COMMANDO Scout C1000 Series Unmanaged Switches Data Sheet

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Product Overview

COMMANDO Scout C1000 Series Unmanaged Switches consists of high power PoE/PoE+/Ultra PoE++ switches that complies IEEEE 802.3af/at/bt and supplies 15.4W/30W/90W of power per port and ideal for applications using high power Wireless Access Points, PTZ (Pan Tilt Zoom) IP Cameras, Surveillance Cameras, VoIP Telephony systems, Kiosks, POS Terminals, Thin client, 802.11ac and 802.11ax Access Points, small cells, and connected LED lighting, which is useful for small to medium-sized businesses, Internet cafes, hotels, schools, and others. 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+/Ultra PoE++ with power budget up to 800W capability while reducing energy consumption and minimizing noise. This series switches are available in 4 to 48 Gigabit Ethernet ports or 4 to 48 SFP Ports with 2/4 modular copper/Fiber Uplinks. 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 designed for Small business network these unmanaged Switches empower your growing business instant flexibility with copper as well as fiber ports connectivity along with PoE/PoE+/Ultra PoE++ reliable performance at a very affordable cost for wireless devices. These switches are powerful and flexible enough for users to deploy wireless access points, surveillance cameras, IP phones and other PoE/PoE+/Ultra PoE++ supported devices over longer distance up to 250m over copper pairs. This switch Giga Ethernet high-speed network connectivity, auto-negotiation for optimal speed detection through RJ45 Category 5, 5e or 6 cables.

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. This Switch also removes speed and duplex mismatches automatically as well as covers larger physical distance (Up to 250m) with copper.

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+/Ultra PoE++ power output for transmissions based on the cable length for PoE/PoE+/Ultra PoE++ devices connected.

It provides compact design that provides additional deployment flexibility, fiber connectivity combo 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. Convenient Deployment as modular power design allows customers to use either AC or DC power sources according to where the switch is deployed. When inserting two power modules, both power modules share the load and help to extend the lifetime of the Switch.

It is having fan-less or up to 4 fans models. These switches have Temperature- and load-based fan-speed control combines accurate monitoring with minimized system acoustic noise 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.

Product Highlights

• All ports capable of Gigabit Ethernet speed.
• Full speed of data transfer with (Auto-Negotiation/Auto MDI/MDIX).
• 4 to 48 ports with auto-negotiation 10/100/1000Mbps PoE/PoE+/Ultra PoE++ & non PoE Models.
• 4 to 48 Fiber SFP Ports Models.
• Extra 2/4 Ports with flexible 1 Gigabit Ethernet Fiber/Copper combo Switchports /Uplinks.
• Additional DC input power to enable UPS to mitigate power supply failures and support critical network infrastructure
• Compatible with IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt 4 Pair 15.4W / 30W / 90W Max Per port (PoE/PoE+/Ultra PoE++).
• POE power supply transmission is more reliable due to design of robust network transformer which uses high current.
• Various power budget options like 290W/600W/800W for 4 to 48 ports PoE/PoE+/Ultra PoE++ Switch models.
• All ports capable of either PoE, PoE+ or Ultra PoE++. Up to 48 ports of full Power over Ethernet capability up to 250m of cable length.
• PD detection will automatically detect and provide required power for your PoE/PoE+/Ultra PoE++ devices.
• Easy Installation, Plug-and-play installation with no configuration required.
• Support Store-and-forward Switching.
• Backplane Bandwidth: 7.2Gbps-104Gbps.
• MAC address Table: 8000 entries with 4-way hashing algorithm.
• MAC Address Auto-Learning and Auto-Aging.
• Surge protection ±6 kV.
• All ports support jumbo frame of size 10000 bytes transmission. Packet length of 10000 bytes.
• Plug and Play design simplifies installation with self-adaption.
• Standard Rackmount/Wall-mountable option along with fan-less or 2/3 fan models, 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+/Ultra PoE++ power for connected PoE devices based on the 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

Easy to Use

It easy to use and manage and Plug-and-Play that requires no 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. The switches range from 4 to 48 Gigabit Ethernet PoE/PoE+/Ultra PoE++ models as well as non-PoE models along with flexible 2 or 4 of Giga Ethernet copper-based or Fiber Ports Uplinks. This series also has 4 to 48 Fiber SFP Ports models. It contains 4 to 48 Gigabit Ethernet PoE/PoE+/Ultra PoE++ models have up to 30W (PoE/PoE+) or 90W Ultra PoE++ Per Port power budget and this series switches have total power budget range from 290W, 600W and 800W to meet PoE/PoE+/Ultra PoE++. Its compact size makes it ideal for rackmount/wall-mount with limited space. Dynamic LED lights provide real-time work status display and basic fault diagnosis.

PoE/PoE+/Ultra PoE++ Capabilities

SCOUT C1000 Series Switches are higher power switches that support 290W up to 800W (PoE/PoE+/Ultra PoE++) Power Budget. This series switches smartly adjust IEEE802.3af / IEEE802.3at /IEEE802.3bt PoE/PoE+/Ultra PoE++ (30W or 90W per port). All ports are capable of PoE/PoE+/Ultra PoE++ and allows Power-over-Ethernet PoE /PoE+/Ultra PoE++ to connect and power PoE/PoE+/Ultra PoE++ capable surveillance cameras, Wireless access points, VoIP phones, IoT devices and all PoE/PoE+/Ultra PoE++ capable devices using just Ethernet cabling.

Ultra PoE++ (IEEE 802.3bt 90W)

COMMANDO BT series Switches with PoE+/Ultra PoE++ standard supplies up to 90W of power per port ideal for applications using high power wireless access points, PTZ (Pan Tilt Zoom) IP cameras, Surveillance cameras, VoIP telephony systems, kiosks, POS terminals, thin client, 802.11ac and 802.11ax access points, small cells, and connected LED lighting, which is useful for small to medium-sized businesses, Internet cafes, hotels, schools, and others. They are easy to install and maintain and provide PoE+/Ultra PoE++ power to high power demanding devices, 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 built-in PoE+/Ultra PoE++ IEEE 802.3at/IEEE802.3bt type-4 (90W) while reducing energy consumption and minimizing noise with built-in PoE+/Ultra PoE++ IEEE 802.3at/IEEE802.3bt type-4 (90W) with circuit protection preventing power interference

between ports. In a nutshell, 90W PoE++ means affordable power for more power-hungry devices, more business and future ready.

Auto MDIX capabilities

Auto sensing/Auto PoE/PoE+/Ultra 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 Noise-free Performance

COMMANDO Scout C1000 Series Unmanaged Switches comes with fan-less or up to 4 fans with Small form-factor, compact PoE/PoE+/Ultra 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.

Green Technology

It uses 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, most of the packaging material can be recycled and reused.

Compact design with flexibility of additional ports

It Provides additional deployment flexibility, fiber connectivity combo 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.

Supports Uninterrupted critical network infrastructure

It has AC as well as DC input power protect from power surges through their inline power supply automatically and have in build Surge protection of ±6KV. 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. Convenient Deployment as modular power design allows customers to use either AC or DC power sources according to where the switch is deployed. When inserting two power modules, both power modules share the load and help to extend the lifetime of the Switch.

Cost Efficient

State of art quality product that can serve on real time high-speed Performance with AC or DC 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.

Hardware

COMMANDO Scout C1000 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/bt. 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.

Solid performance with non-blocking architecture

• CPU Dual Core having frequency 500 MHz along with packet Buffer memory of 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
• Maximum packet length 10000 bytes
• Jumbo frames of 10000 bytes.
• 2-hash algorithm selection for L2 table searching/learning with Aging timer range from 0.2s to 1600000s.
• Switching Capacity: Up to 104 Gbps.
• Forwarding Capacity: Up to 77.38Mpps.
• Store-and-forward Switching Scheme.

Physical Ports and Networking Interfaces

• Up to 48 x 10/100/1000 Mbps Rj45 Ethernet Ports with separate 4 ports GE (RJ-45), 4 SFP as well as combo 4 ports GE (RJ-45), 4 SFP. 4 to 48 ports PoE/PoE+/Ultra PoE++ & SFP models with Extra 2/4 Ports with fixed separate 1G Gigabit Ethernet Fiber/1GE Copper Switchports /Uplinks.
• LED Indicators: Power, Link/Act, PoE Max.
• Additional DC input power to enable UPS to mitigate power supply failures and support critical network infrastructure.

IEEE 802.3at/af/bt -compliant Power over Ethernet

• Various power budget options like 290W, 600W and 800W for 4 to 48 ports

PoE/PoE+/Ultra PoE++ Switch models. 30W or 90 W Max Per port (PoE/PoE+/Ultra PoE++). POE power supply transmission is more reliable due to design of robust network transformer which uses high current. All PoE/PoE+/Ultra PoE++ ports are IEEE 802.3af-compliant PoE, IEEE802.3at-compliant PoE+ and IEEE802.3bt-compliant Ultra PoE++. Each port delivers 15.4 W PoE, 30 W PoE+ and 90W Ultra PoE++ power. PD detection will automatically detect and provide required power for your PoE/PoE+/Ultra 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 ±6KV 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 Silent 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 with Temperature Sensor. Small form-factor, fan-less to up to 4 fans 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 and IEEE802.3bt, Power over Ethernet plus plus.

Enterprise Reliability

- Mean Time Between Failure of system, MTBF > 200,000 hours
- Stability: 64bit packet, time delay<10us, packet loss rate: 0
- Restorability of Network shaking or device breakdown, restart(recovery) time < 60 sec.
- RoHS Compliant with most of the packaging material can be recycled and reused.

Specifications

COMMANDO Scout C1000 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. Supports up to 64 spanning tree instances for MSTP (IEEE 802.1s), RSTP, and STP. 8K-entry L2 MAC table with 4-way hashing algorithm. 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 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 10/100/1000 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 800W. It Supports broadcast, multicast, unknown- multicast, and unknown-unicast packet suppression

control, IEEE 802.1x, IEEE 802.3az Energy Efficient Ethernet (EEE).

Now is the Time to Upgrade to 90W Ultra PoE++

Ultra PoE++ offers a robust, end-to-end high power PoE solution with up-front cost savings. Fortunately, transitioning to the new standard won't necessarily be a costly affair for users and installers or network seeking to deliver more power to, standard CAT 5 and 6 Ethernet cables are IEEE compatible So, you can add and move devices by moving these cables. Wiring and equipment costs remain down as there's usually no need to move AC sources physically. Safety measures ensure up to 90W of power is safely delivered. Ultra PoE++, satisfies this hunger by extending the PoE and PoE+ specifications to 90W of PD delivered power. Ultra PoE++ capabilities of this standard expand the field of Ethernet-powered applications by several orders of magnitude, enabling entirely new classes of PDs, such as power-hungry picocells, base stations or heaters for pan-tilt-zoom cameras and these critical devices stay up during load shed. New IEEE 802.3bt Standard Boosts the Technology for IoT Applications. The first and the most important improvement in the 802.3bt standard is the capability to transfer much more power to edge devices (powered devices or PDs) - 71.3 W, while sending 90 W from the power sourcing equipment (PSE) side enable in numerous new IoT and especially IIoT (Industrial IoT) power hungry and high-speed devices to be powered by PoE technology.

- Expanding Ultra PoE++ Use Cases with the Adoption of High-Power IEEE.
- Safe Cities with PTZ Camara
- Smart Building Systems with Ultra PoE++ Powered LED Lighting
- High-Performance Wireless Access Points
- Intercoms, TVs, and Video Conferencing

Table 1. COMMANDO Scout C1000 Series Unmanaged Switches Hardware Specifications

C1000 Switch Parameter	Specification
CPU	500MHz
Flash (KB)	128Kbytes
Packet Buffer Memory	4.1 MB
Switching Method	Store and Forward

C1000 Switch Parameter	Specification
Switching Capacity	7.2 Gbps to 104 Gbps
MAC Address Table Size	8000 entries L2 MAC table with 4-way hashing algorithm
Jumbo frame Size (Bytes)	10000
Maximum packet length (Bytes)	10000
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 to 240V AC (50Hz to 60 Hz) DC 52V to 5.1A; 12V to 2.1A
LED Indicator	Link/Act PoE, PoE MAX power
Energy Saving	Comply with “EEE” Energy Efficient Ethernet (IEEE 802.3az)
Surge protection (kV)	±6 kV
Rackmount/wall-mountable	Rackmount/wall-mountable
Fan (Number)	Fan-less as well as Up to 2 or 3 Fans

Table 2. COMMANDO Scout C1000 Series Unmanaged Switches Enclosure and Fan Hardware specifications

Product Code	Enclosure Type	Fan (Number)
C1000-24G+4SFP	Rack/Wall mountable - 1U	0
C1000-24G+4CF	Rack/Wall mountable - 1U	0
C1000-24G+8CF	Rack/Wall mountable - 1U	0
C1000-48G+4GE	Rack/Wall mountable - 1U	2
C1000-48G+4SFP	Rack/Wall mountable - 1U	2
C1000-48G+8CF	Rack/Wall mountable - 1U	2
C1000-24GP+4GE	Rack/Wall mountable - 1U	3
C1000-24GP+4SFP	Rack/Wall mountable - 1U	3
C1000-24GP+4CF	Rack/Wall mountable - 1U	3
C1000-24GP+8CF	Rack/Wall mountable - 1U	3
C1000-48GP+4GE	Rack/Wall mountable - 1U	4
C1000-48GP+4SFP	Rack/Wall mountable - 1U	4
C1000-48GP+8CF	Rack/Wall mountable - 1U	4
C1000-4SFP+2GE	Rack/Wall mountable - 1U	0
C1000-8SFP+2GE	Rack/Wall mountable - 1U	0
C1000-24SFP+4GE	Rack/Wall mountable - 1U	2

Product Code	Enclosure Type	Fan (Number)
C1000-48SFP+4GE	Rack/Wall mountable - 1U	2
C1000-4GBT+2GE	Desktop, Rack/Wall mountable	1
C1000-4GBT+2SFP	Desktop, Rack/Wall mountable	1
C1000-8GBT+4CF	Desktop, Rack/Wall mountable	2

Table 3. COMMANDO Scout C1000 Series Unmanaged Switches ports and interface Hardware specifications

Product Code	Ports	Main Interface	Uplink Interfaces
C1000-24G+4SFP	24 x 10/100/1000M ports 4 x 1G SFP Uplink slots	24 GE	4 SFP
C1000-24G+4CF	24 x 10/100/1000M ports 2 x 1GE and 2 x 1G SFP Uplink slots	24 GE	2 GE and 2 SFP

Product Code	Ports	Main Interface	Uplink Interfaces
C1000-24G+8CF	24 x 10/100/1000M ports 4 x 1GE or 4 x 1G SFP Uplink slots	24 GE	4 GE or 4 SFP Combo
C1000-48G+4GE	48 x 10/100/1000M PoE+ ports 4 x 1GE Uplink slots	48 GE	4 GE
C1000-48G+4SFP	48 x 10/100/1000M ports 4 x 1G SFP Uplink slots	48 GE	4 SFP
C1000-48G+8CF	48 x 10/100/1000M ports 4 x 1GE or 4 x 1G SFP Uplink slots	48 GE	4 GE or 4 SFP Combo
C1000-24GP+4GE	24 x 10/100/1000M PoE+ ports 4 x 1GE Uplink slots	24 GE	4 GE

Product Code	Ports	Main Interface	Uplink Interfaces
C1000-24GP+4SFP	24 x 10/100/1000M PoE+ ports 4 x 1G SFP Uplink slots	24 GE	4 SFP
C1000-24GP+4CF	24 x 10/100/1000M PoE+ ports 2 x 1GE and 2 x 1G SFP Uplink slots	24 GE	2 GE and 2 SFP
C1000-24GP+8CF	24 x 10/100/1000M PoE+ ports 4 x 1GE or 4 * 1G SFP Uplink slots	24 GE	4 GE or 4 SFP Combo
C1000-48GP+4GE	48 x 10/100/1000M PoE+ ports 4 x 1GE Uplink slots	48 GE	4 GE
C1000-48GP+4SFP	48 x 10/100/1000M PoE+ ports 4 x 1G SFP Uplink slots	48 GE	4 SFP

Product Code	Ports	Main Interface	Uplink Interfaces
C1000-48GP+8CF	48 x 10/100/1000M PoE+ ports 4 x 1GE or 4 * 1G SFP Uplink slots	48 GE	4 GE or 4 SFP Combo
C1000-4SFP+2GE	4 x 1G SFP ports 2 x 1GE Uplink slots	4 SFP	2 GE
C1000-8SFP+2GE	8 x 1G SFP ports 2 x 1GE Uplink slots	8 SFP	2 GE
C1000-24SFP+4GE	24 x 1G SFP ports 4 x 1GE Uplink slots	24 SFP	4 GE
C1000-48SFP+4GE	48 x 1G SFP ports 4 x 1GE Uplink slots	48 SFP	4 GE
C1000-4GBT+2GE	4 x 10/100/1000M Ultra PoE++ Ports 2 x 1GE Uplink slots	4 GE	2 GE
C1000-4GBT+2SFP	4 x 10/100/1000M Ultra PoE++ ports 2 x 1G SFP Uplink slots	4 GE	2 SFP

Product Code	Ports	Main Interface	Uplink Interfaces
C1000-8GBT+4CF	8 x 10/100/1000M Ultra PoE++ ports 2 x 1GE and 2 * 1G SFP Uplink slots	8 GE	2 GE and 2 SFP

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/bt Power over Ethernet (PoE/PoE+/Ultra PoE++) Provides up to 30 W or 90W per port with backward compatibility having power budget up to 800W, which allows support of the latest PoE/PoE+/Ultra PoE++ capable devices such as Video IP phones, wireless access points, and advanced pan/tilt/zoom security cameras, as well as any PoE/PoE+/Ultra PoE++ compliant end device. This ensures that cost of additional electrical cabling and circuits reduced to zero. PoE/PoE+/Ultra PoE++ availability on all ports. Auto-PoE/PoE+/Ultra PoE++ power configuration means switch automatically assigns the required power to a port for a PD device up to 250m copper cables.

Table 4. COMMANDO Scout C1000 Series Unmanaged Switches Advanced Hardware Specifications

Product Code	Power Budget	Max no. of PoE+ (IEEE 802.3at) Ports	Max no. of PoE (IEEE 802.3af) Ports	Voltage (100 to 240V AC), 50 to 60 Hz, Power Input Dual (AC+DC) , Current
C1000-24G+4SFP	24W	-	-	12V to 2A
C1000-24G+4CF	24W	-	-	12V to 2A
C1000-24G+8CF	24W	-	-	12V to 2A

Product Code	Power Budget	Max no. of PoE+ (IEEE 802.3at) Ports	Max no. of PoE (IEEE 802.3af) Ports	Voltage (100 to 240V AC), 50 to 60 Hz, Power Input Dual (AC+DC) , Current
C1000-48G+4GE	48W	-	-	12V to 4A
C1000-48G+4SFP	48W	-	-	12V to 4A
C1000-48G+8CF	48W	-	-	12V to 4A
C1000-24GP+4GE	600W	17 ports up to 30W	All ports up to 15.4W	52V to 10.6A; 12V to 4.1A
C1000-24GP+4SFP	600W	17 ports up to 30W	All ports up to 15.4W	52V to 10.6A; 12V to 4.1A
C1000-24GP+4CF	600W	17 ports up to 30W	All ports up to 15.4W	52V to 10.6A; 12V to 4.1A
C1000-24GP+8CF	600W	17 ports up to 30W	All ports up to 15.4W	52V to 10.6A; 12V to 4.1A
C1000-48GP+4GE	800W	24 ports up to 30W	All ports up to 15.4W	52V to 14A; 12V to 4A
C1000-48GP+4SFP	800W	24 ports up to 30W	All ports up to 15.4W	52V to 14A; 12V to 4A

Product Code	Power Budget	Max no. of PoE+ (IEEE 802.3at) Ports	Max no. of PoE (IEEE 802.3af) Ports	Voltage (100 to 240V AC), 50 to 60 Hz, Power Input Dual (AC+DC) , Current
C1000-48GP+8CF	800W	24 ports up to 30W	All ports up to 15.4W	52V to 14A; 12V to 4A
C1000-4SFP+2GE	24W	-	-	12V to 2A
C1000-8SFP+2GE	24W	-	-	12V to 2A
C1000-16SFP+4GE	24W	-	-	12V to 2A
C1000-24SFP+4GE	24W	-	-	12V to 2A
C1000-48SFP+4GE	48W	-	-	12V to 4A
C1000-4GBT+2GE	450W	All ports up to 90W, All ports up to 30W	All ports up to 15.4W	52V to 5.1A; 12V to 2.1A
C1000-4GBT+2SFP	450W	All ports up to 90W, All ports up to 30W	All ports up to 15.4W	52V to 5.1A; 12V to 2.1A

Product Code	Power Budget	Max no. of PoE+ (IEEE 802.3at) Ports	Max no. of PoE (IEEE 802.3af) Ports	Voltage (100 to 240V AC), 50 to 60 Hz, Power Input Dual (AC+DC) , Current
C1000-8GBT+4CF	600W	5 ports up to 90W, All ports up to 30W	All ports up to 15.4W	52V to 10.6A; 12V to 4.1A

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. COMMANDO Scout C1000 Series Unmanaged Switches Switching capacity, packet buffer memory and MTBF Specifications

Product Code	Switching Capacity (Gbps)	Packet Filtering Forwarding Rates (64-byte packet size Mpps)	Mean time between failures MTBF (hours)	Heat dissipation (BTU/hr)
C1000-24G+4SFP	56	41.66	251631	81.89
C1000-24G+4CF	56	41.66	251631	81.89
C1000-24G+8CF	56	41.66	315646	81.89
C1000-48G+4GE	104	77.38	318915	163.78
C1000-48G+4SFP	104	77.38	318915	163.78
C1000-48G+8CF	104	77.38	405060	163.78
C1000-24GP+4GE	56	41.66	219545	2047.28
C1000-24GP+4SFP	56	41.66	305156	2047.28

Product Code	Switching Capacity (Gbps)	Packet Filtering Forwarding Rates (64-byte packet size Mpps)	Mean time between failures MTBF (hours)	Heat dissipation (BTU/hr)
C1000-24GP+4CF	56	41.66	305156	2047.28
C1000-24GP+8CF	56	41.66	218951	2047.28
C1000-48GP+4GE	104	77.38	305910	2729.71
C1000-48GP+4SFP	104	77.38	305910	2729.71
C1000-48GP+8CF	104	77.38	415163	2729.71
C1000-4SFP+2GE	12	8.93	315916	81.89
C1000-8SFP+2GE	20	14.88	219563	81.89
C1000-24SFP+4GE	56	41.66	305695	81.89
C1000-48SFP+4GE	104	77.38	216331	163.78

Product Code	Switching Capacity (Gbps)	Packet Filtering Forwarding Rates (64-byte packet size Mpps)	Mean time between failures MTBF (hours)	Heat dissipation (BTU/hr)
C1000-4GBT+2GE	12	8.93	315964	989.52
C1000-4GBT+2SFP	12	8.93	350169	989.52
C1000-8GBT+4CF	24	17.86	405301	2047.28

Ultra Power PoE++ Flexibility

This series switches Provides a quick, safe and cost-effective IEEE 802.3af/ IEEE 802.3at/IEEE 802.3bt PoE/PoE+/Ultra PoE++ Network solution for small businesses and enterprise. It has total power budget of up to 450~800 watts for different kinds of PoE/PoE+/Ultra PoE++ devices over a long-range copper cable length up to 250m, provides power and network connectivity for PoE/PoE+/Ultra PoE++ powered devices over a single network cable. PoE/PoE+/Ultra PoE++ devices range from wireless access points, IP cameras, VoIP phones, PoE LED lighting, PoE speakers to IoT doorbells and other IoT, wireless access points, Wireless bridges or other standards compliant PoE/PoE+/Ultra PoE++ all end devices. All ports auto-sensing detects 802.3af/at/bt devices so they automatically receive PoE/PoE+/Ultra PoE++ power.

Table 6. COMMANDO Scout C1000 Series Unmanaged Switches LED Indication

LED Indication on Switch	LED Status
Power	Green OFF: No power on the switch. Green ON: The switch powered on
Link/Act	LINK/ACT bi-color LED: OFF: Port disconnected or link fail. Green ON: 1000Mbps connected. Amber ON: 10/100Mbps connected. Green Flashing: 1000Mbps connected and Data in transit Amber Flashing: 10/100Mbps connected and Data in transit
System	Green OFF: The system is starting, please wait Green ON: The system is up and running

LED Indication on Switch	LED Status
PoE	OFF: PoE/PoE+/Ultra PoE++ power is not provided on port Blue ON: PoE/PoE+/Ultra PoE++ power is provided on port
PoE MAX	PoE MAX OFF: PoE Power budget is available in switch Red ON: PoE Power budget is 95%

Power Budget According to Cable Length

Ideally, shorter cables would use less power because of less power degradation over their length. This is not the case with most devices as they will use the same amount of power across the cable regardless of whether it is 10 or 100 meters in length. These switches analyze the length of the Ethernet cable connected and adjusts the power usage accordingly, rather than keeping the power consumption in a conventional solution.

Table 7. COMMANDO Scout C1000 Series Unmanaged Switches 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) 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) 1000Base-T: UTP Category 5/5e/6 cable (Maximum 100m)	100M
Optical Fiber Cable	550M~120KM Depending on SFP	120KM

Included in the bundle/box

All SCOUT C1000 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 C1000 Series Switch
- 1x Power cable
- 1x Console cable
- 1x Rack/Wall mountable kit
- Support and Warranty

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 5 years

Table 8. Warranty and Support

Warranty and Support	
Products covered	COMMANDO Soldier C1000 Series Unmanaged Switches
Warranty duration	One Year RTB (Return To Base) replacement warranty – optionally extendable up to 5 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.

Warranty and Support	
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 9 lists ordering information for the COMMANDO Scout C1000 Series Unmanaged Switches. To place an order, please contact your local reseller/distributor or COMMANDO Sales Representative at www.commandonetworks.com/ordering

Table 9. COMMANDO Scout C1000 Series Unmanaged Switches Ordering Information

Product Code	Description
C1000-24G+4GE	COMMANDO Scout C1000 24GE, 4GE Uplinks, Unmanaged Switch
C1000-24G+4SFP	COMMANDO Scout C1000 24GE, 4SFP Uplinks, Unmanaged Switch
C1000-24G+4CF	COMMANDO Scout C1000 24GE, 2GE+2SFP Uplinks, Unmanaged Switch
C1000-24G+8CF	COMMANDO Scout C1000 24GE, 4GE/4SFP Combo Uplinks, Unmanaged Switch
C1000-48G+4GE	COMMANDO Scout C1000 48GE, 4GE Uplinks, Unmanaged Switch
C1000-48G+4SFP	COMMANDO Scout C1000 48GE, 4SFP Uplinks, Unmanaged Switch
C1000-48G+8CF	COMMANDO Scout C1000 48GE, 4GE/4SFP Combo Uplinks, Unmanaged Switch

Product Code	Description
C1000-24GP+4GE	COMMANDO Scout C1000 24GE PoE+, 4GE Uplinks, 600W, Unmanaged Switch
C1000-24GP+4SFP	COMMANDO Scout C1000 24GE PoE+, 4SFP Uplinks, 600W, Unmanaged Switch
C1000-24GP+4CF	COMMANDO Scout C1000 24GE PoE+, 2GE+2SFP Uplinks, 600W, Unmanaged Switch
C1000-24GP+8CF	COMMANDO Scout C1000 24GE PoE+, 4GE/4SFP Combo Uplinks, 600W, Unmanaged Switch
C1000-48GP+4GE	COMMANDO Scout C1000 48GE PoE+, 4GE Uplinks, 800W, Unmanaged Switch
C1000-48GP+4SFP	COMMANDO Scout C1000 48GE PoE+, 4SFP Uplinks, 800W, Unmanaged Switch
C1000-48GP+8CF	COMMANDO Scout C1000 48GE PoE+, 4GE/4SFP Combo Uplinks, 800W, Unmanaged Switch
C1000-4SFP+2GE	COMMANDO Scout C1000 4SFP, 2GE Uplinks, Fiber Unmanaged Switch
C1000-8SFP+2GE	COMMANDO Scout C1000 8SFP, 2GE Uplinks, Fiber Unmanaged Switch
C1000-24SFP+4GE	COMMANDO Scout C1000 24SFP, 4GE Uplinks, Fiber Unmanaged Switch

Product Code	Description
C1000-48SFP+4GE	COMMANDO Scout C1000 48SFP, 4GE Uplinks, Fiber Unmanaged Switch
C1000-4GBT+2GE	COMMANDO Scout C1000 4GE Ultra PoE++, 2GE Uplinks, 450W, Unmanaged Switch
C1000-4GBT+2SFP	COMMANDO Scout C1000 4GE Ultra PoE++, 2SFP Uplinks, 450W, Unmanaged Switch
C1000-8GBT+4CF	COMMANDO Scout C1000 8GE Ultra PoE++, 2GE+2SFP Uplinks, 600W, Unmanaged Switch

Document History

Release	Remark	Date
Release 1	First Release	Aug 1, 2020
Release 2	Adjustment of models	July 5, 2021