

Gigabit Managed PoE Switches

GA-ML series offers a highly reliable environment, by high durability and management functions.

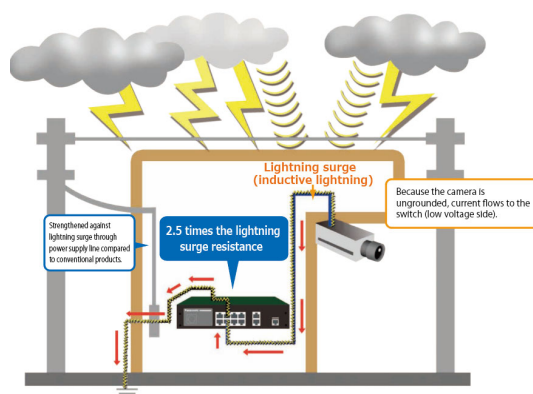
High Durability

-Strengthened lightning surge resistance 10KV

Surge protection devices (SPD) are installed on all UTP ports. Lightning-induced surges from the UTP port side are diverted to ground.

This results in a surge resistance of 10KV* — 2.5 times more durable than conventional models (based on our testing methods).

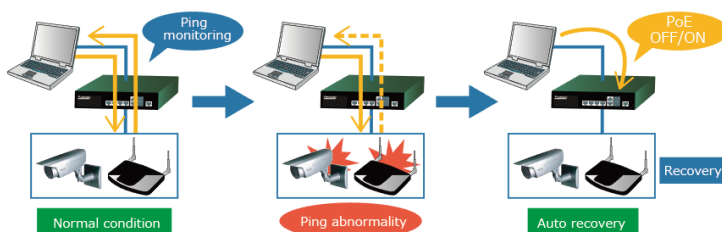
-Operating Temperature up to 60°C or 50°C



Management

-PoE Automatic Reboot

If there is no ping response from network cameras or wireless LAN access points, PoE power supply is automatically turned OFF then ON again, rebooting the network cameras or wireless LAN access points.



-PoE Timer Application /PoE Scheduler Function

The "PoE Timer Application" (free) lets you schedule power supply via PoE. You can save power consumption by not supplying power to devices such as IP phones and wireless LAN access points when they are not in use.

PoE (Power over Ethernet)

-IEEE802.3at
PoE Plus 30W power distribution compatible



Key Features

Original

•Port side lightning surge resistance

10KV

•PoE Automatic Reboot

•PoE Timer Application / PoE Scheduler Function

•IP address Easy Setup

The IP addresses for Panasonic cameras and switches can be set up together, through a single configuration screen.

•Loop detection – breaking and History Functions

If a loop is detected, the relevant ports are shut down to prevent disruption from looped connections. LEDs indicate ports for which loops have occurred within the past 3 days.

•Spanning Tree

- ✓ IEEE 802.1D
Spanning Tree Protocol,
Rapid Spanning Tree Protocol
- ✓ IEEE 802.1Q
Multiple Spanning Tree Protocol
- ✓ BPDU guard

•VLAN

- ✓ IEEE802.1Q
- ✓ Private VLAN
- ✓ MAC-based VLAN
- ✓ Subnet based VLAN
- ✓ Protocol-based VLAN
- ✓ Number of VLAN registrations:
4,094 (including default)
- ✓ Asymmetric VLAN
- ✓ Voice VLAN (LLDP-MED)
- ✓ Dynamic VLAN
- ✓ Guest VLAN
- ✓ Internet mansion function

•Link aggregation

- ✓ IEEE802.3ad
Link Aggregation function
(LACP/Manual)

•SPAN,RSPAN

- ✓ Subject port traffic can be copied and transmitted to designated ports (multiple subject ports can be designated)
- ✓ Remote switching packets can be monitored via RSPAN.

•QoS

- ✓ IEEE802.1p
-8 levels
- ✓ Scheduling Method:
Strict Priority Queuing
(SPQ: Strict priority queuing)
Weighted Round Robin
(WRR: Weighted round robin scheduling)
Weighted Deficit Round Robin
(WDRR: Weighted Deficit Round Robin
scheduling)

•Authentication Function

- ✓ IEEE802.1X
Port-based authentication
- ✓ Mac-based authentication
using IEEE 802.1X
- ✓ Dynamic VLAN function
using IEEE 802.1X
- ✓ Guest VLAN using IEEE 802.1X
(EAP-MD5/TLS/PEAP
Authentication method)
- ✓ IEEE802.1X supplicant
- ✓ Force Authorized MAC Address
Configuration
- ✓ EAP Packet Forwarding function
(Enable/disable EAP transmission can be
specified for each port.)
- ✓ MAC authentication
- ✓ WEB authentication
- ✓ Triple authentication
IEEE802.1X MAC-based/MAC/WEB
authentication can be simultaneously
- ✓ Step authentication
authentications can be combined in
phases
- ✓ MAC-WEB authentication
- ✓ MAC-802.1X authentication
- ✓ 802.1X-WEB authentication

• PoE power supply function

- ✓ IEEE802.3af / IEEE802.3at
Maximum power
supplied to a port: 30 W
- ✓ Supply method :
Alternative A

• Ring redundant protocol

- ✓ Redundancy is enabled by ring
configuration.

• Multicast

- ✓ IGMP snooping (IGMPv1/v2/v3)
- ✓ IGMP Querier function
- ✓ MLD snooping (MLDv2) function
- ✓ Multicast filtering function

•Other

- ✓ Port grouping
- ✓ Silent fan control
- ✓ Access control
- ✓ Time setting
- ✓ Storm control function

•Industry-standard CLI

Specifications

PN262493·PN261693·PN260893·PN260493N·PN262492·PN260893H·PN260493H

Product Name (Prodct No.)	10/100/1000T	SFP	PoE Port	Max Power Supply	Size(H×W×D)	Fan	Operation Temp
GA-ML24TPoE+ (PN262493)	28 24+4 combo	4	24	370W	44×440×387mm	Yes	0-50°C
GA-ML16TPoE+ (PN261693)	20 16+4 combo	4	16	250W	44×330×230mm	Yes	0-50°C
GA-ML8TPoE+ (PN260893)	10 8+2 combo	2	8	124W	44×210×260mm	Yes	0-50°C
GA-ML4TPoE+ (PN260493N)	6 4+2 combo	2	4	62W	44×210×260mm	Fanless	0-50°C
GA-ML24TCPoE+ (PN262492)	28 24+4 combo	4	24	185W	44×440×254mm	Yes	0-50°C
GA-MLi8TPoE+ (PN260893H)	10 8+2 combo	2	8	124W	44×210×260mm	Yes	0-60°C
GA-MLi4TPoE+ (PN260493H)	6 4+2 combo	2	4	62W	44×210×260mm	Yes	0-60°C

Interface**Twisted pair port:**

RJ45 connector

Transmitting and receiving network system :IEEE802.3 10BASE-T
IEEE802.3u 100BASE-TX
IEEE802.3ab 1000BASE-T**SFP extension slot:**

IEEE802.3z 1000BASE-X

Switching mode**Packet transfer capability:** Non-blockingMax 14,880pps/port (10Mbps)
Max 148,800pps/port (100Mbps)
Max 1,488,000pps/port (1000Mbps)**MAC Address table :** Max 16K entry/unit**Buffer memory:** 2M Byte/unit**Transmittable frames:** EAP·BUDU**Software Specifications****Agent:****Management protocol :**SNMP v1/v2c /v3
RFC 1157, RFC 1901, RFC 3411, RFC 3412,
RFC 3413, RFC 3414, RFC 3415, RFC 3416**TELNET**

RFC 854, RFC 855

SSH v2RFC 4252, RFC 4253, RFC 4254, RFC 4716,
RFC4419**Data transfer protocol :**

TFTP (RFC 783, RFC 1350)

Loop detection:

Turns on the port LED with a orange light when a loop occurs in the corresponding port. At this time, the relevant port automatically shuts down (default setting: 60 sec.) to prevent loop from occurring. During loop is occurring, or if loop has occurred within the latest 3 days, LOOP HISTORY LED blinks to notify this.

Supported MIB:

RFC1213-MIB (MIB II) (RFC 1213) (※1)
BRIDGE-MIB (RFC 4188) (※2)
SNMPv2-MIB (RFC 1907)
RMON-MIB (RFC 2819) only etherStatsTable
SNMP-FRAMEWORK-MIB (RFC 2571)
SNMP-MPD-MIB (RFC 2572)
SNMP-NOTIFICATION-MIB (RFC 2573N)
SNMP-TARGET-MIB (RFC 2573T)
SNMP-USER-BASED-SM-MIB (RFC 2574)
SNMP-VIEW-BASED-ACM-MIB (RFC 2575)
SNMP-COMMUNITY-MIB (RFC 2576)
IP-MIB (RFC 4293) (※3)
IF-MIB (RFC 2863) excluding IfMIB
IEEE8021-PAE-MIB excluding dot1xPaeSupplicant
*1 Excluding following item At , ipRouteTable, icmp, egp
*2 Excluding following item dot1dStp, dot1dSr, dot1dStatic
*3 Excluding following item ipDefaultRouterTable,
ipv6RouterAdvertTable

System log:

Transfers system logs to the Syslog server (IPv4/IPv6)

Others:**Syslog Client**

(Transfers system logs to the Syslog server.)

TFTP Client

(Upgrades the software and saves/loads configuration information.)

SNTP Client**TELNET Client****DHCP Client****LLDP****LLDP-MED****DNS Resolver****DHCP Snooping****DDM****Statistics****sFlow****Ethernet OAM****CFM****UDLD (Scheduled to be supported)**

Rated

Power supply:

AC100-240V, 50/60Hz, 2.0A(with a built-in power supply)

Environmental Conditions

EMC compliance:

CISPR 32 Class A

EN 55032 Class A

AS/NZS CISPR32 Class A

VCCI Class A

EN 61000-3-2, EN 61000-3-3

EN 55024

IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4,

IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8,

IEC 61000-4-11

Safety compliance:

IEC 62368-1 EN 62368-1

Environment compliance:

RoHS compliant

Operation environment

Temperature: 0 - 50°C

Humidity: 20 - 80%RH (no condensation)

<PN260893H·PN260493H>

Temperature: 0 - 60°C








Humidity: 20 - 80%RH (no condensation)

Optional Accessories

1000BASE-SX SFP Module(i) (PN54022)

1000BASE-LX SFP Module(i) (PN54024)

Lineup

	GA-ML24TPoE+ (PN262493) 10/100/1000T × 28 (24+4combo) SFP × 4 PoE × 24 370W PoE Budget
	GA-ML16TPoE+ (PN261693) 10/100/1000T × 20 (16+4combo) SFP × 4 PoE × 16 250W PoE Budget
	GA-ML8TPoE+ (PN260893) 10/100/1000T × 10 (8+2combo) SFP × 2 PoE × 8 124W PoE Budget
	GA-ML4TPoE+ (PN260493N) 10/100/1000T × 6 (4+2combo) SFP × 2 PoE × 4 62W PoE Budget
	GA-ML24TCPoE+ (PN262492) 10/100/1000T × 28 (24+4combo) SFP × 4 PoE × 24 185W PoE Budget
 0-60°C	GA-MLi8TPoE+ (PN260893H) 10/100/1000T × 10 (8+2combo) SFP × 2 PoE × 8 124W PoE Budget
 0-60°C	GA-MLi4TPoE+ (PN260493H) 10/100/1000T × 6 (4+2combo) SFP × 2 PoE × 4 62W PoE Budget