# COMMANDO Scout E1000 Series Unmanaged Switches

# Data Sheet

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# Product Overview

COMMANDO Scout E1000 Series Unmanaged Switches consists of switches which are ideal for small to medium-sized businesses, Internet cafes, hotels, schools, and suitable for surveillance. They are easy to install and maintain and provide rich services, helping customers build secure, reliable, and high-performance networks. It is an economical way for SOHO and Small-to-Medium Businesses (SMB) to take advantage of Gigabit Ethernet speeds with copper/fiber ports as well as PoE/PoE+ with power budget up to 600W capability while reducing energy consumption and minimizing noise. This Series switches are available in 8 to 48 Gigabit Ethernet ports or 8 to 48 Fast Ethernet Ports with 2/4 fixed 1GE copper/ 1G Fiber Uplinks having enclosure type desktop, rack/wall mountable-1U depending on switch model. Designed for operational simplicity to lower total cost of ownership, they enable scalable access layer office and home operations.

It can be quickly set up with plug and play with Zero Touch Provisioning. It is unmanaged SOHO (Small Office/Home Office) Switches, are designed for Small Business Networks, unmanaged Switches empower your growing business instant flexibility with copper as well as fiber ports connectivity along with PoE/PoE+ reliable performance at a very affordable cost. This switch provides Gigabit Ethernet high-speed network connectivity with duplex and speed auto-negotiation for optimal speed detection through RJ45 Category 5, 5e or 6 cables and supports up to 250m cable distance on copper ports and Up to 20Km on fiber ports.

It can identify and determine the correct transmission speed and half/full duplex mode of the attached devices. It also supports standard Auto-MDI/MDI-X that can detect the type of connection to any Ethernet device without requiring special straight or crossover cables, Store-and-Forward forwarding scheme to ensure low latency and high data integrity.

It supports Energy Efficient Ethernet (EEE), which enables the switch to enter a power-saving mode when traffic is light. Switches can smartly automatically adjust the PoE/PoE+ power output for transmissions based on the cable length for PoE/PoE+ devices connected. It can also set any ports that are not transmitting traffic to sleep mode.

# Product Highlights

- 8 to 48 x 10/100Mbps or 10/100/1000Mbps Ethernet Ports along with fixed 1G fiber/1G copper Uplinks and PoE/PoE+ and non PoE Models.

- Extra 2/4 Ports slots with separate, fixed 1G Fiber/ 1GE Copper Switchports or Uplinks.

- Power over Ethernet (PoE) / Power over Ethernet plus (PoE+) models to provide power on all ports to IEEE 802.3af and IEEE 802.3at (15.4W, 30W) capable devices including Wireless AP, Bridges, IoT etc. according to the power budget Up to 600 W along with backward compatibility.

- All ports have PoE/PoE+ capability and 30W Max Per port.

- PD detection will automatically detect and provide required power for your PoE/PoE+ devices.

- Automatically adjust the PoE/PoE+ power for connected PoE devices based on the cable length and supports up to 250m of copper cable length.

- Backplane Bandwidth: 5.6Gbps-104Gbps

- MAC address Table: 8000 entries

- MAC Address Auto-Learning and Auto-Aging

- Easy Installation, Plug-and-play installation with no configuration required

- Support Store-and-forward Switching

- Enclosure Type Desktop, Rack/Wall mountable - 1U.

- Surge protection ±4 kV

- All ports support jumbo frame of size 10000 bytes transmission.

- All 8 to 48 ports support auto-negotiation and auto MDI/MDIX.

- All ports capable of Gigabit Ethernet connections and provide full speed of data transferring with (Auto-Negotiation/Auto MDI/MDIX) model based.

- Plug and Play design simplifies installation with self-adaption.

- Desktop as well standard rack mountable option along with fan or fan-less option, silent design with Small form-factor. Perfect for noise sensitive environments.

- Energy-Saving by Energy Efficient Ethernet (EEE), which enables the switch to enter a power-saving mode when traffic is light.

- Automatically adjust the PoE/PoE+ power for connected PoE devices based on the cable length and supports up to 250m of cable length.

- With Zero Touch Provisioning: Plug and play and no setup.

- Affordable, Easy-to-Use Switches for Small Business Networks, with Zero Configuration Required

- Comes with one-year default warranty – optionally extendable up to 3 years.

# Features and Benefits

### Compact Design with Flexibility of additional ports

The switches provide additional deployment flexibility, fiber connectivity for easy expansion of your networks up to 20Km with fiber connectivity. So, you can directly connect to a high-performance storage server or deploy a long-distance uplink to another switch.

### Longer Distance Coverage

State of art quality switches that can serve real time high-speed performance which covers longer physical distance up to 250 meters with copper pairs compared to other brands.

### Easy to Use

COMMANDO Scout E1000 Series Switches are easy to use and manage. All switches are Plug-and-Play devices that requires zero configuration, so setup is simple and hassle-free. Auto MDI/MDI-X crossover on all ports eliminate the need for crossover cables or uplink ports. Auto-Negotiation on each port senses the link speed of a network device (either 10, 100 or 1000Mbps) and smartly adjusts for compatibility and optimal performance. Its compact size makes it ideal for desktops as well as rackmount with limited space. Dynamic LED lights provide real-time work status display and basic fault diagnosis.

### PoE/PoE+ Capabilities

Scout E1000 Series Unmanaged Switches are high power switches and support up to 600W (PoE/PoE+) Power Budget. This Series switches smartly adjust IEEE802.3af / IEEE802.3at PoE/PoE+ (up to 30 Watts per port). All ports in PoE/PoE+ capable switch allows Power-over-Ethernet (PoE /PoE+) to connect and power PoE/PoE+ capable cameras, Wireless access points, VoIP phones, IoT and all PoE/PoE+ capable devices using just Ethernet cabling.

### Auto MDIX Capabilities

Auto sensing/Auto PoE/PoE+ 10/100/1000 ports with auto MDIX capabilities which also removes speed and duplex mismatches automatically as well as covers larger physical distance with copper pairs compared to other brands best switches.

### Compact and Silent Performance

It comes with one or two fans or fan-less models with Small form-factor, compact PoE/PoE+ switch operates quietly, making it ideal for use in virtually any room or office. Perfect for noise sensitive environments. Fan based Switches have Temperature and load based fan speed control combines accurate monitoring with minimized system acoustic noise. The Fan based switches also feature built-in smart fans that monitor and detect temperature changes, adjusting the fan speed for maximum efficiency. At lower temperatures, the fans run at a lower speed, reducing both the power consumption and noise output of the switch.

### Compact design with flexibility of additional ports

It Provides additional deployment flexibility, fiber connectivity with separate extra flexible ports or combo ports options for easy expansion of your networks. So, you can directly connect to a high-performance storage server or deploy a long-distance uplink to another switch.

### Support uninterrupted critical network infrastructure

It has AC input power which protect from power surges through their inline power supply automatically and have in build Surge protection of ±4KV. With this feature protect on cost and the impact to your business by losing these network devices and thus the users/servers connected to them.

### Auto MDIX Capabilities

Auto sensing/Auto PoE/PoE+ 10/100/1000Mbps ports with auto MDIX capabilities which also removes speed and duplex mismatches automatically as well as covers larger physical distance with copper pairs compared to other brands best switches.

## Cost Efficient

State of art quality product that can serve on real time high-speed Performance with AC input power which covers larger physical distance with copper pairs compared to other brands best switches and are highly reliable, conformance to international open standards, durable, serviceable, aesthetics, perceived quality, enhanced performance with larger range with copper cables up to 250m and usability leads to value to money.

## Green Technology

It features the energy-efficient Ethernet that can save power. It automatically adjusts power consumption according to the link status to limit the carbon footprint of your network. It also complies with RoHS, prohibiting the use of certain hazardous materials. Besides that most of the packaging material can be recycled and reused.

# Hardware

COMMANDO Scout E1000 Series Unmanaged Switches supports IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3z Gigabit Ethernet, IEEE 802.3x Flow Control, IEEE 802.3af/at. Supported Auto-MDIX function automatically identify straight forward cable and cross-over cable. Support port auto-negotiation function (Automatically negotiate transmission rate and Duplex modes). Support the Energy Efficient Ethernet (IEEE 802.3az) standard, which reduces energy consumption by monitoring the amount of traffic on an active link and putting the link into a sleep state during quiet periods.

## Solid performance with non-blocking architecture

- CPU Dual Core having frequency 500 MHz along with packet Buffer memory of up to 4.1MB.

- All ports capable of Gigabit Ethernet speed. Full speed of data transferring with (Auto-Negotiation/Auto MDI/MDIX).

- Solid performance with non-blocking architecture, 8000 entries MAC Address Table with 4-way hashing algorithm.

- Supports Jumbo frames having maximum packet length up to 10000 bytes.

- 2-hash algorithm selection for L2 table searching/learning with Aging timer range from 0.2s to 1600000s.

- Switching Capacity: up to 104Gbps

- Forwarding Capacity: Up to 77.38Mpps

- Store-and-forward Switching Scheme.

### Physical Ports and Networking Interfaces

- Up to 48 x 10/100 or 10/100/1000 Mbps Rj45 Ethernet Ports with combo 8CF, 4CF as well separate ports 2 GE (RJ-45) and 2 SFP. Extra separate 2/4 Ports with flexible 1G Fiber/ 1GE Copper Switchports /Uplinks.

- LED Indicators: Power, Link/Act, PoE Max.

### IEEE 802.3af/at Compliant Power over Ethernet

- Various power budget options like 150W, 260W, 450W and 600W with 30W Max Per port (PoE/PoE+). POE power supply transmission is more reliable due to design of robust network transformer which uses high current. All PoE/PoE+ ports are IEEE 802.3af-compliant PoE, IEEE802.3at-compliant PoE+. Each port delivers 15.4 W PoE, 30 W PoE+ power. PD detection will automatically detect and provide required power for your PoE/PoE+ devices.

### Extra Long operational life

- High Quality PCB Circuit Board and PCB Surface Treatment Using Gold Sinking Process.

- Support temperature range 0° C to 55° C

- Surge protection up to ±4KV to designed to automatically protect Switches from surge events by limiting transient voltages and diverting surge currents.

- Long life electrolytic capacitance to increase the operational life of switches. RJ45 Gold plated with 3U thickness.

- Rack and Wall mount design that enables to mounts in an EIA Standard 19-inch telco rack or equipment cabinet along with Rack-mounting kit available with device. Which enables horizontal surface mounting, wall mounting and also having durable robust metal body.

## Green Energy and Noise-free Operation

- Comply with IEEE 802.3az (Energy-Efficient Ethernet) standard, reduces power consumption up to 58% and reduce the noise pollution. Energy Efficient Ethernet (EEE) on the RJ-45 ports and low-power operations for industry best-in-class power management and power consumption capabilities. The ports support reduced power modes so that ports not in use can move into a lower power utilization state.

- Automatic Temperature Controlled Fans using Temperature Sensor. Small form-factor, fan-less as well fan design for silent operation. Perfect for noise sensitive environments.

- Temperature Control Fan to optimize cooling and noise with bilateral heat dissipation.

## Ethernet Protocols

Supports wide range of IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3z Gigabit Ethernet, IEEE 802.3x Flow Control, 802.1p priority, Energy Efficient Ethernet, IEEE802.3af, Power over Ethernet, IEEE802.3at, Power over Ethernet plus.

## Enterprise High reliability design and high quality product

- Very high Quality as for all Mean Time Before Failure of system, MTBF >2,00,000 hours

- Stability: 64-bit packet, time delay < 10us, packet loss rate: 0

- Restorability of Network shaking or device breakdown, restart(recovery) time < 60sec.

- RoHS Compliant with most of the packaging material can be recycled and reused.

# Specifications

COMMANDO Scout E1000 Series Smart Switches supports IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, IEEE 802.3z Gigabit Ethernet, IEEE 802.3x Flow Control, IEEE 802.3af/at. Supported Auto-MDIX function automatically identifies straight forward cable and cross-over cable. Support port auto-negotiation function (Automatically negotiate transmission rate and Duplex modes). Support the Energy Efficient Ethernet (IEEE 802.3az) standard, which reduces energy consumption by monitoring the amount of traffic on an active link and putting the link into a sleep state during quiet periods.

It supports 8K entries in the 4-way hash L2 table for MAC address learning and searching also has two hash algorithms for IVL (Independent VLAN Learning), SVL (Shared VLAN Learning), and IVL/SVL (both Independent and Shared VLAN Learning) for flexible network topology architecture. It also has per-port L2 storm filtering control mechanism which suppresses the flow rate of some specific packets for Unknown Unicast Storm, Unicast Storm, Unknown Multicast Storm, Multicast Storm, and Broadcast Storm. IEEE 802.3az Energy Efficient Ethernet (EEE) for 100Base-TX in full duplex operation and supports 10Base-T for 10Base-T in full/half duplex. The Energy Efficient Ethernet (EEE) operational mode combines the IEEE 802.3 Media Access Control (MAC) Sub-layer with a family of Physical Layers defined to support operation in Low Power Idle (LPI) Mode. When Low Power Idle Mode is enabled, systems on both sides of the link can disable portions of the functionality and save power during periods of low link utilization. EEE operational mode supports IEEE 802.3 MAC operation at 1000Mbps. For 100Mbps operation, the 100Base-TX PHY is supported interoperable with legacy 10Base-T PHYs over 100m of Class-D (Category 5) or better cabling. It supports IEEE 802.3x full duplex flow control. If one port's received frame buffer is over the pause threshold, a pause-on frame is sent to indicate to the link partner to stop the transmission. When the port's received frame buffer drops below the pause threshold, it sends a pause-off frame. Auto MDI/MDI-X adjusts automatically for straight-through or crossover cables on all 10/100/1000 ports. Loop protection, If the switch detects a

loop, it disables the source port from forwarding data packets originating from the switch to avoid broadcast storms. SFP fiber uplinks provides greater distance connectivity using Gigabit fiber uplinks. The switch provides an estimated cumulative energy savings due to green Ethernet features being auto enabled along with power budget up to 600W.

Table 1. Technical Specifications

| E1000 Switch Parameter | Specification |
|---|---|
| Packet Buffer Memory | Up to 4.1 MB |
| Switching Method | Store and Forward |
| Switching Capacity | 5.6Gbps to 104Gbps |
| MAC Address Table Size | 8000 entries |
| Maximum packet length | 10000byte |
| Operation Temperature | 0° to 55°C |
| Storage Temperature | -20° to 70°C |
| Operation Humidity (relative, noncondensing) | 10% to 90% |
| Storage humidity (relative, noncondensing) | 5% to 90% |
| Input Power Supply | AC: 100~240V 50/60Hz<br>AC: 180 to 240V AC 50/60Hz |
| LED Indicator | Link/Act，PoE, PoE MAX，Power |
| Energy Saving | Comply with "EEE" Energy Efficient Ethernet (IEEE 802.3az) |
| Surge protection (kV) | ±4 kV |
| Rack-mountable | Desktop, Rack/Wall mountable depending on model |
| Fan (Number) | Fan-less, up to 3 Fan depending on model |

COMMANDO Scout E1000 Series Unmanaged Switches hardware supports L2 VLAN function with IVL, SVL, and IVL/SVL with 2-hash algorithm selection for L2 table searching/learning along with Aging timer range from 0.2s to 1600000s. IEEE 802.1Q VLAN with 4K-entry VLAN Table with limited learned L2 MAC entry on each port and each VLAN. It has 8K entries in the 4-way hash L2 table for MAC address learning and searching also has two hash algorithms for IVL (Independent VLAN Learning), SVL (Shared VLAN Learning), and IVL/SVL (both Independent and Shared VLAN Learning) for flexible network topology architecture. Independent 512-entry L2/IP Multicast table for multicast function. Supports Reserved Multicast Addresses processing.

It also has per-port L2 storm filtering control mechanism which suppresses the flow rate of some specific packets for Unknown Unicast Storm, Unicast Storm, Unknown Multicast Storm, Multicast Storm, and Broadcast Storm. IEEE 802.3az Energy Efficient Ethernet (EEE) for 100Base-TX in full duplex operation and supports 10Base-Te for 10Base-T in full/half duplex. The Energy Efficient Ethernet (EEE) operational mode combines the IEEE 802.3 Media Access Control (MAC) Sub-layer with a family of Physical Layers defined to support operation in Low Power Idle (LPI) Mode. When Low Power Idle Mode is enabled, systems on both sides of the link can disable portions of the functionality and save power during periods of low link utilization. EEE operational mode supports IEEE 802.3 MAC operation at 100Mbps. For 100Mbps operation, the 100Base-TX PHY is supported interoperable with legacy 10Base-T PHYs over 100m of Class-D (Category 5) or better cabling.

It Supports broadcast, multicast, unknown- multicast, and unknown-unicast packet suppression control, IEEE 802.1x, IEEE 802.3az Energy Efficient Ethernet (EEE), IEEE 802.3x full duplex flow control. If one port's received frame buffer is over the pause threshold, a pause-on frame is sent to indicate to the link partner to stop the transmission. When the port's received frame buffer drops below the pause threshold, it sends a pause-off frame. It has Auto MDI/MDI-X, to adjusts automatically for straight-through or crossover cables on all 10/100/1000Mbps speed ports. Loop protection, If the switch detects a loop, it disables the source port from forwarding data packets originating from the switch to avoid broadcast storms. SFP fiber uplinks provides greater distance connectivity using Gigabit fiber uplinks. The switch provides an

estimated cumulative energy savings due to green Ethernet features being auto enabled along with power budget up to 600W.

Table 2. Hardware Specifications

| Product Code | Ports | Main Interface | Uplink Interfaces |
|---|---|---|---|
| E1000-16G+4CF | 16 x 10/100/1000Mbps Ethernet ports 2 x 10/100/1000Mbps Ethernet + 2 x 1G SFP Uplink ports | 16 GE | 2GE and 2SFP |
| E1000-16P+4CF | 16 x 10/100Mbps Ethernet PoE+ ports 2 x 10/100/1000Mbps Ethernet/2 x 1G SFP Combo Uplink ports | 16 FE | 2GE or 2SFP |
| E1000-24P+4CF | 24 x 10/100Mbps Ethernet PoE+ ports 2 x 10/100/1000Mbps Ethernet/2 x 1G SFP Combo Uplink ports | 24 FE | 2GE or 2SFP |
| E1000-8GP+4CF | 8 x 10/100/1000Mbps Ethernet PoE+ ports 2 x 10/100/1000Mbps Ethernet + 2 x 1G SFP Uplink ports | 8 GE | 2GE and 2SFP |
| E1000-16GP+4CF | 16 x 10/100/1000Mbps Ethernet PoE+ ports 2 x 10/100/1000Mbps Ethernet + 2 x 1G SFP Uplink ports | 16 GE | 2GE and 2SFP |
| E1000-24GP+4CF | 24 x 10/100/1000Mbps Ethernet PoE+ ports 2 x 10/100/1000Mbps Ethernet + 2 x 1G SFP Uplink ports | 24 GE | 2GE and 2SFP |

Table 3.  Enclosure, Fan, Power Specifications

| Product Code | Enclosure Type | Fan (Number) | Power Supply |
|---|---|---|---|
| E1000-16G+4CF | Desktop, Rack/Wall mountable | Fan-less | AC: 100~240V 50/60Hz |
| E1000-16P+4CF | Desktop, Rack/Wall mountable | 1 | AC: 180~240V 50/60Hz |
| E1000-24P+4CF | Rack/Wall mountable - 1U | 1 | AC: 180~240V 50/60Hz |
| E1000-8GP+4CF | Desktop | Fan-less | AC: 180~240V 50/60Hz |
| E1000-16GP+4CF | Desktop, Rack/Wall mountable | 1 | AC: 180~240V 50/60Hz |
| E1000-24GP+4CF | Rack/Wall mountable - 1U | 1 | AC: 180~240V 50/60Hz |

IEEE 802.3X Flow Control Provides a flow throttling mechanism propagated through the network to prevent packet loss at a congested node. IEEE 802.3 af/at Power over Ethernet (PoE/PoE+) Provides up to 30 W per port having power budget up to 600W, which allows support of the latest PoE/PoE+ capable devices such as Video IP phones, wireless access points, and advanced pan/tilt/zoom security cameras, as well as any 15.4 W IEEE 802.3af-compliant end device up to 250m cable length. This ensures that cost of additional electrical cabling and circuits reduced to zero. PoE/ PoE+ availability on all ports. Auto-PoE power configuration means switch automatically assigns the required power to a port for a PD device.

**Table 4.    Power Specifications**

| PRODUCT CODE | Power Budget | Max no. of PoE+ (IEEE 802.3at) Ports | Max no. of PoE (IEEE 802.3af) Ports |
|---|---|---|---|
| E1000-16G+4CF | 24W | - | - |
| E1000-16P+4CF | 260W | 8 ports up to 30W | All ports up to 15.4W |
| E1000-24P+4CF | 450W | 12 ports up to 30W | All ports up to 15.4W |
| E1000-8GP+4CF | 150W | 4 ports up to 30W | All ports up to 15.4W |
| E1000-16GP+4CF | 260W | 8 ports up to 30W | All ports up to 15.4W |
| E1000-24GP+4CF | 450W | 12 ports up to 30W | All ports up to 15.4W |

The switching capacity indicates the total data exchange capability of the switch, in Gbps. MTBF is a basic measure of a system's reliability. This Series Switch is having higher MTBF, means very reliable product.

**Table 5. Bandwidth Specifications**

| Model Number | Switching Capacity （Gbps） | Forwarding rate （Mpps） | MTBF (hours) |
|---|---|---|---|
| E1000-16G+4CF | 40 | 29.76 | 249856 |
| E1000-16P+4CF | 7.2 | 5.36 | 405023 |
| E1000-24P+4CF | 8.8 | 6.55 | 415632 |
| E1000-8GP+4CF | 24 | 17.85 | 245461 |
| E1000-16GP+4CF | 40 | 29.76 | 384902 |
| E1000-24GP+4CF | 56 | 41.66 | 298416 |

Table 6.  LED Indication

| LED Indication | LED Status |
|---|---|
| Power | **Green OFF:** No power on the switch.<br>**Green ON:** The switch powered on |
| Link/Act | **LINK/ACT bi-color LED:**<br>**OFF:** Port disconnected or link fail.<br>**Green ON:** 1000Mbps connected.<br>**Amber ON:** 10/100Mbps connected.<br>**Green Flashing:** 1000Mbps connected and Data in transit<br>**Amber Flashing:** 10/100Mbps connected and Data in transit |
| System | **Green OFF:** The system is starting, please wait<br>**Green ON:** The system is up and running |
| PoE | **OFF:** PoE/PoE+ power is not provided on port<br>**Blue ON:** PoE/PoE+ power is provided on port |
| PoE MAX | **PoE MAX OFF:** PoE Power budget is available in switch<br>**Red ON:** PoE Power budget is 95% |

Table 7.  Maximum Cable Lengths

| Connection Cable Type | Category and Speed | Maximum Cable Distance Supported |
|---|---|---|
| Unshielded Twisted Pair cable | **10/100Base-TX:** UTP category 5/5e/6 cables (Maximum 100m)<br>**1000Base-T:** UTP Category 5/5e/6 cable (Maximum 100m) | 100M |
| Shielded Twisted Pair cable | **10/100Base-TX:** STP category 5/5e/6 cables (Maximum 250m)<br>**1000Base-T:** UTP Category 5/5e/6 cable (Maximum 100m) | 250M/100M |
| Optical Fiber Cable | 550M~20KM Depending on SFP | 20KM |

## Environmental properties specifications

Environmental properties include those physical properties which relate to the environment. Moisture, heat conductivity, the physical effect of heat, Altitude, Humidity and electrical properties depend on the environmental conditions surrounding the device.

**Table 8. Environmental properties**

| Property | Description |
|---|---|
| Operation Temperature | 0°C to 55°C |
| Operating temperature and altitudes: | 0°C to +55°C, up to 5000 feet (1500m)<br>0°C to +55°C, up to 10,000 feet (3000m)<br>Minimum ambient temperature for cold start is 32°F (0°C)<br>Short-term* exceptional conditions:<br>0°C to +55°C, up to 5000 feet (1500m)<br>0°C to +50°C, up to 10,000 feet (3000m)<br>0°C to +55°C, at sea level with single fan failure<br>Not more than following in one-year period:<br>96 consecutive hours, or 360 hours total, or 15 days |
| Storage Temperature | -20° to 70°C |
| Operating Humidity (relative, noncondensing) | 10% to 90% (Non-condensing) |
| Storage Humidity | 5% to 90%(Non-condensing) |

## Weight and Dimension specifications

It offers best in class from package dimensions to weight, destination, value, and shipment type. They are suitable for Industry standard Rack/Wall mounting. Industry Standard Rack/Wall mounted describes a unit of electronic equipment

that is housed in a metal framework called an equipment rack. Usually, an equipment rack contains multiple "bays," each designed to hold a unit of equipment of standard dimensions.

Table 9. Weight and Dimension

| Product Code | Weight and Dimension | | |
|---|---|---|---|
| | Kg | Centimeters (H x D x W) | Inches (H x D x W) |
| E1000-16G+4CF | 3.00 | 4.4 x 44.3 x 23.0 | 1.7 x 17.4 x 9.1 |
| E1000-16P+4CF | 3.32 | 4.4 x 44.3 x 23.0 | 1.7 x 17.4 x 9.1 |
| E1000-24P+4CF | 3.54 | 4.4 x 44.3 x 23.0 | 1.7 x 17.4 x 9.1 |
| E1000-8GP+4CF | 2.80 | 4.4 x 29.0 x 20.0 | 1.7 x 11.4 x 7.9 |
| E1000-16GP+4CF | 3.58 | 4.4 x 44.3 x 23.0 | 1.7 x 17.4 x 9.1 |
| E1000-24GP+4CF | 3.74 | 4.4 x 44.3 x 23.0 | 1.7 x 17.4 x 9.1 |

SFP ports Slots specifications

It has 1G/1GE Gigabit Ethernet fiber-based or Gigabit Ethernet copper based Small Form-Factor Pluggable with granular port densities that fit diverse campus needs. The SFP transceiver is a compact, hot-swappable device that plugs into a physical port of a network device. SFP optics are used in communication networks and have a transmitting side (Tx) and a receiving side (Rx). The different SFP transceivers work with different wavelengths at an appointed distance. 1G fiber solution or 1GE copper fixed uplinks.

## Table 10. SFP specifications

| PRODUCT CODE | SUPPORTING SFP |
|---|---|
| SFP-SM-1G | COMMANDO LightningFIBER 1000BASE-LX/LH, SFP, 1310nm, 20km, SMF, DDM, Multi-vendor Compatible |
| SFP-MM-1G | COMMANDO LightningFIBER 1000BASE-SX, SFP, 850nm, 550m, MMF, DDM, Multi-vendor Compatible |
| SFP-UTP-1G | COMMANDO LightningCOPPER 1000BASE-T Copper RJ-45, SFP, 100m, CAT5/6, Multi-vendor Compatible |

## Power Supply Specifications

Power supply is a king of all electronic devices without the power supply switch cannot work. Following rating power input required to make switch work.

## Table 11. Power supply specifications

| | |
|---|---|
| Power supply rated maximum | 240V AC |
| Input-voltage range and frequency | AC: 180V to 240V AC, 50 to 60 Hz<br>AC: 100~240V 50/60Hz |
| Power cord rating | 15A |

## Included in the bundle/box

All Soldier E1000 Series Switches are made available for use globally along with accessories in the bundle to facilitate for enhance operations.

The switch box comes included with the following accessories:

1x COMMANDO Scout E1000 Series Unmanaged Switch

1x Power cable

1x Console cable

1x Rack/Wall mountable kit

# Support and Warranty

- Same-day assistance.
- Comprehensive 24-hour support using common communication/chat platforms, Email and Telephone.
- Provide FAQs and troubleshooting help online (self-service) through cloud-based solutions.
- Highly technical and trained representatives to resolve issues.
- One-year default warranty with option of warranty extension up to 3 years

Table 12. Support and Warranty

| Warranty and Support | |
|---|---|
| Products covered | COMMANDO Soldier E1000 Series Unmanaged Switches |
| Warranty duration | One Year RTB (Return To Base) replacement warranty – optionally extendable up to 3 years. |
| Hardware replacement | COMMANDO, its resellers or its service center will use commercially reasonable efforts to replace the product subject to stock availability. Otherwise, a replacement will be arranged within 15 working days after receipt of the Return Materials Authorization (RMA) request. |
| End-of-life policy | In case of discontinuation of the product, support is limited to 3 years from announcement date. |
| Effective date | Hardware warranty commences from the date of shipment to customer (and in case of resale by a COMMANDO reseller, not more than 90 days after original shipment by COMMANDO). |
| Support duration | Lifetime support. |
| COMMANDO Care | COMMANDO will provide 24x7 support for basic configuration, diagnosis, and troubleshooting of device-level problems for up to one year from the date of shipment of the originally purchased product. This support does not include solution or network-level support beyond the specific device under consideration. |
| Online Portal Access | Warranty allows guest access to commandonetworks.com for all available technical queries. |

# Ordering Information

Table 13 lists ordering information for the COMMANDO Scout E1000 Series Unmanaged Switches. To place an order, please contact your local reseller/distributor or COMMANDO Sales Representative at www.commandonetworks.com/rfq

Table 13. Ordering Information

| Ordering Information | |
| --- | --- |
| Product Code | Description |
| E1000-16G+4CF | COMMANDO Scout E1000 16GE, 2GE+2SFP Uplinks, Unmanaged Switch |
| E1000-16P+4CF | COMMANDO Scout E1000 16FE PoE+, 2GE/2SFP Combo Uplinks, 260W, Unmanaged Switch |
| E1000-24P+4CF | COMMANDO Scout E1000 48FE PoE+, 2GE/2SFP Combo Uplinks, 450W, Unmanaged Switch |
| E1000-8GP+4CF | COMMANDO Scout E1000 8GE PoE+, 2GE+2SFP Uplinks, 150W, Unmanaged Switch |
| E1000-16GP+4CF | COMMANDO Scout E1000 16GE PoE+, 2GE+2SFP Uplinks, 260W, Unmanaged Switch |
| E1000-24GP+4CF | COMMANDO Scout E1000 24GE PoE+, 2GE+2SFP Uplinks, 450W, Unmanaged Switch |
| E1000-24GP-4SFP | COMMANDO Scout E1000 24GE Full PoE/PoE+, 4SFP Uplinks, 450W, Unmanaged Switch |

## Document History

| Release | What's new | Date |
| --- | --- | --- |
| Release 1 | First Release | January 4, 2021 |
| Release 2 | More models added | July 5, 2021 |
| Release 3 | New Models | September 18, 2023 |