

iES8G

Intelligent 8 Port Managed Gigabit Ethernet Switch

Product Overview



The iES8G is an intelligent 8 Port managed Gigabit Ethernet switch with up to 8 x 10/100/1000Base-T(X) RJ45 Auto MDI/MDIX, up to 6 x 10/100Base-T(X) RJ45 Auto MDI/MDIX, up to 4 x 100/1000Base-X SFP, up to 4 Combo 10/100/1000Base-T(X) RJ45 and 100/1000Base-X, and up to 2 X 1000SX /LX.

The iES8G provides redundancy support through functions such as STP/RSTP/MSTP assuring protection of all mission critical network applications. iES8G can be managed via the Web UI, iManage Software Suite, Telnet, and Console (CLI)/SSH v2.

The switch is made of IP-40 galvanized steel and has a wide operating temperature range from -40°C to +85°C, which is suitable for the harshest of environments without the use of fans.



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Features

Table 1. Features

| Feature | |
|--|--|
| Supports: | <ul style="list-style-type: none">• STP / RSTP / MSTP• LLDP (Link Layer Discovery Protocol)• Modbus TCP• VLAN Priority—supports priority-tagged frames to be received by specific IEDs• HTTPS / SSH v2• SNTP for synchronizing the switch's clock |
| IGMP v2 / v3 (IGMP Snooping) | |
| SNMP v1 / v2c / v3 | |
| RADIUS for 802.1x authentication TACACS+ for user login authentication | |
| Supports DDM (Digital Diagnostic Monitoring) function for SFP modules | |
| Multiple alarm notification methods | |
| Configurable by Web UI, Telnet, Console(CLI), iManage software running on Windows 10, NT /2000/ XP/2003/VISTA/7 | |
| DIN rail and panel mount | |



Product Specifications

Table 2. Technical Specification

| Description | Specification |
|--|---|
| 10/100/1000Base-T(X) RJ45 Auto MDI/MDIX | Up to 8 |
| 10/100Base-T(X) RJ45 Auto MDI/MDIX | Up to 6 |
| 100/1000Base-X SFP | Up to 4 |
| Combo 10/100/1000Base-T(X) RJ45 and 100/1000Base-X | Up to 4 |
| 1000SX /LX | Up to 2 |
| RS-232 Serial Console Port | RS-232 in RJ45 connector with console cable: 9600 bps, 8, N, 1 |
| Warning / Monitoring System | Relay output for fault event alarming 2 alarm warning methods for system events supported: <ul style="list-style-type: none"> • SYSLOG with server / client structure; recording and viewing events in the System Event Log • SMTP for notification via email Event selection per port |
| Alarm | Relay output to carry capacity of 1 A at 24 VDC |
| Technology | |
| MAC Table | 8K |
| Priority Queues | 4 |
| Processing | Store-and-Forward |
| Switch Properties | Switching latency: 7 μ s Switching bandwidth: 16 Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 32 Port rate limiting: User Defined |
| Jumbo frame | 9.6K |
| Security Features | <ul style="list-style-type: none"> • STP/RSTP/MSTP • RADIUS for 802.1x authentication • TACACS+ for user login authentication • Port based network access control (NAS) 802.1x • VLAN (802.1 Q) for segregation and securing network traffic enabled by GVRP • SNMPv3 authentication and privacy encryption • Management Security • Port security and MAC Blacklist • IP Guard • HTTPS / SSH v2 • Web and CLI authentication and authorization |



| Description | Specification |
|--|--|
| Software Features | <ul style="list-style-type: none">• Web or CLI based Management (RS-232 Serial Console or Telnet/SSH v2)• DHCP Server /Client / Relay• VLAN—Port-based (untagged) and 802.1Q (tagged)• Supports SNMPv1/v2/v3• Traffic Prioritization—QoS, Port-based Priority, COS/802.1p, TOS/ DSCP• Multicast traffic—IGMP Snooping (IGMP v2 / v3), MVR, Static Multicast Filtering• Warnings (SYSLOG and SMTP), Fault Alarm (power and ports failure), and Event Selection• Monitoring and Diagnostics—MAC Table and Port Statistics, Counters, and Monitoring, System Event Log, Traffic Monitoring, and Ping• SNTP for synchronizing of clocks over network |
| Network Redundancy | STP/ RSTP/ MSTP, Fast Recovery, Dual Port Recovery, and Ring |
| Physical Characteristics | |
| Enclosure | IP-40 Galvanized Steel |
| Dimensions (W x D x H) for 8G | 101.6 (W) x 125.2 (D) x 162.4(H) mm (4.0 x 4.93 x 6.39 inches) DIN rail 101.6 (W) x 120.8 (D) x 184.2(H) mm (4.0 x 4.76 x 7.25 inches) Panel mount 1 101.6 (W) x 125.2 (D) x 184.2(H) mm (4.36 x 4.93 x 7.25 inches) Panel mount 2 |
| Dimensions (W x D x H) for 8G-S | 65.13 (W) x 160.5 (D) x 191.3 (H) mm (2.56 x 6.32 x 7.53 inches) DIN rail 114.3 (W) x 156.5 (D) x 203.2 (H) mm (4.50 x 6.16 x 8.0 inches) Panel mount |
| Weight (g) | ~1 kg (8G-S); ~1.6 kg (8G) |
| Power | |
| Input Power | Dual Input 10-48VDC, or Single Input 36-75VDC with Single 10-48VDC Backup, or Single Input 110-370VDC or 90-264VAC with Single 10-48VDC Backup |
| Power Consumption (Typ.) | 22.8 Watts |
| Overload Current Protection | Present |
| Reverse Polarity Protection | Internal |

**Table 3. Compliance Specifications**

| Type | Standards |
|----------------------------------|--|
| Electromagnetic Emissions | FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4) |
| Electromagnetic Immunity | EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 |
| Safety Standards | EN60950-1 |
| Operating Environment | -40°C to +85°C (-40° to 185°F) (no fans) EN 60068-2-21 |
| Storage Environment | -40°C to +85°C (-40° to 185°F) EN 60068-2-14 |
| Operating Humidity | 5% to 95% Non-condensing EN 60068-2-30 |
| Shock | IEC60068-2-27 |
| Free Fall | IEC60068-2-32 |
| Vibration | IEC60068-2-6 |
| Warranty | 5 years |

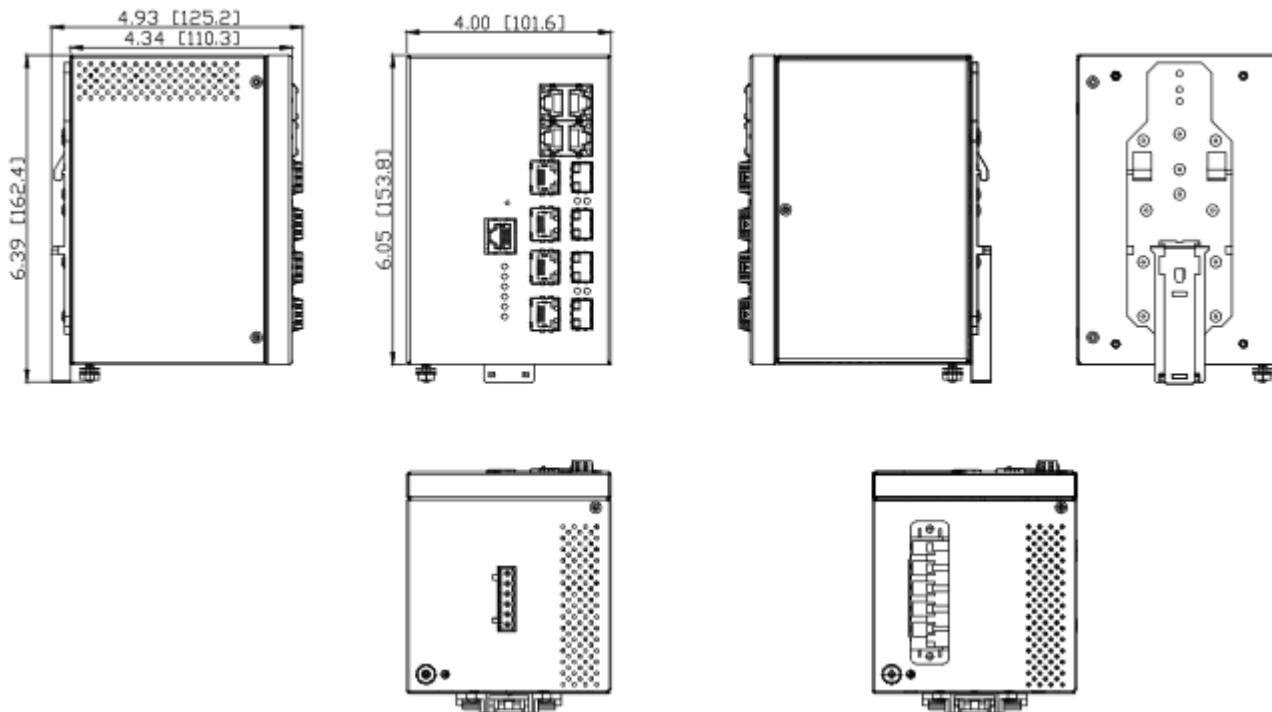
Table 4. Standards and Management

| Description | Specification |
|-----------------------|---|
| IEEE Standards | <p>IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X IEEE 802.3x for Flow control IEEE 802.1D Spanning Tree Protocol IEEE 802.1w -2001 Rapid Spanning Tree Protocol (RSTP) IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP:2004) IEEE 802.1X-2010 Port Based Network Access Control IEEE 802.1AB – 2016 Station and Media Access Connectivity discovery (LLDP)</p> |
| RFC Compliance | <ul style="list-style-type: none"> • RFC 768: UDP • RFC 783: TFTP • RFC 791: IPv4 • RFC 792: ICMP • RFC 793: TCP • RFC 854: Telnet • RFC 959: FTP • RFC 1157: SNMP • RFC 1901,1902-1907 SNMPv2 • RFC 2273-2275: SNMPv3 • RFC 2571: SNMP Management • RFC 1166: IP Addresses • RFC 1643: Ethernet Interface MIB • RFC 2068: HTTP • RFC 2131, 2132: DHCP • RFC 2236: IGMP v2 • RFC 2817 Upgrading to TLS Within HTTP/1.1 • RFC 2818 HTTP Over TLS • RFC 3376: IGMP v3 • RFC 2474: DiffServ Precedence • RFC 3046: DHCP Relay Agent Information Option • RFC 3580: 802.1x RADIUS • RFC draft-ietf-opsawg-tacacs-09 -TACACS+ |

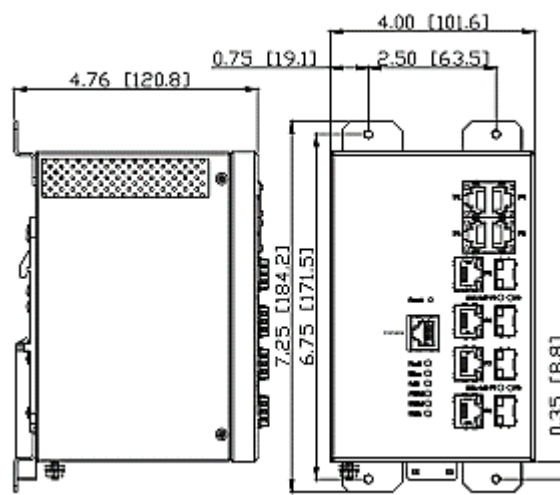


Dimensions

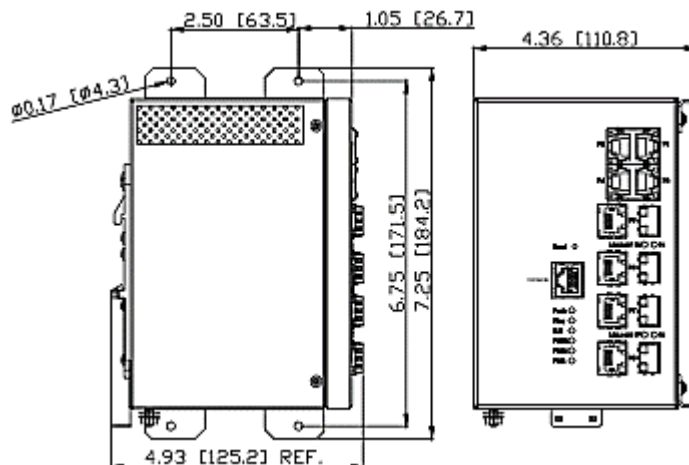
All dimensions are shown in inches.



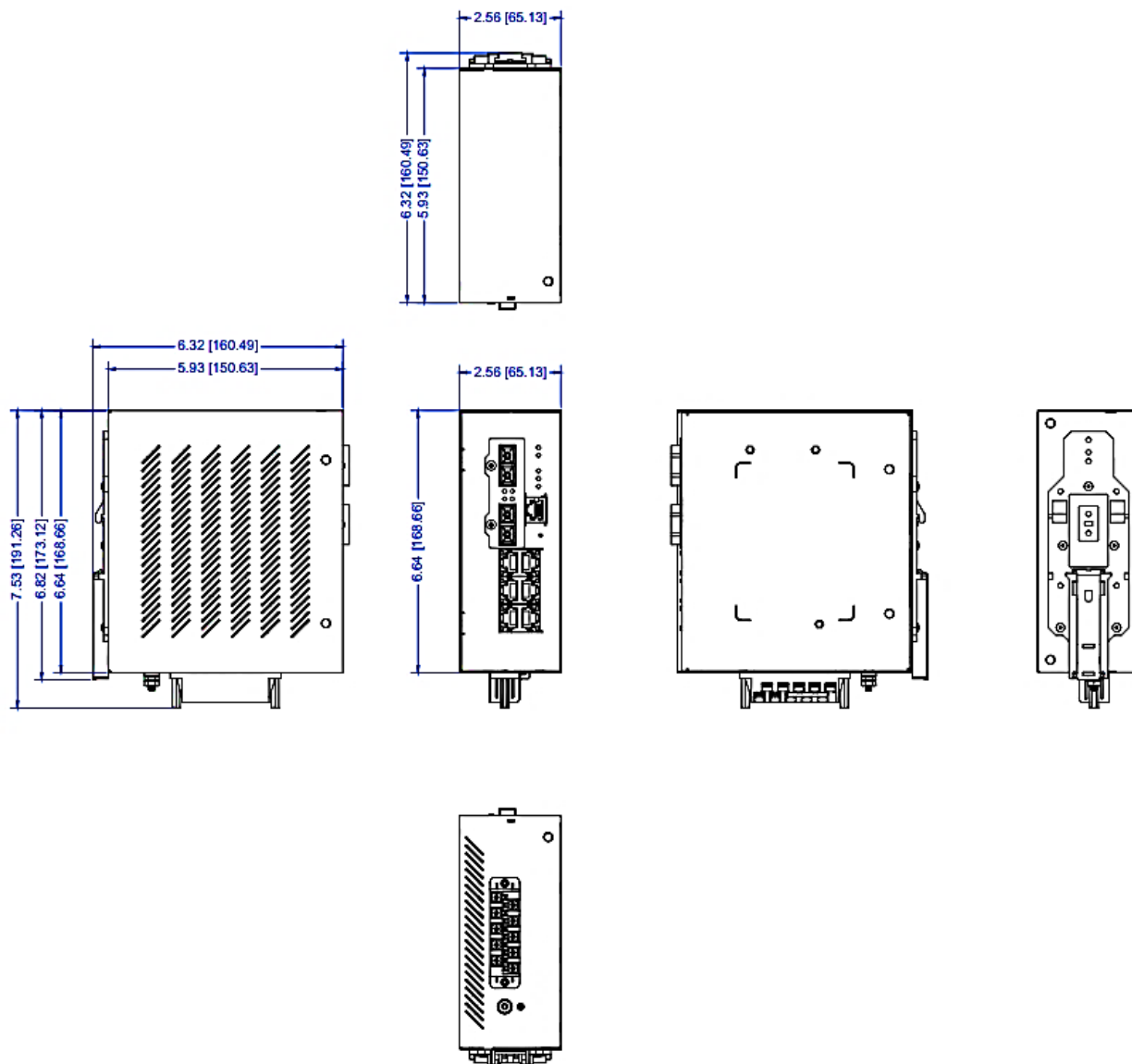
iES8G with a DIN mount bracket



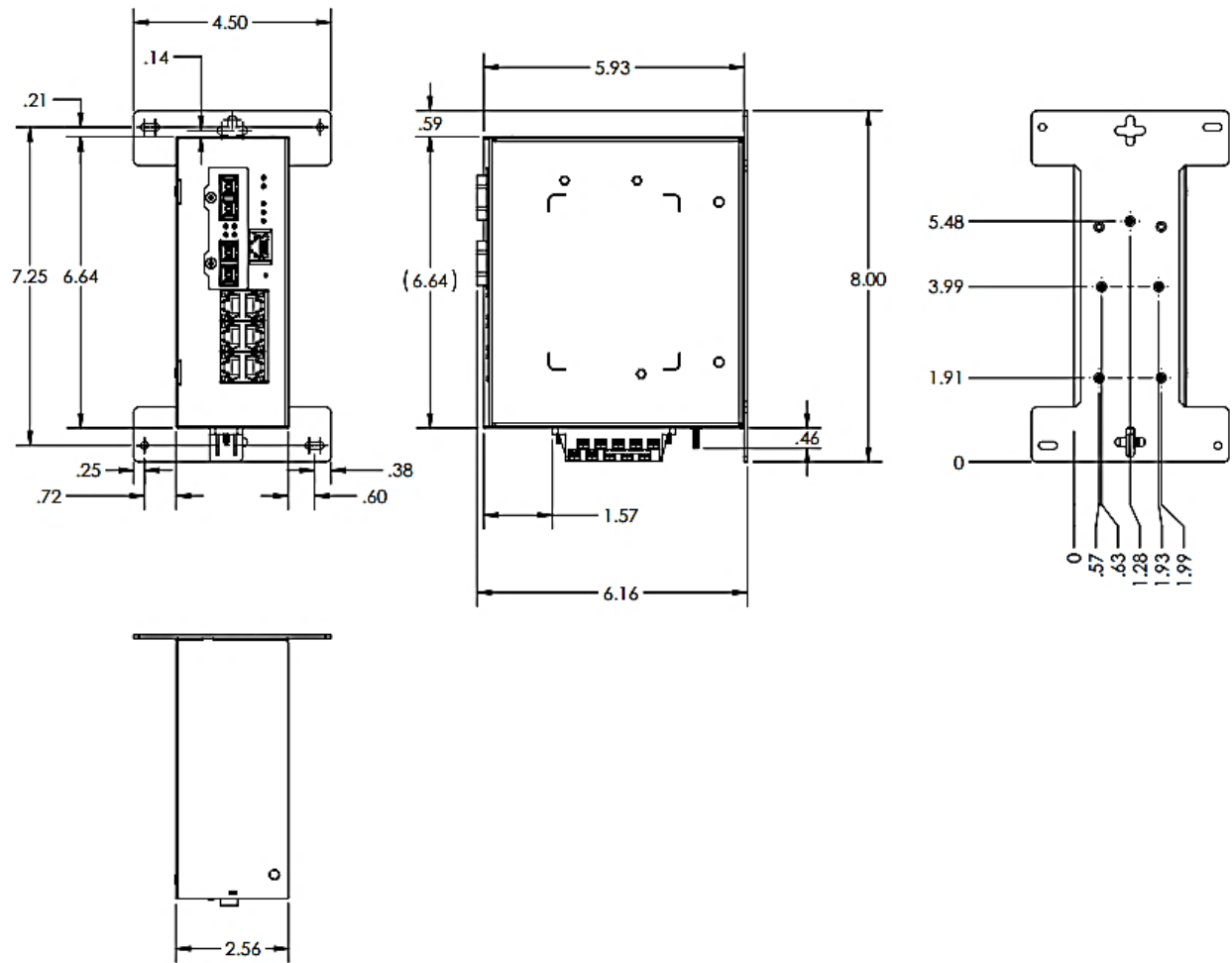
iES8G with a panel mount bracket installed at rear



iES8G with a panel mount bracket installed at side



iES8G-S with a DIN mount bracket



iES8G-S with a panel mount bracket



Ordering Information

| Base | Power Supply | Mount | Ethernet Port 1-4* | Ethernet Port 5 & 6 | Ethernet Port 7 & 8**** | Conformal Coating | Description |
|---------|--------------|-------|--------------------|---------------------|-------------------------|-------------------|--|
| iES8G | HV | D | 4GRJ45 | 2GSFP | 2GSFP | | |
| iES8G | | | | | | | Core assembly and packaging |
| iES8G-S | | | | | | | Slim Line Core assembly and packaging |
| | LV | | | | | | Dual Input 10-48VDC |
| | MV | | | | | | Single Input 36-75VDC with Single 10-48VDC Backup |
| | HV | | | | | | Single Input 110-370VDC or 90-264VAC with Single 10-48VDC Backup |
| | | D | | | | | DIN Rail Mounting |
| | | P | | | | | Panel Mounting |
| | | N | | | | | No Mounting Hardware |
| | | | 4GRJ45 | | | | 4 X 10/100/1000Base-T(X) RJ45 |
| | | | 6RJ45 | | | | 6 X 10/100Base-T(X) RJ45 |
| | | | | | XX | | None |
| | | | | 2GRJ45 | 2GRJ45 | | 2 X 10/100/1000Base-T(X) RJ45 |
| | | | | 2GSFP | 2GSFP | | 2 X 100/1000Base-X SFP |
| | | | | 2GCX | 2GCX | | Combo*** 2 X 10/100/1000Base-T(X) RJ45 and 2 X 100/1000Base-X |
| | | | | | 2GMMSC | | 2 X 1000SX Multimode SC, 850nm, 550m |
| | | | | | 2GMMST | | 2 X 1000SX Multimode ST, 850nm, 550m |
| | | | | | 2GSMSC10 | | 2 X 1000LX Singlemode SC, 1310nm, 10km |
| | | | | | 2GSMST10 | | 2 X 1000LX Singlemode ST, 1310nm, 10km |
| | | | | | 2GSMSC40 | | 2 X 1000LX Singlemode SC, 1310nm, 40km |
| | | | | | 2GSMST40 | | 2 X 1000LX Singlemode ST, 1310nm, 40km |
| | | | | | 2GSMSC70 | | 2 X 1000LX Singlemode SC, 1550nm, 70km |
| | | | | | 2GSMST70 | | 2 X 1000LX Singlemode ST, 1550nm, 70km |
| | | | | | | C1 | Conformal Coating |

*iES8G is available only with 4GRJ45, iES8G-S is available only with 6RJ45. Ports 5-6 are not available when selecting option 6RJ45 as used in iES8G-S.

*** Combo of the 2 ports is available (Combo 2GCX for ports 5-6 and 7-8), only one type can be used for ports 5-6 and 7-8.

****iES8G offers RJ45 or SFP ports only (Ports 5-8); only iES8G-S offers an option of 1000SX/LX (SC/ST connectors) (for ports 7&8), and then 6RJ45 is used for ports 1-6.

Example Order Code iES8G-HV-D-4GRJ45-2GSFP-2GSFP-iES20G-C1
Description:

8 Port Gigabit Ethernet Switch—(Power Supply) Dual Input 10-48VDC, (Mount) DIN Rail Mounting, (Ethernet Port 1-4) 4 X 10/100/1000Base-T(X) RJ45, (Ethernet Port 5&6) - 2 X 100/1000Base, (Ethernet Port 7&8) 2 X 100/1000Base-X, C1 - added for conformal coating.