

ICS-G7850Aシリーズ

48G+2 10GbEレイヤー3フルギガビットモジュール式マネージド・イーサネット・スイッチ



機能と特長

- ・最大48個のギガビットイーサネットポートならびに2つの10Gイーサネットポート
- ・最大50の光ファイバ接続（SFPスロット）
- ・外部電源付き最大48個のPoE+ポート（IM-G7000A-4PoEモジュール搭載）
- ・ファンレス、動作温度範囲-10～60°C
- ・柔軟性が高く、将来的に無理なく拡張できるモジュール設計
- ・連続運転を実現するホットスワップ可能なインターフェースおよび電源モジュール
- ・Turbo RingとTurbo Chain（回復時間 < 20 ミリ秒 @ 250 スイッチ）¹ ネットワーク冗長性のためのSTP/RSTP/MSTP
- ・ユニバーサル110/220 VAC電力範囲の絶縁冗長電源
- ・簡単で視覚化された産業用ネットワーク管理を行うためのMXstudioに対応
- ・V-ON™により、ミリ秒レベルのマルチキャストデータとビデオネットワークの回復を確実に実現

認証



製品紹介

プロセスオートメーションやトランスポートオートメーションの用途では、データ、音声、動画を組み合わせるため、高いパフォーマンスと高い信頼性が求められます。ICS-G7850Aシリーズのフルギガビットバックボーンスイッチのモジュール設計により、ネットワークの計画が容易になり、最大48個のギガビットイーサネットポート、2つの10Gイーサネットポートを設置できるため、柔軟性が向上します。

このファンレススイッチは、Turbo Ring、Turbo Chain、RSTP/STPの冗長性技術をサポートし、絶縁冗長電源を完備し、これによりネットワークバックボーンシステムの信頼性と可用性を向上させます。

その他の機能とメリット

- ・ネットワーク間でデータと情報を移動するレイヤー3スイッチング機能(ICS-G7800Aシリーズ)
- ・先進的なPoE管理機能：PoE出力設定、PD障害チェック、PoEスケジューリング、およびPoE診断（IM-G7000A-4PoEモジュール搭載）
- ・主なマネージド機能をすばやく構成するためのコマンドラインインターフェース（CLI）
- ・Q-in-Qタギングで高度なVLAN機能をサポート
- ・各ポリシーに応じてIPアドレスを割り当てるDHCP Option 82
- ・デバイスの管理および監視用のEtherNet/IPおよびModbus TCPプロトコルをサポート
- ・トランスペアレントデータ伝送のためのPROFINETプロトコルとの互換性
- ・センサーとアラームをIPネットワークと統合するためのデジタル入力
- ・冗長デュアルAC電源
- ・マルチキャストトラフィックをフィルタリングするIGMPスヌーピングおよびGMRP
- ・ネットワーク計画を容易にするIEEE 802.1Q VLANとGVRPのプロトコル
- ・可用性を向上させるQoS（IEEE 802.1p/1QおよびTOS/DiffServ）
- ・最適な帯域幅利用のためのポートランキング
- ・TACACS+、SNMPv3、IEEE 802.1x、HTTPS、およびSSHで、ネットワークセキュリティを強化
- ・アクセス制御リスト（ACL）により、ネットワーク管理の柔軟性とセキュリティを向上
- ・異なるレベルのネットワーク管理を実現するSNMPv1/v2c/v3
- ・プロアクティブで効率の高いネットワーク監視のためのRMON
- ・想定外のネットワーク状況を防ぐ帯域幅管理
- ・不正アクセスをブロックするためのMACアドレスによるポートロック機能
- ・オンラインデバッグ用のポートミラーリング
- ・メールとリレー出力を通じた例外検出による自動警告

1. ポートリンク速度が1ギガビット以上の場合、回復時間は50ミリ秒未満で、

仕様

Input/Output Interface

Alarm Contact Channels	Relay output with current carrying capacity of 2 A @ 30 VDC
Digital Inputs	+13 to +30 V for state 1 -30 to +1 V for state 0 Max. input current: 8 mA

Ethernet Interface

10GbE SFP+ Slots	2
Slot Combination	12 slots for 4-port interface modules (10/100/1000BaseT(X), or PoE+ 10/100/1000BaseT(X), or 100/1000BaseSFP slots) ²
Standards	IEEE 802.1D-2004 for Spanning Tree Protocol IEEE 802.1p for Class of Service IEEE 802.1Q for VLAN Tagging IEEE 802.1s for Multiple Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1X for authentication IEEE 802.3 for 10BaseT IEEE 802.3ab for 1000BaseT(X) IEEE 802.3ad for Port Trunk with LACP IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for flow control IEEE 802.3z for 1000BaseSX/LX/LHX/ZX IEEE 802.3af/at for PoE/PoE+ output IEEE 802.3ae for 10 Gigabit Ethernet

Ethernet Software Features

Management	ARP Back Pressure Flow Control BOOTP DDM DHCP Option 66/67/82 DHCP Server/Client Flow control IPv4 LLDP Port Mirror RARP RMON SCP SMTP SNMP Inform SNMPv1/v2c/v3 Syslog Telnet TFTP
Filter	802.1Q BPDU Filter BPDU Guard GMRP GVRP IGMP v1/v2/v3 QinQ VLAN
Multicast Routing	DVMRP PIM-DM PIM-SM PIM-SSM
Redundancy Protocols	Link Aggregation MRP MSTP RSTP Turbo Chain

2. ギガビットイーサネットモジュールおよびPoE+モジュールの詳細については、IM-G7000Aシリーズの仕様をご確認ください。

	Turbo Ring v1/v2 V-ON
Routing Redundancy	VRRP
Security	Access control list Broadcast storm protection HTTPS/SSL MAB authentication Sticky MAC NTP authentication Port Lock RADIUS SSH TACACS+
Time Management	NTP Server/Client SNTP
Unicast Routing	OSPF RIPV1/V2 Static Route
Industrial Protocols	EtherNet/IP Modbus TCP
MIB	Bridge MIB Ethernet-like MIB MIB-II P-BRIDGE MIB Q-BRIDGE MIB RMON MIB Groups 1, 2, 3, 9 RSTP MIB

Switch Properties

DRAM	128 MB
Flash	16 MB
IGMP Groups	4096
Jumbo Frame Size	9.6 KB
MAC Table Size	16 K
Max. No. of VLANs	256
Packet Buffer Size	12 Mbits
VLAN ID Range	VID 1 to 4094
Priority Queues	8

USB Interface

Storage Port	USB Type A
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Serial Interface

Console Port	USB-serial console (Type B connector)
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Power Parameters

Input Voltage	110 to 220 VAC Redundant dual inputs
Operating Voltage	85 to 264 VAC
Input Current	1.1/0.72 A @ 110/220 VAC

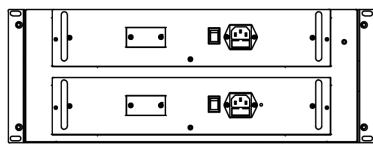
	Note: These are the input current ratings for the device with the maximum number of modules installed.
Power Consumption (Max.)	109.68/117.8 W @ 110/220 VAC Note: These are the power consumption ratings for the device with the maximum number of modules installed.
Total PoE Power Budget	Installed with IM-G7000A-4PoE Module: Maximum 1,440 W @ 48 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported
Physical Characteristics	
IP Rating	IP30
Dimensions	440 x 176 x 523.8 mm (17.32 x 6.93 x 20.62 in)
Weight	12900 g (28.5 lb)
Installation	Rack mounting
Environmental Limits	
Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Standards and Certifications	
Safety	EN 61010-2-201 UL 61010-2-201
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Railway	EN 50121-4
Freefall	IEC 60068-2-32
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
MTBF	
Time	282,329 hrs
Standards	Telcordia (Bellcore), GB
Warranty	
Warranty Period	5 years
Details	See www.moxa.com/jp/warranty

Package Contents

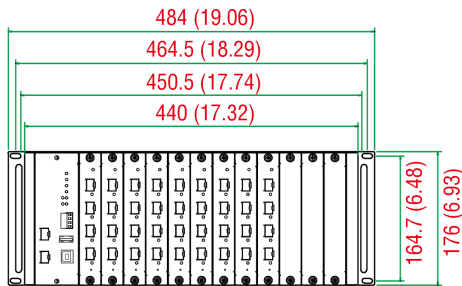
Device	1 x ICS-G7850A Series switch
Cable	1 x USB type A male to USB type B male
Installation Kit	2 x rack-mounting ear 6 x cap, plastic, for SFP slot
Power Supply	1 x power cord, EU type 1 x power cord, US type
Documentation	1 x quick installation guide 1 x warranty card
Note	48 V external power supply, SFP modules and/or modules from the IM-G7000A Module Series need to be purchased separately for use with this product.

寸法

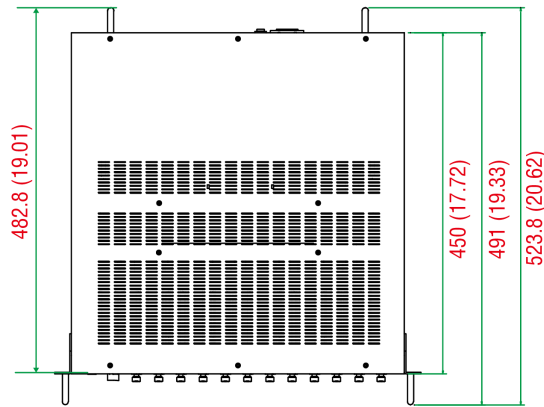
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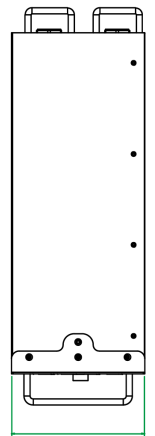
背面図



前面図



上面図



側面図

注文情報

Model Name	Layer	10GbE SFP+ Slots	100/1000Base SFP Slots	10/100/1000BaseT(X) Ports RJ45 Connector	Operating Temp.
ICS-G7850A-2XG-HV-HV	3	2	Up to 48	Up to 48	-10 to 60°C

アクセサリ (別売)

IM-G7000A Module Series

IM-G7000A-4GSFP	Gigabit Ethernet interface module with 4 100/1000BaseSFP slots, -10 to 60°C operating temperature
IM-G7000A-4GTx	Gigabit Ethernet interface module with 4 10/100/1000BaseT(X) ports, -10 to 60°C operating temperature
IM-G7000A-4PoE	Gigabit Ethernet PoE+ interface module with 4 10/100/1000BaseT(X) ports, -10 to 60°C operating temperature

Power Supplies

PWR-G7000A-AC	Power supply module (85 to 264 VAC) for ICS-G7748A/G7750A/G7752A/G7848A/G7850A/G7852A Series, -10 to 60°C operating temperature
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SFP Modules

SFP-1FELLC-T	SFP module with 1 100Base single-mode with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1FEMLC-T	SFP module with 1 100Base multi-mode, LC connector for 2/4 km transmission, -40 to 85°C operating temperature
SFP-1FESLC-T	SFP module with 1 100Base single-mode with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1G10ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G10ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G10BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G10BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 10 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G20ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G20ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G20BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G20BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 20 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1G40ALC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, 0 to 60°C operating temperature
SFP-1G40ALC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1310 nm, RX 1550 nm, -40 to 85°C operating temperature
SFP-1G40BLC	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, 0 to 60°C operating temperature
SFP-1G40BLC-T	WDM-type (BiDi) SFP module with 1 1000BaseSFP port with LC connector for 40 km transmission; TX 1550 nm, RX 1310 nm, -40 to 85°C operating temperature
SFP-1GEZXC	SFP module with 1 1000BaseEZXC port with LC connector for 110 km transmission, 0 to 60°C operating temperature
SFP-1GEZXC-120	SFP module with 1 1000BaseEZXC port with LC connector for 120 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, 0 to 60°C operating temperature
SFP-1GLHLC-T	SFP module with 1 1000BaseLH port with LC connector for 30 km transmission, -40 to 85°C operating temperature
SFP-1GLHXC	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, 0 to 60°C operating temperature
SFP-1GLHXC-T	SFP module with 1 1000BaseLHX port with LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-1GLSXC	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, 0 to 60°C operating temperature
SFP-1GLSXC-T	SFP module with 1 1000BaseLSX port with LC connector for 1km/2km transmission, -40 to 85°C operating temperature
SFP-1GLXC	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, 0 to 60°C operating temperature
SFP-1GLXC-T	SFP module with 1 1000BaseLX port with LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-1GSXC	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, 0 to 60°C operating temperature
SFP-1GSXC-T	SFP module with 1 1000BaseSX port with LC connector for 300m/550m transmission, -40 to 85°C operating temperature

SFP-1GZXL	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, 0 to 60°C operating temperature
SFP-1GZXL-T	SFP module with 1 1000BaseZX port with LC connector for 80 km transmission, -40 to 85°C operating temperature
SFP-1GTXRJ45-T	SFP module with 1 1000BaseT port with RJ45 connector for 100 m transmission, -40 to 75°C operating temperature
SFP-10GERLC-T	SFP+ module with 1 10GBase-ER port, LC connector for 40 km transmission, -40 to 85°C operating temperature
SFP-10GLRLC-T	SFP+ module with 1 10GBase-LR port, LC connector for 10 km transmission, -40 to 85°C operating temperature
SFP-10GSRLC-T	SFP+ module with 1 10GBase-SR port, LC connector for 33m/82m/300m/400m transmission, -40 to 85°C operating temperature
SFP-10GZRLC-T	SFP+ module with 1 10GBase-ZR port, LC connector for 80 km transmission, -40 to 85°C operating temperature

Power Cords

PWC-C7UK-2B-183	Power cord with United Kingdom (UK) plug, 2.5A/250V, 1.83 m
PWC-C7EU-2B-183	Power cord with Continental Europe (EU) plug, 2.5A/250V, 1.83 m
PWC-C7US-2B-183	Power cord with United States (US) plug, 10A/125V, 1.83 m
PWC-C13US-3B-183	Power cord with United States (US) plug, 1.83 m
PWC-C7AU-2B-183	Power cord with Australian (AU) plug, 2.5A/250V, 1.83 m
PWC-C13UK-3B-183	Power cord with United Kingdom (UK) plug, 1.83 m
PWC-C13CN-3B-183	Power cord with three-prong China (CN) plug, 1.83 m
PWC-C13AU-3B-183	Power cord with Australian (AU) plug, 1.83 m
PWC-C13EU-3B-183	Power cord with Continental Europe (EU) plug, 1.83 m

Software

MXview-50	Industrial network management software with a license for 50 nodes (by IP address)
MXview-100	Industrial network management software with a license for 100 nodes (by IP address)
MXview-250	Industrial network management software with a license for 250 nodes (by IP address)
MXview-500	Industrial network management software with a license for 500 nodes (by IP address)
MXview-1000	Industrial network management software with a license for 1000 nodes (by IP address)
MXview-2000	Industrial network management software with a license for 2000 nodes (by IP address)
MXview Upgrade-50	License expansion of MXview industrial network management software by 50 nodes (by IP address)

Storage Kits

ABC-02-USB	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature
ABC-02-USB-T	Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature

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