

## ALLNET Switch full managed industrial 4 Port Gigabit 4x Giga



### EAN CODE



### ALLNET Switch full managed industrial 4 Port Gigabit 4x Gigabit / 2x SFP / Lüfterlos / DIN / "ALL-SGI8104M"

This is an Ethernet switch with layer 2+ static routing capability, and advanced ITU-G.8032 ERPS Ring technology to improve the rapid self-recovery capability for critical network applications. LK4006P4C2F features 4 gigabit RJ45 ports + 2 gigabit SFP optical ports, all ports are in an IP40 rugged but compact-sized case, to meet the demands of industrial harsh environment and small space.

#### Features:

- Support spanning tree STP (802.1D) and RSTP (802.1W) and MSTP (802.1s)
- Support enhanced management through WEB, CLI, TELNET, SSH, SNMP.
- Support cable diagnosis
- Dual firmware backup
- Support G.8032 quick ring protocol. Self-recovery time <20ms
- Support IEEE1588 v2, transparent clock (TC)

This ALL-SGI8104M is an Ethernet switch with layer 2+ static routing capability, and advanced ITU-G.8032 ERPS Ring technology to improve the rapid self-recovery capability for critical network applications. ALL-SGI8104M features 4 gigabit RJ45 ports + 2 gigabit SFP optical ports, all ports are in an IP40 rugged but compact-sized case, to meet the demands of industrial harsh environment and small space.

#### Fast Recovery Redundant Ring for Critical Network Applications

The ALL-SGI8104M industrial managed switch supports redundant ring technology and features strong, rapid self-

recovery capability to prevent interruptions and external intrusions. It incorporates advanced G.8032 ERPS technology, Spanning Tree Protocol (802.1s MSTP), and redundant power input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a certain simple Ring network, the recovery time of data link can be as fast as 20ms.

### **588 Time Protocol for Industrial Computing Networks**

The ALL-SGI8104M network switch with 4 port gigabit is ideal for telecom and Carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.

### **Strong Layer 2 Features**

The ALL-SGI8104M can be programmed for advanced Layer 2 switch management functions such as dynamic port link aggregation, 802.1Q tagged VLAN, Q-in-Q VLAN, private VLAN, Multiple Spanning Tree Protocol (MSTP), QoS, bandwidth control, IGMP snooping and MLD snooping. Via the aggregation of supporting ports, the ALL-SGI8104M series allows the operation of a high-speed trunk group that comes with multiple ports and supports fail-over as well.

### **Efficient and Various Management Methods**

For efficient management, the ALL-SGI8104M management switch is equipped with console, Web and SNMP management interfaces.

With the built-in Web-based management interface, it offers an easy-to-use, platform-independent management and configuration facility.

For text-based management, it can be accessed via Telnet and the console port.

For standard-based monitor and management software, it offers SNMPv3 connection which encrypts the packet content at each session for secure remote management.

### **Intelligent SFP DDM Function**

The ALL-SGI8104M Ethernet switch supports SFP-DDM (digital diagnostic monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP transceivers, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.

### **Application**

#### **High Stability Networking Solution for Industrial Areas**

The ALL-SGI8104M features strong, rapid, self-recovery capability to prevent interruptions and external intrusions. It incorporates ITU-T G.8032 ERPS (Ethernet Ring Protection Switching) into customer's automation network to enhance system reliability and uptime. The ALL-SGI8104M DIN-rail series is the ideal solution for data centers, service providers and telecoms to build redundant connection and establish high bandwidth for Big Data server farm.

#### **Network Extension Deployment Solution**



With its additional 1000BASE-SX/LX SFP fiber optic Ethernet link capability, the administrator now can flexibly choose the suitable SFP transceiver according to the transmission distance or the transmission speed required to extend the network efficiently. They are well suited for applications to uplink to backbone switch and monitoring center in long distance.

## Technical Details:

### Specifications

Model	ALL-SGI8104M
Copper Ports	4-10/100/1000BASE-T RJ45 auto-sensing ports
Fiber Ports	2-100/1000BASE-T SFP interfaces, supports 100/1000Mbps dual mode
Console Ports	1 x RS-232-to-RJ45 serial port (115200, 8, N, 1)
Switch Architecture	Store-and-Forward
Switch Fabric	12Gbps/non-blocking
Throughput	8.928Mpps @64 bytes
Address Table	8K entries
Share Data Buffer	4.1 Mb
Jumbo Frame	9216 Bytes
SDRAM	1Gb
Flash Memory	128Mb
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Reset Button	>2 sec.: Factory default and reset
Power Supply	12~48 VDC, 50/60Hz, Dual DC
LED Indicators	Power: Green  Solid on—power work normal, off—power disconnected  System: Green  Blink—work normally, solid on—soft work abnormal, fast blink—soft upgrade  10/100/1000T RJ45 Interfaces (Port 1 to Port 4): 1000 LNK/ACT (Green),  10/100 LNK/ACT (yellow),  Blink—port connected with data transmission; Solid on—port connected



	without data transmission  100/1000Mbps SFP Interfaces (Port 5 to Port 6): Green  Blink- port connected with data transmission; Solid on- port connected  without data transmission
EMC	Surge Immunity: 6KV Per: IEC61000-4-5  ESD Protection: ESD Level 4 Per: IEC61000-4-2;  EFT Level 4 Per: IEC61000-4-4
Dimension	145x112x47.2mm
Weight	0.6kg
Working Temperature	-40°C to 75°C
Storage Temperature	-40? to 80 ?
MTBF	50,000hrs

## Layer 2 functions

Port configuration	Auto-negotiation  Flow Control  Port Mirror: TX/RX/BOTH; Many-to-1 monitor  CPU Mirror  Traffic statistics
Link Aggregation	Static link aggregation  LACP(Dynamic Trunk/Static Trunk)  Algorithm based on Source/Destination MAC  Algorithm based on Source/Destination IP
MAC Table	Aging Time  Static MAC address  Dynamic MAC address management
VLAN	4094 Active VLANs  4094 VID

	802.1Q Tag VLAN Port VLAN Protocol VLAN MAC VLAN Voice VLAN 802.1ad Q-in-Q tunneling Private VLAN (Protected port) GARP/GVRP
ACL	256ACLs L2, L3 e L4 Time-based ACL IP ACL MAC ACL MAC-IP ACL User-Defined ACL ICMPv6
Spanning tree	802.1D Spanning Tree Protocol (STP) 802.1w Rapid Spanning Tree Protocol (RSTP) 802.1s Multiple Spanning Tree Protocol (MSTP) Loop Guard Root Guard TC-BPDU Guard BPDU Guard BPDU Filter
Ring Protection	<20ms G.8032 ERPS Ring Fast Ring

	LINKOH Ring, < 20ms
Multicast	256 groups IGMP v1/v2/v3 Snooping, Fast Leave MLD Snooping Multicast VLAN IGMP filter MVR Multicast Routing
QOS	8 mapping IDs to 8 level priority queues CoS port-based CoS 802.1p-based CoS DSCP-based Scheduling algorithms SP, WRR, SP+WRR Storm Control (Broadcast, Multicast, Unknown Unicast) Bandwidth control per port SWRR, DWRR for Scheduling Flow Redirect Precedence TOS Rate Limiting(Ingress/Egress) Stri Priority
Security Features	Port Security MAC address filter ARP Association (Manual, ARP scanning, DHCP snooping) ARP Protection



	<p>AAA</p> <p>DAI</p> <p>DoS (Denial of Service)</p> <p>Classification of packages based on: End.MAC, IP End, TCP / UDP Ports,</p> <p>Protocol Type;</p> <p>802.1x Authentication (port-based e MAC-based)</p> <p>TACACS/TACACS+ Authentication</p> <p>RADIUS Authentication</p> <p>DHCP Filter</p> <p>Guest VLAN</p> <p>SSLv2/SSLv3/TLSv1</p> <p>SSHv1/SSHv2</p> <p>Restriction of WEB access based on: IP Address, And. MAC and Port;</p> <p>Port Isolation</p> <p>Loopback detection</p>
Management	<p>SNMP v1/v2c/v3 with Full Private MIBs</p> <p>RMON 4 groups</p> <p>WEB (HTTP/HTTPS)</p> <p>CLI (Telnet, Console, SSHv1/v2)</p> <p>Firmware upgrade via console/web/TFTP</p> <p>Configuration Backup/Reload</p> <p>Dual Firmware</p> <p>LLDP</p> <p>Configuration Export/Import</p>

	CDP Aware OAM (IEEE802.3ah) CFM (IEEE802.1ag) sFlow Telnet Client
Synchronization, IEEE1588	Support IEEE1588v2 transparent clock
Other Features	DNS Client DHCP Relay DHCP Client DHCP Snooping DHCP Option 66 DHCP Option 67 DHCP Option 82 NTP/SNTP Client UPNP UDLD
PoE management	Total PoE power budget control Per port PoE function enable/disable PoE admin-mode control PoE port power feeding priority Per PoE port power limitation PD classification detection PD alive check PoE schedule Soft-reboot PoE Non-stop



Maintenance	Cable Diagnostics Ping SFP DDM (Digital Diagnostics Monitoring) Thermal protection System log (Local and Remote) Memory and CPU Monitoring Tracert/ Tracert 6
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### Layer 3 functions

Static Routing	IPv4 Unicast: Static Routing (Software Base) IPv6 Unicast: Static Routing (Software Base)
IPV6	IPv6 neighbor discovery (ND) Path maximum transmission unit (MTU) discovery Internet Control Message Protocol (ICMP) version 6 TCPv6/UDPv6 Ping6 Telnet(v6) Http/Https Interface IPV6 ACL IPV6

## Attributes

Attribute	Value
Anzahl Ports PoE/LAN:	4/0
Belüftung Switch:	Lüfterlos
Einsatzort Switch:	Industrial DIN



Attribute	Value
LAN Geschwindigkeit:	1Gbit/s
Management:	full managed
PoE Budget:	<200 Watt
PoE Port Leistung:	30W at
SFP Geschwindigkeit:	SFP 1GBit
Weight:	0.9 Kg
Warranty:	24 Months

## Accessories

Part No.	Name
128033	ALLNET Switch Modul ALL4750-INDU SFP(Mini-GBIC), 1000Mbit MM
128034	ALLNET Switch Module ALL4751-INDU SFP(Mini-GBIC), 1000Mbit,
140675	ALLNET Switch Module ALL4765 SFP(Mini-GBIC), 1000Mbit
134034	ALLNET ALL-B100-24VDC / Power-Booster 24VDC to 48~55VDC 90W
140523	Mean Well power supply - 48V 75W DIN rail, narrow
140523	Mean Well power supply - 48V 75W DIN rail, narrow
140522	Mean Well power supply - 48V 120W DIN rail, narrow
131244	Mean Well power supply - 48V 240W DIN rail
146994	Mean Well Power Supply - 48V 480W DIN Rail
140955	TP(RJ45) POE-Tester, at/af, Endspan/Midspan, standard, Synergy 21,
200364	ALLNET 19"zbh. Gerätehalter für Hutschiene/DIN-Rail Geräte, T150mm/5HE, Lichtgrau, Frontmontage,
193038	ALLNET DIN-RAIL Wandgehäuse, T223mm, Lichtgrau, IP55, SO-DIN-Serie,
193039	ALLNET 19"Wandgehäuse, 6HE, T488mm, Lichtgrau, IP55, SO-Serie, incl. 2-Fach Lüftereinheit
193040	ALLNET 19"Wandgehäuse, 9HE, T488mm, Lichtgrau, IP55, SO-Serie, incl. 2-Fach Lüftereinheit
193041	ALLNET 19"Wandgehäuse, 12HE, T488mm, Lichtgrau, IP55, SO-Serie, incl. 2-Fach Lüftereinheit