 26 Tx Packets | 4 words | 64 bits | HEX | 0x2064 | 38293 | |
| | Port 27 Tx Packets | 4 words | 64 bits | HEX | 0x2068 | 38297 | |
| | Port 28 Tx Packets | 4 words | 64 bits | HEX | 0x206C | 38301 | |
| | Port 29 Tx Packets | 4 words | 64 bits | HEX | 0x2070 | 38305 | |
| | Port 30 Tx Packets | 4 words | 64 bits | HEX | 0x2074 | 38309 | |
| | Port 31 Tx Packets | 4 words | 64 bits | HEX | 0x2078 | 38313 | |
| | Port 32 Tx Packets | 4 words | 64 bits | HEX | 0x207C | 38317 | |
| Packet Info | Rx Packets Counter | 4 words | 64 bits | HEX | 0x2100 ~ 0x217C | 38449 ~ 38573 | Rx Packets Ex: port 1 Rx Packet Amount = 11223344 Received MODBUS response: 0xAB4130 Word 0 = 0x0000 Word 1 = 0x0000 Word 2 = 0x00AB Word 3 = 0x4130 |
| | Port 1 Rx Packets | 4 words | 64 bits | HEX | 0x2100 | 38449 | |
| | Port 2 Rx Packets | 4 words | 64 bits | HEX | 0x2104 | 38453 | |
| | Port 3 Rx Packets | 4 words | 64 bits | HEX | 0x2108 | 38457 | |
| | Port 4 Rx Packets | 4 words | 64 bits | HEX | 0x210C | 38461 | |
| | Port 5 Rx Packets | 4 words | 64 bits | HEX | 0x2110 | 38465 | |
| | Port 6 Rx Packets | 4 words | 64 bits | HEX | 0x2114 | 38469 | |

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| | Port 7 Rx Packets | 4 words | 64 bits | HEX | 0x2118 | 38473 | |
| | Port 8 Rx Packets | 4 words | 64 bits | HEX | 0x211C | 38477 | |
| | Port 9 Rx Packets | 4 words | 64 bits | HEX | 0x2120 | 38481 | |
| | Port 10 Rx Packets | 4 words | 64 bits | HEX | 0x2124 | 38485 | |
| | Port 11 Rx Packets | 4 words | 64 bits | HEX | 0x2128 | 38489 | |
| | Port 12 Rx Packets | 4 words | 64 bits | HEX | 0x212C | 38493 | |
| | Port 13 Rx Packets | 4 words | 64 bits | HEX | 0x2130 | 38497 | |
| | Port 14 Rx Packets | 4 words | 64 bits | HEX | 0x2134 | 38501 | |
| | Port 15 Rx Packets | 4 words | 64 bits | HEX | 0x2138 | 38505 | |
| Packet Info | Port 16 Rx Packets | 4 words | 64 bits | HEX | 0x213C | 38509 | |
| | Port 17 Rx Packets | 4 words | 64 bits | HEX | 0x2140 | 38513 | |
| | Port 18 Rx Packets | 4 words | 64 bits | HEX | 0x2144 | 38517 | |
| | Port 19 Rx Packets | 4 words | 64 bits | HEX | 0x2148 | 38521 | |
| | Port 20 Rx Packets | 4 words | 64 bits | HEX | 0x214C | 38525 | |
| | Port 21 Rx Packets | 4 words | 64 bits | HEX | 0x2150 | 38529 | |
| | Port 22 Rx Packets | 4 words | 64 bits | HEX | 0x2154 | 38533 | |
| | Port 23 Rx Packets | 4 words | 64 bits | HEX | 0x2158 | 38537 | |

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|-------------|--------------------------|---------|---------|-----|-----------------|---------------|---|
| | Port 24 Rx Packets | 4 words | 64 bits | HEX | 0x215C | 38541 | |
| | Port 25 Rx Packets | 4 words | 64 bits | HEX | 0x2160 | 38545 | |
| | Port 26 Rx Packets | 4 words | 64 bits | HEX | 0x2164 | 38549 | |
| | Port 27 Rx Packets | 4 words | 64 bits | HEX | 0x2168 | 38553 | |
| | Port 28 Rx Packets | 4 words | 64 bits | HEX | 0x216C | 38557 | |
| | Port 29 Rx Packets | 4 words | 64 bits | HEX | 0x2170 | 38561 | |
| | Port 30 Rx Packets | 4 words | 64 bits | HEX | 0x2174 | 38565 | |
| | Port 31 Rx Packets | 4 words | 64 bits | HEX | 0x2178 | 38569 | |
| | Port 32 Rx Packets | 4 words | 64 bits | HEX | 0x217C | 38573 | |
| Packet Info | Tx Error Packets Counter | 2 words | 32 bits | HEX | 0x2200 ~ 0x223E | 38705 ~ 38767 | Tx Error Packets Ex: port 1 Tx Packet Amount = 11223344 Received MODBUS response: 0xAB4130 Word 0 = 0x00AB Word 1 = 0x4130 |
| | Port 1 Tx Error Packets | 2 words | 32 bits | HEX | 0x2200 | 38705 | |
| | Port 2 Tx Error Packets | 2 words | 32 bits | HEX | 0x2202 | 38707 | |
| | Port 3 Tx Error Packets | 2 words | 32 bits | HEX | 0x2204 | 38709 | |
| | Port 4 Tx Error Packets | 2 words | 32 bits | HEX | 0x2206 | 38711 | |
| | Port 5 Tx Error Packets | 2 words | 32 bits | HEX | 0x2208 | 38713 | |
| | Port 6 Tx | 2 words | 32 bits | HEX | 0x220A | 38715 | |

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|-------------|--------------------------|---------|---------|-----|--------|-------|--|
| | Error Packets | | | | | | |
| | Port 7 Tx Error Packets | 2 words | 32 bits | HEX | 0x220C | 38717 | |
| | Port 8 Tx Error Packets | 2 words | 32 bits | HEX | 0x220E | 38719 | |
| | Port 9 Tx Error Packets | 2 words | 32 bits | HEX | 0x2210 | 38721 | |
| | Port 10 Tx Error Packets | 2 words | 32 bits | HEX | 0x2212 | 38723 | |
| | Port 11 Tx Error Packets | 2 words | 32 bits | HEX | 0x2214 | 38725 | |
| | Port 12 Tx Error Packets | 2 words | 32 bits | HEX | 0x2216 | 38727 | |
| Packet Info | Port 13 Tx Error Packets | 2 words | 32 bits | HEX | 0x2218 | 38729 | |
| | Port 14 Tx Error Packets | 2 words | 32 bits | HEX | 0x221A | 38731 | |
| | Port 15 Tx Error Packets | 2 words | 32 bits | HEX | 0x221C | 38733 | |
| | Port 16 Tx Error Packets | 2 words | 32 bits | HEX | 0x221E | 38735 | |
| | Port 17 Tx Error Packets | 2 words | 32 bits | HEX | 0x2220 | 38737 | |
| | Port 18 Tx Error Packets | 2 words | 32 bits | HEX | 0x2222 | 38739 | |
| | Port 19 Tx Error Packets | 2 words | 32 bits | HEX | 0x2224 | 38741 | |
| | Port 20 Tx Error Packets | 2 words | 32 bits | HEX | 0x2226 | 38743 | |
| | Port 21 Tx Error Packets | 2 words | 32 bits | HEX | 0x2228 | 38745 | |
| | Port 22 Tx Error Packets | 2 words | 32 bits | HEX | 0x222A | 38747 | |
| | Port 23 Tx | 2 words | 32 bits | HEX | 0x222C | 38749 | |

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|-------------------------|--------------------------|---------|---------|--------|--------------------|------------------|--|
| | Error Packets | | | | | | |
| | Port 24 Tx Error Packets | 2 words | 32 bits | HEX | 0x222E | 38751 | |
| | Port 25 Tx Error Packets | 2 words | 32 bits | HEX | 0x2230 | 38753 | |
| | Port 26 Tx Error Packets | 2 words | 32 bits | HEX | 0x2232 | 38755 | |
| Packet Info | Port 27 Tx Error Packets | 2 words | 32 bits | HEX | 0x2234 | 38757 | |
| | Port 28 Tx Error Packets | 2 words | 32 bits | HEX | 0x2236 | 38759 | |
| | Port 29 Tx Error Packets | 2 words | 32 bits | HEX | 0x2238 | 38761 | |
| | Port 30 Tx Error Packets | 2 words | 32 bits | HEX | 0x223A | 38763 | |
| | Port 31 Tx Error Packets | 2 words | 32 bits | HEX | 0x223C | 38765 | |
| | Port 32 Tx Error Packets | 2 words | 32 bits | HEX | 0x223E | 38767 | |
| | Rx Error Packets Counter | 2 words | 32 bits | HEX | 0x2300 ~ 0x233E | 38961 ~ 39023 | Rx Error Packets Ex: port 1 Rx Packet Amount = 11223344 Received MODBUS response: 0xAB4130 Word 0 = 0x00AB Word 1 = 0x4130 |
| | Port 1 Rx Error Packets | 2 words | 32 bits | HEX | 0x2300 | 38961 | |
| | Port 2 Rx Error Packets | 2 words | 32 bits | HEX | 0x2302 | 38963 | |
| | Port 3 Rx Error Packets | 2 words | 32 bits | HEX | 0x2304 | 38965 | |
| | Port 4 Rx Error Packets | 2 words | 32 bits | HEX | 0x2306 | 38967 | |
| Port 5 Rx Error Packets | 2 words | 32 bits | HEX | 0x2308 | 38969 | | |

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|-------------|--------------------------|---------|---------|-----|--------|-------|--|
| | Port 6 Rx Error Packets | 2 words | 32 bits | HEX | 0x230A | 38971 | |
| Packet Info | Port 7 Rx Error Packets | 2 words | 32 bits | HEX | 0x230C | 38973 | |
| | Port 8 Rx Error Packets | 2 words | 32 bits | HEX | 0x230E | 38975 | |
| | Port 9 Rx Error Packets | 2 words | 32 bits | HEX | 0x2310 | 38977 | |
| | Port 10 Rx Error Packets | 2 words | 32 bits | HEX | 0x2312 | 38979 | |
| | Port 11 Rx Error Packets | 2 words | 32 bits | HEX | 0x2314 | 38981 | |
| | Port 12 Rx Error Packets | 2 words | 32 bits | HEX | 0x2316 | 38983 | |
| | Port 13 Rx Error Packets | 2 words | 32 bits | HEX | 0x2318 | 38985 | |
| | Port 14 Rx Error Packets | 2 words | 32 bits | HEX | 0x231A | 38987 | |
| | Port 15 Rx Error Packets | 2 words | 32 bits | HEX | 0x231C | 38989 | |
| | Port 16 Rx Error Packets | 2 words | 32 bits | HEX | 0x231E | 38991 | |
| | Port 17 Rx Error Packets | 2 words | 32 bits | HEX | 0x2320 | 38993 | |
| | Port 18 Rx Error Packets | 2 words | 32 bits | HEX | 0x2322 | 38995 | |
| | Port 19 Rx Error Packets | 2 words | 32 bits | HEX | 0x2324 | 38997 | |
| | Port 20 Rx Error Packets | 2 words | 32 bits | HEX | 0x2326 | 38999 | |
| Packet Info | Port 21 Rx Error Packets | 2 words | 32 bits | HEX | 0x2328 | 39001 | |
| | Port 22 Rx Error Packets | 2 words | 32 bits | HEX | 0x232A | 39003 | |

| | | | | | | |
|--------------------------|---------|---------|-----|--------|-------|--|
| Port 23 Rx Error Packets | 2 words | 32 bits | HEX | 0x232C | 39005 | |
| Port 24 Rx Error Packets | 2 words | 32 bits | HEX | 0x232E | 39007 | |
| Port 25 Rx Error Packets | 2 words | 32 bits | HEX | 0x2330 | 39009 | |
| Port 26 Rx Error Packets | 2 words | 32 bits | HEX | 0x2332 | 39011 | |
| Port 27 Rx Error Packets | 2 words | 32 bits | HEX | 0x2334 | 39013 | |
| Port 28 Rx Error Packets | 2 words | 32 bits | HEX | 0x2336 | 39015 | |
| Port 29 Rx Error Packets | 2 words | 32 bits | HEX | 0x2338 | 39017 | |
| Port 30 Rx Error Packets | 2 words | 32 bits | HEX | 0x233A | 39019 | |
| Port 31 Rx Error Packets | 2 words | 32 bits | HEX | 0x233C | 39021 | |
| Port 32 Rx Error Packets | 2 words | 32 bits | HEX | 0x233E | 39023 | |

Table 21. Modbus/TCP Mapping Table

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