

# Gigabit Managed Access/Edge Switches

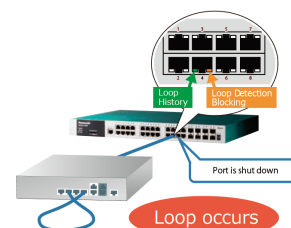
eG series offers superior connectivity at the network edge or access layer,  
Simple management function

## Prevent looping faults

-Loop Detection/breaking and History Function

If a loop is detected, the relevant ports are shut down to prevent disruption from looped connections.

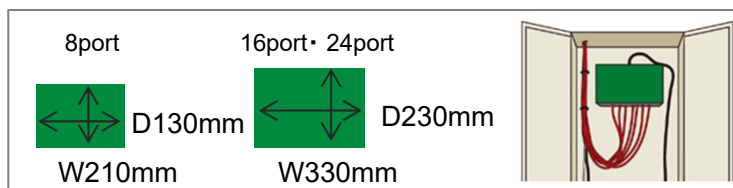
LEDs indicate ports for which loops have occurred within the past 3 days.



## Excellent install ability

-Compact body(Excluding 48 ports)  
Can be installed on Storage board

-Fan less (Excluding 48 ports)  
-Operating Temperature up to 60°C or 50°C



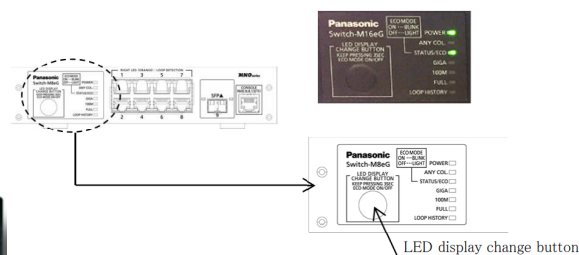
## Quick situation grasp

-LED display change button

You can display connection status using the LED display change button. It helps to understand the situation.

Also if you select ECO mode, you can turned off All port LEDs.

Display mode	Behavior	Description
STATUS/ECO	Green Light Green Blink Off	Link is established Transmitting and receiving data. No device connected.
GIGA	Green Light Off	Link is established at 1000Mbps. Link is established at 100Mbps or 10Mbps , or no device is connected.
100M	Green Light Off	Link is established at 100Mbps. Link is established at 1000Mbps or 10Mbps , or no device is connected.
Full	Green Light Off	Link is established at full-duplex. Link is established at half-duplex or or no device is connected.
LOOP HISTORY	Green Light Off	Loop has been detected within the last 3 days. No loop detection history.



## Key Features

### Original

- **Loop detection – breaking and History Functions**
- **LED display change button**

### • IP address Easy Setup

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

### • VLAN

- ✓ IEEE802.1Q Tag VLAN Protocol
- ✓ Port Base VLAN
- ✓ Number of VLAN registrations: 256 (including default)
- ✓ Internet Mansion function  
You can configure a complex setting such as dividing VLAN port one with a single click

### • Trunking

- ✓ IEEE802.ad  
Link Aggregation function (STATIC)

### • Port Monitoring

- ✓ Traffic of the target port can be copied to the specified port and transmitted.

### • QoS

- ✓ IEEE802.1p  
4 levels of Priority Queue supported (Strict priority queuing )

### • Authentication Function

- ✓ IEEE802.1X Port-based authentication  
EAP-MD5/TLS/PEAP Authentication method
- ✓ Web-based authentication, Mac-based authentication using IEEE 802.1X
- ✓ Web-based authentication, Dynamic VLAN function using IEEE 802.1X
- ✓ Guest VLAN using IEEE 802.1X
- ✓ 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

### • Access control

- ✓ Access control can be controlled by the following parameters:
  - (1) IP address  
(Source or Destination)
  - (2) IPv6 address  
(Source or Destination)
  - (3) MAC address  
(Source or Destination)
  - (4) TCP/UDP port number  
(Source or Destination)
  - (5) VLAN ID
  - (6) IEEE 802.1p Priority
  - (7) DSCP
  - (8) Protocol
  - (9) ICMP type
  - (10) TCP SYN Flag

### • Time configuration

- ✓ SNTP-based time synchronization function
- ✓ Manual mode setting

### • Others

- ✓ FDB
- ✓ ARP table
- ✓ NDP table
- ✓ DDM (Digital Diagnostic Monitoring)
- ✓ Reboot (Normal/Default/Default-exceptIP)
- ✓ Statics
- ✓ IPv4 Ping Execution
- ✓ IPv6 Ping Execution
- ✓ Watch Dog Timer

**Specifications**

Product Name	Procut No	10/100/1000T	SFP	Size(H×W×D)	Fan	Operation Temp
<b>Switch-M48eG</b>	<b>PN28480K</b>	48 48+4 combo	4	44×440×322mm	Yes	0-50°C
<b>Switch-M24eG</b>	<b>PN28240K</b>	24 22+2 combo	2	44×330×230mm	Fanless	0-50°C
<b>Switch-M16eG</b>	<b>PN28160K</b>	16 14+2 combo	2	44×210×230mm	Fanless	0-50°C
<b>Switch-M8eG</b>	<b>PN28080K</b>	8	1	44×210×130mm	Fanless	0-50°C
<b>Switch-M24eGi</b>	<b>PN28240i</b>	24 22+2 combo	2	44×330×230mm	Fanless	0-60°C
<b>Switch-M16eGi</b>	<b>PN28160i</b>	16 14+2 combo	2	44×210×230mm	Fanless	0-60°C
<b>Switch-M8eGi</b>	<b>PN28080i</b>	8	1	44×210×130mm	Fanless	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-blocking

Max 14,880pps/port(10Mbps)  
 Max 148,800pps/port(100Mbps)  
 Max 1,488,000pps/port(1000Mbps)

**MAC Address table :**

Max 8K entry/unit  
 Max 16K entry/unit (PN28480K)

**Buffer memory:**

512K Byte/unit  
 1.5M Byte/unit (PN28480K)

Transmittable frames: EAP·BUDU

**Software Specifications****Agent:****Management protocol :**

SNMP v1/v2c /v3  
 (RFC1157,RFC1901, RFC1908)  
 TELNET (RFC854)  
 SSH v2  
 (RFC4251,RFC4252, RFC4253,RFC4254)

**Data transfer protocol :**

TFTP (RFC783,RFC1350)

**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 2233) Excluding IfMIB  
 IEEE8021-PAE-MIB (IEEE802.1X) 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:**

System log transfer (IPv4/IPv6)

**Others:**

Syslog Client  
 (Transfers system logs to the Syslog server.)  
 TFTP Client  
 (Upgrades the software and saves/loads configuration information.)  
 Login RADIUS  
 (login authentication function by the RADIUS server)

**Rated**

Power supply:

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

**Environmental Conditions**

EMC compliance:

CISPR 22 Class A

EN 55022 Class A

AS/NZS CISPR22 Class A

VCCI Class A

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

CISPR 24

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 60950-1 EN 60950-1

Environment compliance:

RoHS compliant

**Operation environment**

< PN28480K/PN28240K/PN28160K/PN28080K >

Temperature: 0 - 50°C

Humidity: 20 - 80%RH (no condensation)

<PN28240i·PN28160i·PN28080i>

Temperature: 0 - 60°C

Humidity: 20 - 80%RH (no condensation)

**Optional Accessories**

**For eG series**

[PN28480K/PN28240K/PN28160K/PN28080K]

1000BASE-SX SFP Module (PN54021K)








1000BASE-LX SFP Module (PN54023K)

**For eGi series**

[PN28240i/PN28160i/PN28080i]

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

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

Lineup	
eG Series	
	<b>Switch-M48eG PN28480K</b> 10/100/1000T × 48 (44+4combo) SFP × 4
	<b>Switch-M24eG PN28240K</b> 10/100/1000T × 24 (22+2combo) SFP × 2
	<b>Switch-M16eG PN28160K</b> 10/100/1000T × 16 (14+2combo) SFP × 2
	<b>Switch-M8eG PN28080K</b> 10/100/1000T × 8 SFP × 1
eGi Series	
 <b>0-60°C</b>	<b>Switch-M24eGi PN28240i</b> 10/100/1000T × 24 (22+2combo) SFP × 2
 <b>0-60°C</b>	<b>Switch-M16eGi PN28160i</b> 10/100/1000T × 16 (14+2combo) SFP × 2
 <b>0-60°C</b>	<b>Switch-M8eGi PN28080i</b> 10/100/1000T × 8 SFP × 1