

Brève description

Micro-switch durci, 6 ports, switch GBE avec PoE/PoE+



Description

Les applications exigeant une robustesse et une fiabilité élevée, comme par exemple l'éclairage WLAN de grands espaces, l'automatisation des bâtiments ou la vidéo IP, ne nécessitent pas toujours des composants Ethernet industriels coûteux. Avec son Micro-Switch durci, MICROSENS offre une alternative extrêmement avantageuse.

Le Micro-Switch se distingue par sa conception compacte. Ainsi, il s'installe dans des espaces restreints, par exemple dans des boîtiers ou des tableaux de distribution de petite taille. Mesurant seulement 45 mm, le Micro-Switch s'intègre parfaitement dans des découpes standard et le support qui l'accompagne permet de le monter directement sur rails DIN. Par ailleurs, il existe en deux modèles, l'un vertical et l'autre horizontal.

Mais sa petite taille ne diminue en rien ses fonctionnalités ou ses performances. Cet appareil de 90 x 45 x 58 mm offre au total six ports Gigabit : cinq ports 10/100/1000Base-T pour la connexion de terminaux avec le Power-over-Ethernet+ (PoE+) conforme à la norme IEEE 802.3at, et un port uplink FO. Avec ses deux ports uplink FO, la version étendue permet de réaliser une topologie en anneau FO ou une liaison de terminaux redondante, pour une disponibilité accrue. Le Micro-Switch offre une plage de température élargie (-25 à +65 °C) ainsi que toutes les fonctionnalités de sécurité et d'administration présentées par la génération d'appareils industriels Ethernet de MICROSENS.

Caractéristiques

- Alternative économique à l'Ethernet industriel
- Un ou deux uplinks au choix (100/1000Base-X)
- Sécurité contre les pannes en réalisant des topologies en anneau via les ports TP/LWL
- Plage de température étendue pour une utilisation entre -25 et +65 °C
- Conception ultra-compacte
- Support pour rails DIN adapté à une installation directement dans les armoires électriques

Données techniques

Généralités

Type	Gigabit Ethernet Switch Layer 2+, IEEE 802.3 compliant
Performance	Store-and-forward, Full wire-speed, non-blocking on all ports
Adresses MAC	8,192 addresses, automatic learning and aging
Jumbo Frames	max. 10,240 bytes
VLAN	Tagging IEEE 802.3ac Priorisation IEEE 802.1p VLAN IDs 0..4095 256 VLANs Static and dynamic VLAN table VLAN-Modes: access, trunk, hybrid
Quality of Service	4 hardware-queues per port prioritisation according to: * IPv4/IPv6 * VLAN priority IEEE 802.1p * port queue weighting strict or weighted, configurable
Management	CLI: telnet, ssh Web: http, https SNMPv1, SNMPv2c, SNMPv3 MICROSENS NMP-Software
SD Card	optional microSD Memory-Card

Ports locaux (Twisted-Pair)

Nombre de ports	4
Type	Gigabit Ethernet, triple speed 10/100/1000Base-T
Connecteur	RJ-45 jack, shielded
Type de câble	Twisted-Pair cable, category 5e, impedance 100 Ohm, length max. 100 m
Flow Control	Pause frames (IEEE 802.3x), configurable
Position des broches	Auto MDI/MDI-X, auto polarity
Power-over-Ethernet	Power Sourcing Equipment (PSE) IEEE 802.3at and 802.3af, max. 30 W

Uplink (Twisted-Pair)

Nombre de ports	1x (MS450186PMXH-48G6+ & MS450187PMXH-48G6+)
Type	Gigabit Ethernet, triple speed

LED

Type	14 LEDs LED-Modes (generally): dynamic: LED display static states and blink when data is present on a port static: LED display static states but do not blink with data quiet: Display is reduced to sys and on LED. Port LEDs remain off dark: All leds are off
Power	Local ports 1 to 4: green: PoE sourcing blue: PoE+ active orange: PoE standby red: PoE error
Link	Local ports 1 to 4: blinking: activity green: authorized/forwarding orange: blocked red: unauthorized
Statut	Switch Status (S) green: device ready Status uplink (5) downlink (6) blinking: activity green: authorized/forwarding orange: blocked red: unauthorized Power Downlink(P) green: PoE sourcing blue: PoE+ active orange: PoE standby red: PoP error

Uplink (slot pour SFP)

Nombre de ports	1x (MS440209PMXH-48G6+ & MS440219PMXH-48G6+) & 2x (MS440207PMXH-48G6 & MS440217PMXH-48G6)
	Please use transceiver with extended temp. range, only!
Type	Fast/Gigabit Ethernet, 100/1000Base-X
Connecteur	SFP-Slot
Flow Control	Pause frames (IEEE 802.3x), configurable

Port de cascade (Twisted-Pair)

Nombre de ports	1
Type	Gigabit Ethernet, triple speed 10/100/1000Base-T

	10/100/1000Base-T
Connecteur	RJ-45
Type de câble	Twisted-Pair cable, min. category 5e, impedance 100 Ohm, length max. 100 m
Flow Control	Pause frames (IEEE 802.3x), configurable
Position des broches	Auto MDI/MDI-X, auto polarity
Power-over-Ethernet	Powered Device (PD) IEEE 802.3at and 802.3af, max. 30 W

Connecteur	RJ-45
Type de câble	Twisted-Pair cable, category 5e or higher, impedance 100 Ohm, length max. 100 m
Flow Control	Pause frames (IEEE 802.3x), configurable
Position des broches	Auto MDI/MDI-X, auto polarity
Power-over-Ethernet	Power Sourcing Equipment (PSE) IEEE 802.3at and 802.3af, max. 30 W

Champ d'affichage

Bouton Reset	Reset of device, last saved configuration is reloaded
Bouton Config	Pressed separately: Request IP-configuration for management agent. Pressed together with reset-button: Reset to factory default settings, can be disabled

Environnement

Température ambiante	-25°..+65°C
Température de stockage	-25°..+85°C
Humidité rel. Air	10..90%, non condensing

Alimentation (continue - DC)

Entrée	44..57 VDC (54 VDC typ.) For 802.at services 54VDC (min.) is required.
Consommation	typ. 4,5 W (withoutPoE) max. 80 W (incl. PoE)
Connecteur	3 pin screw clamp, PE/-/+ AWG 16
Mise à la terre (PE)	6.3 mm flat-pin plug

Boîtier

Dimensions	90 x 78,2 x 53,7 mm (l x w x d, without connectors)
Profondeur	34 mm (without DIN rail adapter)
Poids	350 g
Couleur	graphite grey
Montage	DIN rail holder
Indice de Protection	IP20

Fiabilité

MTBF	100.000 h
Méthode	calculated, MIL-HDBK-217F

Caractéristiques additionnelles

Software caractéristiques	- Dual Stack IPv4/IPv6 - Port Monitor - CDP v1, v2
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Emballage

Standard	1x Micro Switch 1x microSD Card (extra part-no.) 1x Grounding-cable, 20cm 1x Power plug 1x Quick Installation Guide 1x Set pictogram labels
En vrac	20x Micro Switch 20x microSD Card (extra part-no.) 20x Grounding-cable, 20cm 20x Power-plug 1x Quick Installation Guide 20x Set pictogram labels

Normes

CE	2004/108/EC (EMC) 2006/95/EG (Low Voltage)
Sécurité	EN 60950-1:2011-1
Emission	EN 55022:2011-12
Immunité	EN 55024:2011-09
IEEE (Ethernet)	802.3i 10Base-T 802.3u 100Base-T 802.3z 1000Base-X 802.3ab 1000Base-T 802.3az Energy Efficient

Ethernet
802.3x Flow Control
802.3ac VLAN Tagging
802.3af PoE
802.3at PoE+
802.1AB LLDP
802.1D Spanning Tree
802.1Q Tagged VLANs
802.1p Packet Prioritisation
802.1w Rapid Spanning Tree
802.1X Network Access Control

RFC

IPv4:
- RFC 791 (IPv4)
- RFC 826 (ARP)
- RFC 792 (ICMP)
- RFC 2131 (DHCP)
- RFC 2474/3260 (IPv4
DiffServ/IPv6 Traffic Class)
- RFC 4541 (IGMP)

IPv6:
- RFC 2460/2464/3484/3513
(IPv6)
- RFC 2462 (Address
Configuration)
- RFC 2463 (ICMPv6)
- RFC 2461 (Neighbor
Discovery Protocol)
- RFC 3315 (DHCPv6)
- RFC 3810/4604 (MLD)

- RFC 4330 (NTP)
- RFC 1155/1156/1157
(SNMPv1)
- RFC 1901/1905/1906
(SNMPv2)
- RFC 3411/3412/3584
(SNMPv3)
- RFC 2574/3414 (USM)
- RFC 2575/3415 (VACM)
- RFC 2865 (RADIUS)
- RFC 2866 (Accounting)
- RFC 2868 (Tunnel Attributes)
- RFC 5424 (Syslog)

Désignation

Description

N° article

Horizontal Design

Gigabit Ethernet ruggedized Micro-Switch, 4x10/100/1000T with 2x SFP-Uplink 100/1000X (dual speed), horizontal design, DIN-Rail holder, 44..57 VDC power input, manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 4x Power-over-Ethernet+ (PSE) **MS440207PMXH-48 G6**

Gigabit Ethernet ruggedized Micro-Switch, 4x10/100/1000T with 1x1000Base-X SFP Uplink and 10/100/1000T downlink, horizontal design, DIN-Rail holder, 44..57VDC power plug, manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 5x Power-over-Ethernet+ (PSE) **MS440209PMXH-48 G6+**

Gigabit Ethernet ruggedized Micro-Switch 45x45, 4x10/100/1000T with 2x 10/100/1000Base-T Up-&Downlink port, horizontal version, DIN-Rail holder, 44..57 VDC power plug, manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 5x PoE PSE / 1x PoE PD **MS450186PMXH-48 G6+**

Vertical Design

Gigabit Ethernet ruggedized Micro-Switch, 4x10/100/1000T with 2x SFP-Uplink 100/1000X (dual speed), vertical design, DIN-Rail holder, 44..57 VDC power input, manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 4x Power-over-Ethernet+ (PSE) **MS440217PMXH-48 G6**

Gigabit Ethernet ruggedized Micro-Switch, 4x10/100/1000T with 1x SFP-Uplink 100/1000X (dual speed), 1x 10/100/1000T Downlink, vertical design, DIN-Rail holder, 44..57 VDC power input, manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 4x Power-over-Ethernet+ (PSE) **MS440219PMXH-48 G6+**

Gigabit Ethernet ruggedized Micro-Switch 45x45, 4x10/100/1000T with 2x 10/100/1000Base-T Up-&Downlink port, vertical version, DIN-Rail holder, 44..57 VDC power plug, manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 5x PoE PSE / 1x PoE PD **MS450187PMXH-48 G6+**

Accessoires

Description	N° article
SFP Gigabit Ethernet 1000Base-SX, Multimode 850nm, digital Diagnostics, -40..85°C	MS100200DX
SFP Gigabit Ethernet 1000Base-LX, Monomode 1310nm, digital Diagnostics, -40..85°C	MS100210DX
MICROSENS Network Management Platform nmp professionnel - licence software + 1 an de updates	MS200160-1
MICROSENS Network Management Platform nmp professionnel - licence 1 an de updates	MS200161-n
MICROSENS Network Management Platform nmp standard - licence software + 1 an de updates	MS200162-1
MICROSENS Network Management Platform nmp standard - licence 1 an de updates	MS200163-n
MICROSENS Network Management Platform nmp Server - licence software + 1 an de updates, 5 clients	MS200164-1
MICROSENS Network Management Platform nmp Server - licence n an(s) de updates	MS200165-n
Pre-assembled outdoor housing (IP67 protection class), dimensions 100x410x120mm, incl. 2 DIN-Rails, 230 VAC cable clamp, prepared for 24VDC/1A input voltage, fiber connection cassette, 3 cut outs for cable entry (1xP G16 / 2x PG11), 1x additional cable entry possible (PG13), mounting device (wall or mast mounting), without Micro Switch	MS711000-24
Pre-assembled outdoor housing (IP67 protection class), dimensions 100x410x120mm, incl. 2 DIN-Rails, 230 VAC cable clamp, 48VDC/1.05A power supply, fiber connection cassette, 3 cut outs for cable entry (1xP G16 / 2x PG11), 1x additional cable entry possible (PG13), mounting device (wall or mast mounting), without Micro Switch	MS711000-230NT48
Pre-assembled outdoor housing (IP67 protection class), dimensions 100x410x120mm, incl. 2 DIN-Rails, prepared for 230 VAC input voltage, cable clamp, over voltage protection, fiber connection cassette, 3 cut outs for cable entry (1xP G16 / 2x PG11), 1x additional cable entry possible (PG13), mounting device (wall or mast mounting), without Micro Switch	MS711000-230

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