Cisco Catalyst IE3400 Rugged Series

Contents

The Cisco Catalyst® IE3400 Rugged Series ushers in mainstream adoption of advanced Gigabit Ethernet connectivity in a compact form-factor, modular switch purpose-built for a wide variety of extended enterprise and industrial applications.

Product overview

The Cisco Catalyst IE3400 Rugged Series switches deliver advanced, high-speed Gigabit Ethernet connectivity in a compact form factor, and are designed for a wide range of industrial applications where hardened products are required. The modular design of the Cisco Catalyst IE3400 Rugged Series offers the flexibility to expand up to 26 ports of Gigabit Ethernet with a range of expansion module options. The platform is built to withstand harsh environments in manufacturing, energy, transportation, mining, smart cities, and oil and gas. The IE3400 platform is also ideal for extended enterprise deployments in outdoor spaces, warehouses, and distribution centers.

The IE3400 Series runs Cisco IOS® XE, a next-generation operating system with built-in security and trust, featuring secure boot, image signing, and the Cisco® Trust anchor module. Cisco IOS XE also provides API-driven configuration with open APIs and data models.

The Cisco Catalyst IE3400 Rugged Series can be managed with powerful management tools such as Cisco DNA Center and Industrial Network Director, and can be easily set up with a completely redesigned, user-friendly, modern GUI tool called WebUI. The platform also supports Full Flexible NetFlow (FNF) for real-time visibility into traffic patterns and threat analysis with Cisco Stealthwatch®.

The IE3400 series (with expansion module) supports power budget of up to 480W for PoE/PoE+, shared across 24 ports, and is ideal for connecting PoE-powered end devices such as IP cameras, phones, wireless access points, sensors, and more.

Figure 1.

Features and benefits

Table 1.   IE3400 Features and benefits

Feature	Benefit
Robust industrial design	• Built for harsh environments and temperature ranges (-40°C to +75°C) • Fanless, convection-cooled with no moving parts for extended durability • Hardened for vibration, shock and surge, and electrical noise immunity • Complies with multi-industry specifications for automation, ITS, and substation environments • Improves uptime, performance, and safety of industrial systems and equipment • Covers a wide range of Power over Ethernet (PoE) application requirements • Alarm I/O for monitoring and signaling to external equipment
Full Gigabit Ethernet interfaces	• Provides secure access for new high-speed applications in the industrial space • Packs up to 10 ports of GE - 2x1 Gigabit Small Form-Factor Pluggable (SFP) uplinks plus 8x1 Gigabit Copper or PoE+ RJ45 downlinks in a small form-factor base system • Expandable to 26 ports of GE by attaching one of 10 compatible modules (copper, fiber options) • Connects high-speed wireless access points (802.11n, 802.11ac) • Enables High-Definition (HD) IP cameras and Programmable Logic Controllers (PLC) • Supports delay-sensitive applications and time-sensitive networks • Delivers multiple rings and redundant ring topology for new network configurations • Extends geographical scalability where longer-distance connectivity is required
High-density industrial Power over Ethernet (PoE)	• Supports up to 24 PoE/PoE+ ports [Power budget - 480W] • Controls costs by limiting wiring, distribution panels, and circuit breakers • Reduces equipment needs, thus requiring less space and reducing heat dissipation • Enables ready-to-use PoE devices, such as IP phones, cameras, and wireless access points
User-friendly WEB-based UI (WebUI)	• Allows for easy configuration and monitoring • Eliminates the need for more complex terminal emulation programs • Reduces the cost of deployment
SwapDrive zero-configuration replacement	• True zero-configuration and simple switch replacement in case of a failure • No networking expertise required • Helps ensure fast recovery
Full Flexible NetFlow (FNF)	• Provides enhanced flow and threat visibility • Enables optimization of the network infrastructure, reduces operation costs, and improves capacity planning and security incident detection
Advanced Data plane features	• Parallel redundancy protocol (PRP) [1] • Advanced Security with SGT/SGACL

[1] Parallel redundancy protocol (PRP) is available on IE3400 base switch on select ports only (Gig1/1 - Gig1/4)

Products overview

Table 2.   Product feature sets

Product family	Platforms supported	Cisco IOS Software images (feature sets) supported
IE3000	IE3400	Network Essentials[1], Network Advantage[1]

[1] The Hardware PID with "-E" suffix is Network Essentials and with "-A" suffix is Network Advantage.

Product specifications

Table 3 highlights the hardware configuration for Cisco Catalyst IE3400 Rugged Series switches and the supported modules with these switches.

Table 3.   IE3400 Hardware configurations (incl. IE3400 and IE3300 modules)

Product number*	Total ports	10/100/1000 RJ45 Copper ports	100/1000 SFP ports	Software license (Default)	PoE/ PoE (+) budget
IE-3400-8T2S-E	10	8	2	Network Essentials	N.A.
IE-3400-8T2S-A	10	8	2	Network Advantage	N.A.
IE-3400-8P2S-E	10	8	2	Network Essentials	240W (base), 480W (with expansion module)
IE-3400-8P2S-A	10	8	2	Network Advantage	240W (base), 480W (with expansion module)
IEM-3400-8T=	8	8	N.A.	N.A.	N.A.
IEM-3400-8S=	8	N.A.	8	N.A.	N.A.
IEM-3400-8P=	8	8	N.A.	N.A.	Supported with IE3400 PoE base modules only to provide a total PoE budget of 480W
IEM-3300-8P=	8	8	N.A.	N.A.	Supported with IE3300 PoE base and IE3400 PoE base modules to provide a total PoE budget of 480W
IEM-3300-16P=	16	16	N.A.	N.A.	Supported with IE3300 PoE base and IE3400 PoE base modules to provide a total PoE budget of 480W
IEM-3300-8S=	8	N.A.	8	N.A.	N.A.
IEM-3300-8T=	8	8	N.A.	N.A.	N.A.

Product number*	Total ports	10/100/1000 RJ45 Copper ports	100/1000 SFP ports	Software license (Default)	PoE/ PoE (+) budget
IEM-3300-16T=	16	16	N.A.	N.A.	N.A.
IEM-3300-6T2S=	8	6	2	N.A.	N.A.
IEM-3300-14T2S=	16	14	2	N.A.	N.A.

*PoE modules can only be plugged with PoE base switch. IE3300 expansion modules can also be plugged with IE3400 base switch. However, this combination prevents support for advanced security feature such as SGT/SGACL on the IE3400 base switch.

Table 4 highlights the hardware specifications for Cisco Catalyst IE3400 Rugged Series switches.

Table 4.   IE3400 hardware Specifications

Hardware specifications	Cisco IE-3400-8T2S-E / -A	Cisco IE-3400-8P2S-E / -A
PoE power budget	Not applicable	480W[1] (including expansion module)
Removable storage	USB[2], SD card[2]	USB[2], SD card[2]
Alarms	2 alarms in, 1 alarm out	2 alarms in, 1 alarm out
Console ports	1 RS-232 (via RJ-45), 1 USB Mini Type B	1 RS-232 (via RJ-45), 1 USB Mini Type B
Power inputs	Dual DC power input	Dual DC power input

[1] In order to achieve 480W power budget, the minimum power requirements as specified in Table 8 for the switch need to be considered when selecting the power supply.

[2] The USB and SD card are optional and are not shipped by default with the switch.

Figure 2.
Expansion modules

Table 5 highlights the hardware configuration for Cisco Catalyst IE3400 Rugged Series modules.

Table 5.   Hardware configuration for Cisco Catalyst IE3300 and IE3400 Rugged Series modules

Product ID	Total ports on expansion module	Copper (RJ45)	PoE/PoE+	SFP	Total system ports (including expansion module)
IEM-3400-8T=	8	8	–	–	18
IEM-3400-8S=	8	–	–	8	18

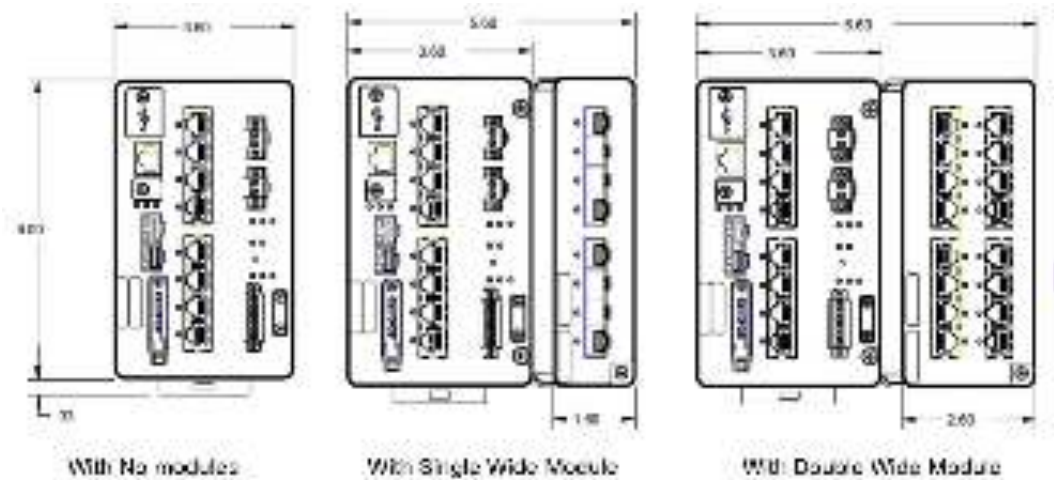| Product ID	Total ports on expansion module	Copper (RJ45)	PoE/PoE+	SFP	Total system ports (including expansion module)
IEM-3400-8P=	8	–	8	–	18
IEM-3300-8P=	8	–	8	–	18
IEM-3300-16P=	16	–	16	–	26
IEM-3300-8S=	8	–	–	8	18
IEM-3300-8T=	8	8	–	–	18
IEM-3300-16T=	16	16	–	–	26
IEM-3300-6T2S=	8	6	–	2	18
IEM-3300-14T2S=	16	14	–	2	26

Table 6 highlights the physical configuration for Cisco Catalyst IE3400 Rugged Series switches and modules.

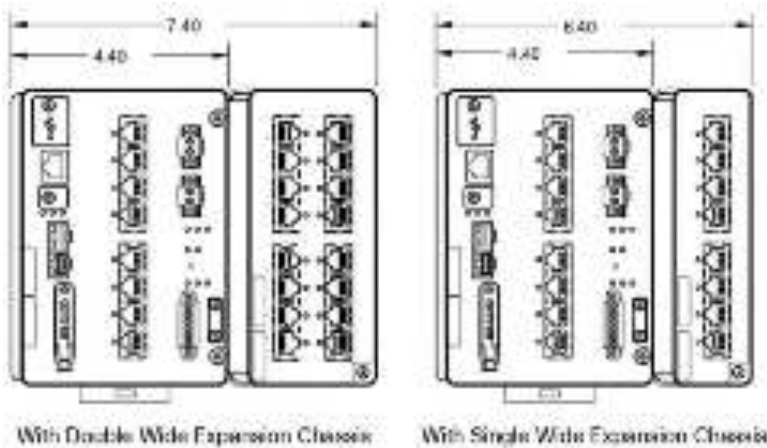**Table 6.**   IE3400 physical configurations

Product ID	Dimensions (H x W x D)	Weight	Mounting
IE-3400-8T2S-E	6 in. X 3.6 in. X 5.3 in.	3.8 lbs	DIN rail
IE-3400-8T2S-A	6 in. X 3.6 in. X 5.3 in.	3.8 lbs	DIN rail
IE-3400-8P2S-E	6 in. X 4.4 in. X 5.3 in.	5.0 lbs	DIN rail
IE-3400-8P2S-A	6 in. X 4.4 in. X 5.3 in.	5.0 lbs	DIN rail
IEM-3300-8T	6 in. X 2.4 in. X 5.3 in.	2.0 lbs	DIN rail
IEM-3300-8S=	6 in. X 2.4 in. X 5.3 in.	2.0 lbs	DIN rail
IEM-3300-16T=	6 in. X 3.4 in. X 5.3 in.	2.7 lbs	DIN rail
IEM-3300-6T2S=	6 in. X 2.4 in. X 5.3 in.	2.0 lbs	DIN rail
IEM-3300-14T2S=	6 in. X 3.4 in. X 5.3 in.	2.7 lbs	DIN rail
IEM-3300-8P=	6 in. X 2.4 in. X 5.3 in.	2.0 lbs	DIN rail
IEM-3300-16P=	6 in. X 3.4 in. X 5.3 in.	2.7 lbs	DIN rail
IEM-3400-8T=	6 in. X 2.4 in. X 5.3 in.	2.0 lbs	DIN rail
IEM-3400-8S=	6 in. X 3.4 in. X 5.3 in.	3.6 lbs	DIN rail
IEM-3400-8P=	6 in. X 2.4 in. X 5.3 in.	2.0 lbs	DIN rail

System dimensions

Front view <IE3400 Non-PoE>

With No modules   With Single Wide Module   With Double Wide Module

Front View <IE3400 PoE>

With Double Wide Expansion Chassis   With Single Wide Expansion Chassis

Module dimensions - Front View

Single wide module   Double wide module

Top view

With No modules   With Single Wide Module   With Double Wide Module
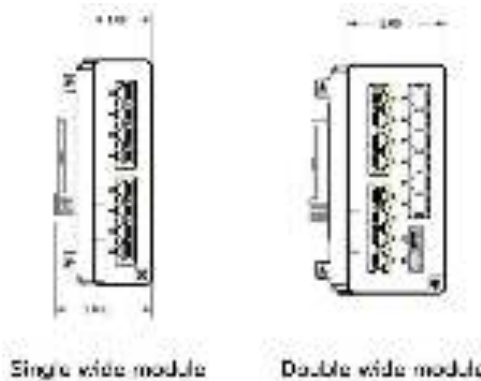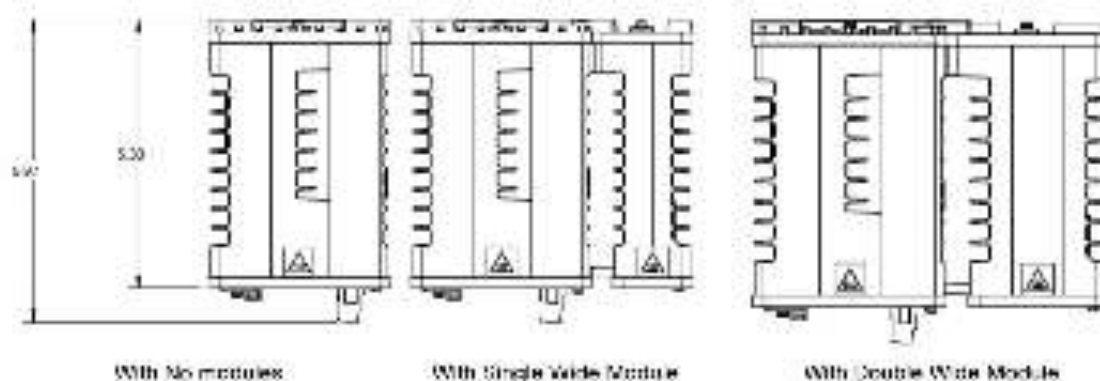
Table 7 highlights the performance and scalability features for Cisco Catalyst IE3400 Rugged Series switches.

Table 7. IE3400 performance and scalability features

Features	Cisco IE-3400-8T2S-E/-A	Cisco IE-3400-8P2S-E/-A
Forwarding rate	Line rate for all ports and all packet sizes	Line rate for all ports and all packet sizes
Number of queues	8	8
Unicast MAC addresses	8K	8K
Internet Group Management Protocol (IGMP multicast groups)	1K	1K
No. of VLANs	256	256
IPv4 Indirect routes[1]	2000	2000
IPv6 Indirect routes[1]	512	512
Spanning Tree Protocol (STP) instances	128	128
Access control lists (PACL/VACL/RACL)	1.5K	1.5K
DRAM	4 GB	4 GB
Flash [User Accessible]	1.5 GB	1.5 GB
SD card capacity[2]	4 GB	4 GB

[1] Supported with –A SKUs or –E SKUs (with Network Advantage license).

[2] The SD card is optional and is not shipped by default with the switch.

Table 8 highlights the power specifications for Cisco Catalyst IE3400 Rugged Series switches.

Table 8.   IE3400 power specifications

	Cisco IE-3400-8T2S-E/-A	**Cisco IE-3400-8P2S-E/-A**
Input voltage range	Redundant DC input voltage: 9.6 to 60VDC	Redundant DC input voltage: 9.6 to 60VDC 48VDC is required for PoE and 54VDC is required for PoE+
Input current	6.3A	10.6A
Power consumption[1]	36W	47W

[1] Power consumption for non PoE supported model is measured at 12V and for the PoE supported model is measured at 54V. Power consumption does not include PoE power.

Table 9 highlights the power specifications for supported expansion modules in Cisco Catalyst IE3400 Rugged Series switches.

Table 9.   IEM3300/IEM3400 expansion modules power consumption

Product ID	**Power Consumption[1]**
IEM-3300-8T=	6W
IEM-3300-8S=	19W
IEM-3300-16T=	12W
IEM-3300-6T2S=	9W
IEM-3300-14T2S=	16W
IEM-3300-8P=	14W
IEM-3300-16P=	21W
IEM-3400-8T=	12W
IEM-3400-8S=	27W
IEM-3400-8P=	20W

[1] Power consumption for non PoE supported model is measured at 12V and for the PoE supported model is measured at 54V. Power consumption does not include PoE power.

Table 10 highlights the power supply options for Cisco Catalyst IE3400 Rugged Series switches.

Table 10. Power supply options

Product ID	Wattage	Rated nominal input operating range	PoE/PoE+ support[1]	More Details
PWR-IE50W-AC=	50W	AC 100–240V/1.25A 50–60Hz or DC 125–250V/1.25A	No	
PWR-IE50W-AC-IEC=	50W	AC 90–264V	No	
PWR-IE50W-AC-L= [2]	50W	AC 100–240V/1.0A 50–60Hz	No	
PWR-IE65W-PC-AC=	65W	AC 100–240V/1.4A 50–60Hz or DC 125–250V/1.0A	Yes	[Click here](#) for more details on these DIN Rail power supplies
PWR-IE65W-PC-DC=	65W	DC 24–48VDC/4.5A	Yes	
PWR-IE170W-PC-AC=	170W	AC 100–240V/2.3A 50–60Hz or DC 125–250V/2.1A	Yes	
PWR-IE170W-PC-DC=	170W	DC 12–54VDC/2.3A	Yes	
PWR-IE240W-PCAC-L= [2]	240W	AC 100–240V/2.5A 50–60Hz	Yes	
PWR-IE480W-PCAC-L= [2]	480W	AC 100–240V/5.0A 50–60Hz	Yes	

[1] The entire power budget for the switch and PoE ports must stay within the power supply wattage.

[2] The power supplies are not certified for smart grid and hazardous locations. These power supplies are IP20 rated.

Table 11 and 12 highlights the supported software features for Cisco Catalyst IE3400 Rugged Series switches.

Table 11. Key supported software features (Network Essentials License)

Network Essentials License (Perpetual)	Features
Layer 2 switching	IEEE 802.1, 802.3 standard, NTP, UDLD, CDP, LLDP, unicast MAC filter, PaGP, LACP VTPv2, VTPv3, EtherChannel, voice VLAN, PVST+, MSTP, and RSTP
Multicast	IGMPv1, v2, v3 snooping, IGMP filtering, IGMP querier
Management	WebUI, MIB, SmartPort, SNMP, syslog, DHCP server, SPAN session, RSPAN, Express setup, NETCONF, RESTCONF
Security	Port security, 802.1x, Dynamic Host Configuration Protocol (DHCP) snooping, dynamic ARP inspection, IP source guard, guest VLAN, MAC authentication bypass, 802.1x multidomain authentication, storm control – unicast, multicast, broadcast, SCP, SSH, SNMPv3, TACACS+, RADIUS server/client, MAC address notification, BPDU guard, Access Lists(PACL/RACL/VACL), SUDI 2099 (Secure Unique Device identifier), Full Flexible NetFlow (FNF), MACsec–128
Quality of Service (QoS)	Ingress policing, rate limit, egress queuing/shaping, auto QoS

Network Essentials License (Perpetual)	Features
IPv6	IPv6 host support, SNMP over IPv6, HTTP/HTTP(s) over IPv6, SNMP over IPv6, Syslog over IPv6, DHCPv6 relay source, DHCPv6 bulk lease query (RFC 5460), IPv6 stateless Auto Config, SCP/SSH, Radius, TACACS+, NTP over IPv6, IPv6 VRF aware BGPv6, IPV6 ND cache expire, IPv6 support for TFTP, IPv6 DNS transport
Layer 3 routing	Inter-VLAN routing, Static routing
Industrial Ethernet	CIP Ethernet/IP, IEEE 1588 PTP v2 (default and power), PROFINET
Redundancy	Resilient Ethernet Protocol (REP) ring, PROFINET-Multi Ring Protocol (MRP), REP Preferred, Fast REP, Parallel redundancy protocol (PRP)[2], PTP over PRP
Utility	Dying gasp, SCADA protocol classification – GOOSE messaging, MODBUS TCP/IP
Automation	YANG, NETCONF, RESTCONF
Industrial Management	Layer 2 switching with 1:1 switch Network Address Translation (L2NAT)[1]

[1] Supported on Uplink ports

[2] Parallel redundancy protocol (PRP) is available on IE3400 base switch on select ports only (Gig1/1 – Gig1/4)

Table 12. Key supported software features (Network Advantage License)

Network Advantage License(Perpetual)	Features
IP routing Protocols	OSPF (v4 and v6), BGP (v4 and v6), ISIS (v4 and v6), RIP (v1 and v2), EIGRP (v4 and v6)
Virtualization	Vrf-lite
Security	MACsec-256, SGT/SGACL[1]
IP Multicast	PIM sparse mode (PIM-SM), PIM dense mode (PIM-DM), and PIM sparse-dense mode

[1] SGT/SGACL is supported on IE3400 base switch and only on IEM-3400 expansion modules.

Table 13 highlights the details on Cisco DNA Essentials and Cisco DNA Advantage License for Cisco Catalyst IE3400 Rugged Series switches.

Table 13. Cisco IE3400 Cisco DNA Essentials and Cisco DNA Advantage license

Feature	Description	Cisco DNA Essentials	Cisco DNA Advantage
Cisco DNA Center	Discovery, Topology, Inventory, software image management	YES	YES
Visibility	Cisco DNA assurance, Device 360	YES	YES
Day-zero network bring-up automation	Cisco Network Plug-and-Play application	YES	YES
Software-define Access	Policy based automation, IE3400 can function as an SD-Access extended node	N.A.	YES

Cisco DNA licenses for Industrial Ethernet switches are add-on/optional and not mandatory. These do not include Network Tier features.

Table 14 highlights the compliance specifications for Cisco Catalyst IE3400 Rugged Series switches.

Table 14. Compliance specifications[1]

Specifications	
Electromagnetic emissions	FCC 47 CFR Part 15 subpart B Class A
	EN 55032/CISPR 32 Class A
	VCCI Class A
	AS/NZS CISPR 32 Class A
	CISPR 11 Class A
	ICES 003 Class A
	CNS 13438 Class A
	KN 32 Class A
	EN 300 386
Electromagnetic immunity	CISPR 24
	EN 55024
	KN 35
	EN 61000-4-2 Electro Static Discharge (air - 15kV, contact - 8kV)
	EN 61000-4-3 Radiated RF (10V/m UTP, 20V/m STP)
	EN 61000-4-4 Electromagnetic Fast Transients (4kV)
	EN 61000-4-5 Surge (2KV/1KV Power, 4KV STP)
	EN 61000-4-6 Conducted RF (10Vrms UTP)
	EN 61000-4-8 Power Frequency Magnetic Field (1000A/m)
	EN 61000-4-10 Pulsed Magnetic Field (30 A/m)
	EN 61000-4-16 Conducted CM Disturbances (30V, Cont/ 300V, 1 sec)
	EN 61000-4-17 Ripple Immunity DC Power (10%)
	EN 61000-4-18 Damped Oscillatory Wave (2.5kV, 1MHz)
	EN-61000-4-29 DC Voltage Dips and Interruptions
Industry standards	EN 61000-6-2 Industrial Immunity
	EN 61000-6-4 Industrial Emissions
	EN 61000-6-1 Light Industrial Immunity
	EN 61326-1 Measurement, Control and Laboratory Equipment
	IEEE 1613 Electric Power Stations Communications Networking[2]
	EN/IEC 61850 -3 Electric Substations Communications Networking[2]
	EN50121-4 Railway - Signaling and Telecommunications Apparatus
	ODVA Industrial EtherNet/IP
	IP30

Specifications	
Safety standards and certifications	Information Technology Equipment:
	UL/CSA 60950-1, CB to IEC 60950-1 with all country deviations
	UL/CSA 62368-1, CB to IEC 62368-1 with all country deviations[2]
	Industrial floor (control equipment):
	UL/CSA 61010-2-201
	CB report and certificate to IEC/EN 61010-2-201
	Hazardous Locations:
	UL121201(Class I, Div 2, groups A-D)
	CSA 213 (Class I, Div 2, groups A-D)
	UL/CSA 60079-0, -15 (Class I, Zone 2, Gc/IIC)
	IEC 60079-0, -15 IECEx test report (Class I, Zone 2, Gc/IIC)
	EN 60079-0, -15 ATEX certifícate (Class I, Zone 2, Gc/IIC) cabinet enclosure required
Operating environment	Operating temperature:
	-40°C to +70°C (40 LFM vented enclosure)
	-40°C to +60°C (sealed enclosure)
	-34°C to +75°C (Min. 200 LFM fan or blower-equipped enclosure)
	+85°C (type tested for 16 hours)
	Altitude: up to 15,000 feet
Storage environment	Temperature: -40°C to +85°C
	Altitude: 15,000 feet
	IEC 60068-2-14
Humidity	Relative humidity of 5% to 95% non-condensing
	IEC 60068-2-78
	IEC 60068-2-30
Shock and vibration	IEC 60068-2-27 (operational shock, 50G, 3ms, half sine)
	IEC 60068-2-27 (non-operational shock, 65-80G, 9ms, trapezoidal)
Corrosion	IEC 60068-2-52 (salt fog)[2]
	IEC 60068-2-60 (flowing mixed gas)[2]
Warranty	Five-year limited hardware warranty on all IE3400 product IDs and all Industrial Ethernet (IE) power supplies. See more information under the Warranty section

[1] For more detailed information on safety approved power/thermal ratings refer the Hardware Installation Guide.

[2] Test in progress.

Table 15 highlights Mean-Time-Between-Failures (MTBF) for Cisco Catalyst IE3400 Rugged Series switches.

Table 15. MTBF information

Product ID	Rated MTBF (hours)
IE-3400-8T2S-E	549,808
IE-3400-8T2S-A	549,808
IE-3400-8P2S-E	401,313
IE-3400-8P2S-A	401,313
IEM-3300-8T=	3,041,040
IEM-3300-8S=	6,810,960
IEM-3300-16T=	1,594,210
IEM-3300-6T2S=	3,729,130
IEM-3300-14T2S=	1,865,300
IEM-3400-8T=	3,385,166
IEM-3300-8P=	2,931,233
IEM-3300-16P=	1,043,520
IEM-3400-8S=	5,572,640
IEM-3400-8P=	1,802,010

Table 16 highlights information about management and standards for Cisco Catalyst IE3400 Rugged Series switches.

Table 16. Management and standards

Description	Specifications	
IEEE standards	IEEE 802.1D MAC Bridges, STP	IEEE 802.3ah 100BASE-X SMF/MMF only
	IEEE 802.1p Layer2 COS prioritization	IEEE 802.3x full duplex on 10BASE-T
	IEEE 802.1q VLAN	IEEE 802.3 10BASE-T specification
	IEEE 802.1s Multiple Spanning-Trees	IEEE 802.3u 100BASE-TX specification
	IEEE 802.1w Rapid Spanning-Tree	IEEE 802.3ab 1000BASE-T specification
	IEEE 802.1x Port Access Authentication	IEEE 802.3z 1000BASE-X specification
	IEEE 802.1AB LLDP	IEEE 802.3af Power over Ethernet
	IEEE 802.3ad Link Aggregation (LACP)	IEEE 802.3 at Power over Ethernet plus
	IEEE 1588v2 PTP Precision Time Protocol	

Description	Specifications	
RFC compliance	RFC 768: UDP RFC 783: TFTP RFC 791: IPv4 protocol RFC 792: ICMP RFC 793: TCP RFC 826: ARP RFC 854: Telnet RFC 959: FTP RFC 1157: SNMPv1 RFC 1901,1902-1907 SNMPv2 RFC 2273-2275: SNMPv3 RFC 2571: SNMP Management RFC 1166: IP Addresses RFC 1256: ICMP Router Discovery RFC 1305: NTP RFC 951: BootP	RFC 1492: TACACS+ RFC 1493: Bridge MIB Objects RFC 1534: DHCP and BOOTP interoperation RFC 1542: Bootstrap Protocol RFC 1643: Ethernet Interface MIB RFC 1757: RMON RFC 2068: HTTP RFC 2131, 2132: DHCP RFC 2236: IGMP v2 RFC 3376: IGMP v3 RFC 2474: DiffServ Precedence RFC 3046: DHCP Relay Agent Information Option RFC 3580: 802.1x RADIUS RFC 4250-4252: SSH Protocol RFC 5460: DHCPv6 bulk lease query
SNMP MIB objects	802.1X MIB CISCO-DHCP-SNOOPING-MIB CISCO-UDLDP-MIB CISCO-ENVMON-MIB CISCO-PRIVATE-VLAN-MIB CISCO-PAE-MIB Cisco-Port-QoS-MIB CISCO-ERR-DISABLE-MIB CISCO- PROCESS-MIB LLDP-MIB CiscoMACNotification-MIB CISCO-CONFIG-COPY-MIB LLDP-MED-MIB Bridge-MIB CISCO-CAR-MIB CISCO-LAG-MIB CISCO-SYSLOG-MIB CISCO-FTP-CLIENT-MIB CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB CISCO-VLAN-MEMBERSHIP-MIB Cisco-REP-MIB CISCO-PORT-STORM-CONTROL-MIB	CISCO-IF-EXTENSION-MIB CISCO-IMAGE-MIB CISCO-MEMORY-POOL-MIB CISCO-PING-MIB SNMP-TARGET-EXT-MIB IF_MIB ENTITY-MIB LLDP-EXT-PNO-MIB NOTIFICATION-LOG-MIB OLD-CISCO-CPU-MIB ETHERLIKE-MIB OLD-CISCO-SYSTEM-MIB OLD-CISCO-MEMORY-MIB RMON-MIB SNMP-COMMUNITY-MIB SNMP-FRAMEWORK-MIB SNMP-PROXY-MIB SNMP-MPD-MIB SNMP-NOTIFICATION-MIB SNMP-TARGET-MIB SNMP-USM-MIB CISCO-DATACOLLECTION-MIB

Description	Specifications	
	CISCO-CDP-MIB	CISCO-CABLE-DIAG-MIB
	CISCO-IP-STAT-MIB	CISCO-PORT-SECURITY-MIB
	CISCO-LICENSE-MGMT-MIB	BULK_FILE_MIB
	CISCO-STP-EXTN-MIB	NAC-NAD-MIB
	CISCO-VTP-MIB	CISCO-ENTITY-ALARAM-MIB
	IEEE8023-LAG-MIB	SNMP-VIEW-BASED-ACM-MIB
	SMON-MIB	CISCO-MAC-AUTH-BYPASS-MIB
	CISCO-ACCESS-ENVMON-MIB	CISCO-AUTH-FRAMEWORK-MIB
	CISCO-CALLHOME-MIB	CISCO-BRIDGE-Ext-MIB
	CISCO-CONFIG-MAN-MIB	SNMPv2-MIB
	CISCO-FLASH-MIB	CISCO-ENTITY-VENDORTYPE-OID-MIB
	CISCO-ENTITY-SENSOR-MIB	CISCO-PRODUCTS-MIB
	IP-MIB	IP-FORWARD-MIB
	CISCO-PAGP-MIB	BGP-CISCO-BGP-MIBv2

Table 17 highlights information about supported SFPs for Cisco Catalyst IE3400 Rugged Series switches.

Table 17. SFP support

Product ID	Specifications	SFP type	Temperature range[1]	Maximum distance	Cable type	Dom support
GLC-FE-100FX-RGD	100BASE-FX	FE	IND	2 km	Multimode fiber (MMF)	No
GLC-FE-100LX-RGD	100BASE-LX10	FE	IND	10 km	Single-Mode Fiber (SMF)	No
GLC-FE-100FX	100BASE-FX	FE	COM	2 km	MMF	No
GLC-FE-100LX	100BASE-LX10	FE	COM	10 km	SMF	No
GLC-FE-100EX	100BASE-EX	FE	COM	40 km	SMF	No
GLC-FE-100ZX	100BASE-ZX	FE	COM	80 km	SMF	No
GLC-FE-100BX-U	100BASE-BX10	FE	COM	10 km	SMF	No
GLC-FE-100BX-D	100BASE-BX10	FE	COM	10 km	SMF	No
GLC-SX-MM-RGD	1000BASE-SX	GE	IND	220–550 m	MMF	Yes
GLC-LX-SM-RGD	1000BASE-LX/LH	GE	IND	550 m/10 km	MMF/SMF	Yes
GLC-ZX-SM-RGD	1000BASE-ZX	GE	IND	70 km	SMF	Yes
SFP-GE-S	1000BASE-SX	GE	EXT	220–550 m	MMF	Yes
SFP-GE-L	1000BASE-LX/LH	GE	EXT	550 m/10 km	MMF/SMF	Yes

Product ID	Specifications	SFP type	Temperature range[1]	Maximum distance	Cable type	Dom support
SFP-GE-Z	1000BASE-ZX	GE	EXT	70 km	SMF	Yes
GLC-BX-U	1000BASE-BX10	GE	COM	10 km	SMF	Yes
GLC-BX-D	1000BASE-BX10	GE	COM	10 km	SMF	Yes
GLC-SX-MM	1000BASE-SX	GE	COM	220-550 m	MMF	Yes
GLC-LH-SM	1000BASE-LX/LH	GE	COM	550 m/10 km	MMF/SMF	Yes
GLC-ZX-SM	1000BASE-ZX	GE	COM	70 km	SMF	Yes
GLC-EX-SMD	1000BASE-EX	GE	COM	40 km	SMF	Yes
GLC-TE	1000BASE-T	GE	EXT	100 m	Cat5e	No
GLC-BX40-U-I=	1000BASE-BX40	GE	IND	40 km	SMF	Yes
GLC-BX40-D-I=	1000BASE-BX40	GE	IND	40 km	SMF	Yes
GLC-BX40-DA-I=	1000BASE-BX40	GE	IND	40 km	SMF	Yes
GLC-BX80-U-I=	1000BASE-BX80	GE	IND	80 km	SMF	Yes
GLC-BX80-D-I=	1000BASE-BX80	GE	IND	80 km	SMF	Yes
GLC-SX-MMD=	1000BASE-SX	GE	EXT	550 m	MMF	Yes
GLC-LH-SMD=	1000BASE-LX/LH	GE	EXT	550m/10km	MMF/SMF	Yes
GLC-ZX-SMD=	1000BASE-ZX	GE	EXT	70 km	SMF	Yes
GLC-T-RGD=	1000BASE-T	GE	IND	100 m	Copper	NA

[1] If non-industrial SFPs (EXT, COM) are used, the switch operating temperature must be derated.

Ordering information

Table 18 lists the ordering information for fixed system, expansion modules and memory that are commonly used with the Cisco Catalyst IE3400 switches.

Table 18. Ordering information

Product ID	Description
IE-3400-8T2S-E	Catalyst IE3400 with 8 GE Copper and 2 GE SFP, Adv. Modular, Network Essentials
IE-3400-8T2S-A	Catalyst IE3400 with 8 GE Copper and 2 GE SFP, Adv. Modular, Network Advantage
IE-3400-8P2S-E	Catalyst IE3400 with 8 GE PoE/PoE+, 2 GE SFP, Adv. Modular, Network Essentials
IE-3400-8P2S-A	Catalyst IE3400 with 8 GE PoE/PoE+, 2 GE SFP, Adv. Modular, Network Advantage
IEM-3300-8T=	Catalyst IE3300 with 8 GE Copper ports, Expansion Module

Product ID	Description
IEM-3300-8S=	Catalyst IE3300 with 8 GE SFP Fiber ports, Expansion Module
IEM-3300-16T=	Catalyst IE3300 with 16 GE Copper ports, Expansion Module
IEM-3300-6T2S=	Catalyst IE3300 with 6 GE Copper + 2 GE SFP, Expansion Module
IEM-3300-14T2S=	Catalyst IE3300 with 14 GE Copper + 2 GE SFP, Expansion Module
IEM-3300-8P=	Catalyst IE3300 with 8 GE PoE/PoE+ Copper ports, Expansion Module
IEM-3300-16P=	Catalyst IE3300 with 16 GE PoE/PoE+ Copper, Expansion Module
IEM-3400-8T=	Catalyst IE3400 with 8 GE Copper ports, Expansion Module
IEM-3400-8S=	Catalyst IE3400 with 8 GE SFP ports, Expansion Module
IEM-3400-8P=	Catalyst IE3400 with 8 GE Copper PoE/PoE+, Expansion Module
SD-IE-4GB=	IE 4GB SD memory card for IE
STK-RACK-DINRAIL=	19" DIN Rail mount kit
IE3400-NW-A=	Network Advantage License for IE3400, Perpetual
IE3400-DNA-E	Cisco DNA Essentials license for IE3400 Series
IE3400-DNA-E-3Y	IE 3400 Cisco DNA Essentials, 3 Year Term license
IE3400-DNA-E-5Y	IE 3400 Cisco DNA Essentials, 5 Year Term license
IE3400-DNA-A	Cisco DNA Advantage license for IE3400 Series
IE3400-DNA-A-3Y	IE 3400 Cisco DNA Advantage, 3 Year Term license
IE3400-DNA-A-5Y	IE 3400 Cisco DNA Advantage, 5 Year Term license
LIC-MRP-MGR-XE=	MRP Ring Manager License
LIC-MRP-CLIENT-XE=	MRP Ring Client License

Warranty

Five-year limited HW warranty on all IE3400 PIDs and all IE Power Supplies (see table 9 above). See link below for more details on warranty https://www.cisco.com/c/en/us/products/warranties/warranty-doc-c99-740591.html.

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Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

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Document history

New or Revised Topic	Described In	Date
Added new product numbers to hardware configurations and updated hardware specifications	Table 3 and Table 4	12/17/2019
Updated power specifications, power consumption and power supply options	Table 8 and Table 9	12/17/2019
Added PWR-IE50W-AC-IEC= to Power Supply Options; Added details on IPv6 support and PROFINET support on key supported software features	Table 10 and Table 11	12/17/2019
Updated key supported software features: IP protocols, IP Multicast	Table 12	12/17/2019
Updated Management and Standards: RFC 5460 and SNMP MIB objects	Table 16	12/17/2019
Added new part numbers on SFP support	Table 17	12/17/2019
Fixed descriptions on product description in ordering information	Table 18	12/17/2019