Data sheet
AFS670/675

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Configurator: AFS670/675

Configurator Description

Managed Fast/Gigabit Ethernet 19’ Switch with Layer 2 Software, upto 28 ports, custom configurable design, upto 24 Fast Ethernet ports with multiple media options and up to 2 or 4 additional Gigabit uplinks (RJ45 and/or SFP for fiber), Option for Power over Ethernet 4 ports, Option for ports on rear, Industrial fanless design

Technical Specifications

Product Description	
Description	Industrial managed Fast Ethernet Switch according to IEEE 802.3, 19" rack mount, fanless Design, Power over Ethernet 4 Ports, Store-and-Forward-Switching
Port type and quantity	GE 1 and 2: Combo (10/100/1000BASE-TX, RJ45 plus related 100/1000BASE-FX, SFP slot) \\\ GE 3 and 4: not available \\\ FE 1 and 2: 10/100BASE-TX, RJ45 \\\ FE 3 and 4: 10/100BASE-TX, RJ45 \\\ FE 5 and 6: 10/100BASE-TX, RJ45 \\\ FE 7 and 8: 10/100BASE-TX, RJ45 \\\ FE 9 and 10: 10/100BASE-TX, RJ45 \\\ FE 11 and 12: 10/100BASE-TX, RJ45 \\\ FE 13 and 14: 10/100BASE-TX, RJ45 \\\ FE 15 and 16: 10/100BASE-TX, RJ45 \\\ FE 17 and 18: 10/100BASE-TX, RJ45 \\\ FE 19 and 20: 10/100BASE-TX, RJ45 \\\ FE 21 and 22: 10/100BASE-TX, RJ45 \\\ FE 23 and 24: 10/100BASE-TX, RJ45
More Interfaces	
Power supply/signaling contact	Power supply 1: power supply 3-pin spring clip, signal contact 2-pin spring clip ; Power supply 2: power supply 3-pin spring clip, signal contact 2-pin spring clip
V.24 interface	1 x RJ11 socket
USB interface	1 x USB to connect Configuration Recovery Adapter CRA
Network size - length of cable	
Twisted pair (TP)	\\\ GE 1 and 2: 0-100 m \\\ FE 1 and 2: 0-100 m \\\ FE 3 and 4: 0-100 m \\\ FE 5 and 6: 0-100 m \\\ FE 7 and 8: 0-100 m \\\ FE 9 and 10: 0-100 m \\\ FE 11 and 12: 0-100 m \\\ FE 13 and 14: 0-100 m \\\ FE 15 and 16: 0-100 m \\\ FE 17 and 18: 0-100 m \\\ FE 19 and 20: 0-100 m \\\ FE 21 and 22: 0-100 m \\\ FE 23 and 24: 0-100 m \\\
Single mode fiber (SM) 9/125 µm	GE 1 and 2: cf. SFP modules M-FAST SFP or M-SFP \\\
Single mode fiber (LH) 9/125 µm (long haul transceiver)	GE 1 and 2: cf. SFP modules M-FAST SFP or M-SFP \\\
Multimode fiber (MM) 50/125 µm	GE 1 and 2: cf. SFP modules M-FAST SFP or M-SFP \\\
Multimode fiber (MM) 62.5/125 µm	GE 1 and 2: cf. SFP modules M-FAST SFP or M-SFP \\\
Network size - cascadibility	
Line - / star topology	any
Ring structure (E-MRP) quantity switches	10ms (10 switches), 30ms (50 switches), 40ms (100 switches), 60ms (200 switches)
Power requirements	
Current consumption at 230 V AC	Power supply 1: 170 mA max, if all ports are equipped with fiber ; Power supply 2: 170 mA max, if all ports are equipped with fiber
Operating voltage	Power supply 1: 110/250 VDC, 110/230 VAC ; Power supply 2: 110/250 VDC, 110/230 VAC
Power consumption	max. 103.5 W

Power output in BTU (IT)/h	max. 144
Software	
Switching	Disable Learning (hub functionality), Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Egress Broadcast Limiter per Port, Flow Control (802.3X), Jumbo Frames, VLAN (802.1Q), GARP VLAN Registration Protocol (GVRP), Double VLAN Tagging (QinQ), Voice VLAN, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier (v1/v2/v3)
Redundancy	Advanced Ring Configuration for MRP, E-MRP, Link Aggregation with LACP, Media Redundancy Protocol (MRP) (IEC62439-2), Redundant Network Coupling, Sub Ring Manager, RSTP 802.1D-2004 (IEC62439-1), MSTP (802.1Q), RSTP Guards, RSTP over MRP
Management	Dual Software Image Support, TFTP, LLDP (802.1AB), LLDP-MED, SSHv1, SSHv2, V.24, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet
Diagnostics	Management Address Conflict Detection, Address Relearn Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Port Monitoring with Auto-Disable, Link Flap Detection, Overload Detection, Duplex Mismatch Detection, RMON (1,2,3,9), Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, System Information, Self-Tests on Cold Start, Copper Cable Test, SFP Management, Configuration Check Dialog, Switch Dump
Configuration	Automatic Configuration Undo (roll-back), Configuration Fingerprint, BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port, DHCP Server: Pools per VLAN, DHCP Server: Option 43, Configuration Recovery Adapter (CRA), AFS Finder, DHCP Relay with Option 82, Command Line Interface (CLI), CLI Scripting, Full-featured MIB Support, Web-based Management, Context-sensitive Help
Security	IP-based Port Security, MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, RADIUS VLAN Assignment, Multi-Client Authentication per Port, MAC Authentication Bypass, Access to Management restricted by VLAN, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, SNMP Logging, Local User Management, Remote Authentication via RADIUS
Time synchronisation	SNTP Server, PTP / IEEE 1588 in software, realtime clock with energy buffer
Industrial Profiles	IEC61850 Protocol (MMS Server, Switch Model)
Miscellaneous	PoE (802.3AF), Manual Cable Crossing
Ambient conditions	
Operating temperature	-40-+85 °C
Storage/transport temperature	-40-+85 °C
Relative humidity (non-condensing)	5-95 %
Mechanical construction	
Dimensions (WxHxD)	448 x 44 x 310 mm (448 x 44 x 345 mm if power supply type M or L)
Weight	4.3 kg
Mounting	19" control cabinet
Protection class	IP30
Mechanical stability	
IEC 60068-2-6 vibration	1 mm, 2 Hz-13.2 Hz, 90 min.; 0.7 g, 13.2 Hz-100 Hz, 90 min.; 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min.; 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	8 kV contact discharge, 15 kV air discharge
EN 61000-4-3 electromagnetic field	20 V/m (80-2700 MHz); 1 kHz, 80% AM
EN 61000-4-4 fast transients (burst)	4 kV power line, 4 kV data line
EN 61000-4-5 surge voltage	DC power line: 2 kV (line/earth), 1 kV (line/line); AC power line: 4 kV (line/earth), 2 kV (line/line); 4 kV data line; IEEE1613: power line 5 kV (line/earth)
EN 61000-4-6 conducted immunity	10 V (150 kHz - 80 MHz)
EN 61000-4-12 damped oscillatory wave	2.5 kV (line/earth), 1 kV (line/line) (1MHz)

EN 61000-4-16 mains frequency voltage	30 V, 50 Hz continous; 300 V, 50 Hz 1 s
EMC emitted immunity	
EN 55032	EN 55032 Class A
FCC CFR47 Part 15	FCC 47CFR Part 15, Class A
Approvals	
Basis Standard	CE, FCC, EN61131
Safety of industrial control equipment	cUL 508
Substation	IEC 61850-3, IEEE 1613
Scope of delivery and accessories	
Scope of delivery	Device, Installation user manual

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