



**EtherWAN**

[migrate-ed9.hellosanta.tw/products/ig5-rack-series](http://migrate-ed9.hellosanta.tw/products/ig5-rack-series) IG5 Rack Series

IG5 Rack Series

IEC 61850-3/IEEE 1613 Lite L3 Hardened Managed 24-port Gigabit and 4-port 1G/10G SFP+ Ethernet Switch





## Overview

EtherWAN's InfraGreEn IG5 Rack series managed switching platform that combines the advantages of Layer 3 routing protocols with robust management features and enhanced specifications. With support for static routing, Routing Information Protocol (RIP) v1/v2, OSPF and Virtual Router Redundancy Protocol (VRRP), these switches deliver outstanding flexibility and security in a high performance and cost-effective solution.

The IG5 Rack series providing effective modularity through a wide range of port combination options. Supports full 28 ports gigabit transmission, and supports SFP+ to achieve 10G speed. Mountable on a 1U rack, equipped with EtherWAN's Alpha-Ring self-healing technology, providing less than 15ms fault recovery time making it ideal for applications intolerant to interruption, promote stronger communication networks.

EtherWAN — "When Connectivity is Crucial."

## Highlights

### High Bandwidth and Versatility

- 24 full gigabit ports for high bandwidth connections
- 4 x 1G/10G SFP+ uplink ports for fiber connections
- 128 Gbps full duplex switching capacity
- Variant of optical and electrical port interface options

### Time Stamped Supported

- IEEE 1588v2
  - Available in all ports
  - Hardware-based time stamping
  - Operation as transparent clock

### Layer 3 Functionality

- Static routing, RIP v1/v2, and OSPF
- Redundancy with VRRPv2
- Reduces amount of broadcast traffic

### Flexible Rack Cabinet Installation

- Dual LED Panel design, support rear and front display
- Concise communication status display
- Considerable ease of cabling management

## Features





## Interface

- CLI, Telnet, Web GUI

## Management

- Firmware Upgrade
- Configuration Backup
- DHCP Server/Client
- RMON (Remote Monitoring)
- Port Mirroring
- NTP (Network Time Protocol) Synchronization
- LLDP (Link Layer Discovery Protocol)
- IPv4/IPv6
- SNMP v1/v2c/v3
- Modbus

## Security

- MAC Address Filtering
- Enable/Disable Port
- Storm Control
- System Logging
- IEEE 802.1x LAN Access Control
- Remote Authentication through RADIUS and TACACS+
- Complex Password Support
- Multi-user Login and Privileged Access Management
- SSH for CLI and Telnet Security
- SSL and HTTPS for Web Security
- ACL (Access Control List, up to 4096 Entries)

## Layer 2 Features

- **Auto-negotiation for Port Speed and Duplex**
- Flow Control
- IEEE 802.3x full duplex mode
- Back-pressure half duplex mode
  
- **Redundant Protocols**
- IEEE 802.1D STP
- IEEE 802.1w RSTP
- IEEE 802.1s MSTP
- EtherWAN's Alpha-Ring network fault recovery
  
- **VLANs**
- IEEE 802.1Q Tag VLANs
- GVRP
- GMRP
  
- **Link Aggregation**
- Static Trunk (4 groups)
- IEEE 802.3ad LACP
  
- **IGMP Snooping v1/v2/v3**

## Quality of Service (QoS)

- Priority Queues: 8 Queues Per Port
- Traffic Classification Based on IEEE 802.1p CoS (Cost of Service), DSCP (Differentiated Services Code Point), WRR (Weighted Round Robin), and Strict Mode
- Rate Limiting (Ingress/Egress)

## Software Properties and Performance

- **Switching Fabric**
  - 128Gbps
- **Forwarding Rate**
  - 95.23Mpps
- **Max VLANs**
  - 256 (4096 VID)
- **Jumbo Frame Size**
  - 9KB
- **MAC Table Size**
  - 16K
- **Packet Buffer Memory**
  - 12M bits

## Specifications







## Interface

- **Ethernet**

- 10/100/1000BASE-T(X): 0, 8, 16 or 24 ports
- 100/1000BASE SFP: 0, 8, 16 or 24 ports
- 1G/10G SFP+: 4 ports

- **Console**

- 1 x RJ45

- **Digital Input**

- 2 x Digital Input
- Wet Contact: 0-3V for State 0; 13-30V for State 1; Max input current: 8mA
- Dry Contact: Logic Level 1–Close to GND; Logic Level 0–Open

- **Alarm Contact**

- 2 x Relay output, current capacity  
0.6A/30VDC

- **LED Indicators**

- Per Unit: Power 1, (Single Power models)
- Power 2 (Dual Power models) (Green)
- Per Port: Link/Activity (Green)
- Per Port: Alarm (Red)

## Physical

- **Casing Material**

- Metal

- **IP Rating**

- IP40

- **Dimensions**

- 442 x 325 x 44mm (W x D x H)  
17.4" x 12.8" x 1.73"

- **Weight**

- 4.6kg (10.14lbs) / 4.0kg (8.82lbs)

- **Installation Type**

- Rack mounting

### Environmental

- **Operating Temp.**

- -40 to 75°C (-40 to 167°F)  
(-40°C to 85°C for IEC 60068-2-2 Environmental 16 hours)

- **Storage Temp.**

- -45 to 85°C (-49 to 185°F)

- **Relative Humidity**

- 5% to 95% (non-condensing)

- **MTBF**

- 446,556 hours





## Technology

- **Standards**

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX/100BASE-FX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3ae 10Gigabit Ethernet
- IEEE 802.3ad link aggregation control
- IEEE 802.3z 1000BASE-SX/1000BASE-LX
- IEEE 802.3x full duplex and flow control
- IEEE 802.1D STP
- IEEE 802.1p QoS
- IEEE 802.1Q Tag VLANs
- IEEE 802.1s MSTP
- IEEE 802.1w RSTP
- IEEE 802.1x PNAC
- IEEE 802.1ab LLDP

- **Forward/Filtering Rate**

- 14,880pps for 10Mbps
- 148,810pps for 100Mbps
- 1,488,100pps for 1000Mbps
- 14,881,000pps for 10Gbps

- **Processing Type**

- Store-and-forward
- Auto-negotiation
- Half-duplex back-pressure and full-duplex flow control
- Auto MDI/MDIX

- **System Memory**

- 2Gb DDR3 SDRAM

- **Flash Storage**

- 1Gb

## Regulatory

- **ISO**

- Manufactured in ISO-9001 facility

- **EMI**

- FCC Part 15B Class A
- VCCI Class A
- EN 61000-6-4

- **EMS**

- EN 61000-6-2
- EN 61000-4-2 (ESD)
- EN 61000-4-3 (Radiated RFI)
- EN 61000-4-4 (Burst)
- EN 61000-4-5 (Surge)
- EN 61000-4-6 (Induced RFI)
- EN 61000-4-8 (Magnetic field)

- **Safety**

- UL 62368-1

## Power

- **Input**
- **Dual Power**
  - FTR: (Terminal Block)
  - 24VDC to 48VDC (Nominal)
  - 18 - 60VDC (Operational)
  - FWR: (Terminal Block)
  - 100 - 250VDC or 100 - 240VAC (Nominal)
  - 88 - 300VDC or 88 - 264VAC (Operational)
  - RCR: (AC Inlet)
  - 100 - 240VAC
- **Single Power**
  - FWS: (Terminal Block)
    - 100 - 250VDC or 100 - 240VAC (Nominal)
    - 88 - 300VDC or 88 - 264VAC (Operational)
  - RCS: (AC Inlet)
    - 100 - 240VAC
- **Power Consumption**
  - 50W max.
- **Protection**
  - Reverse Polarity Protection

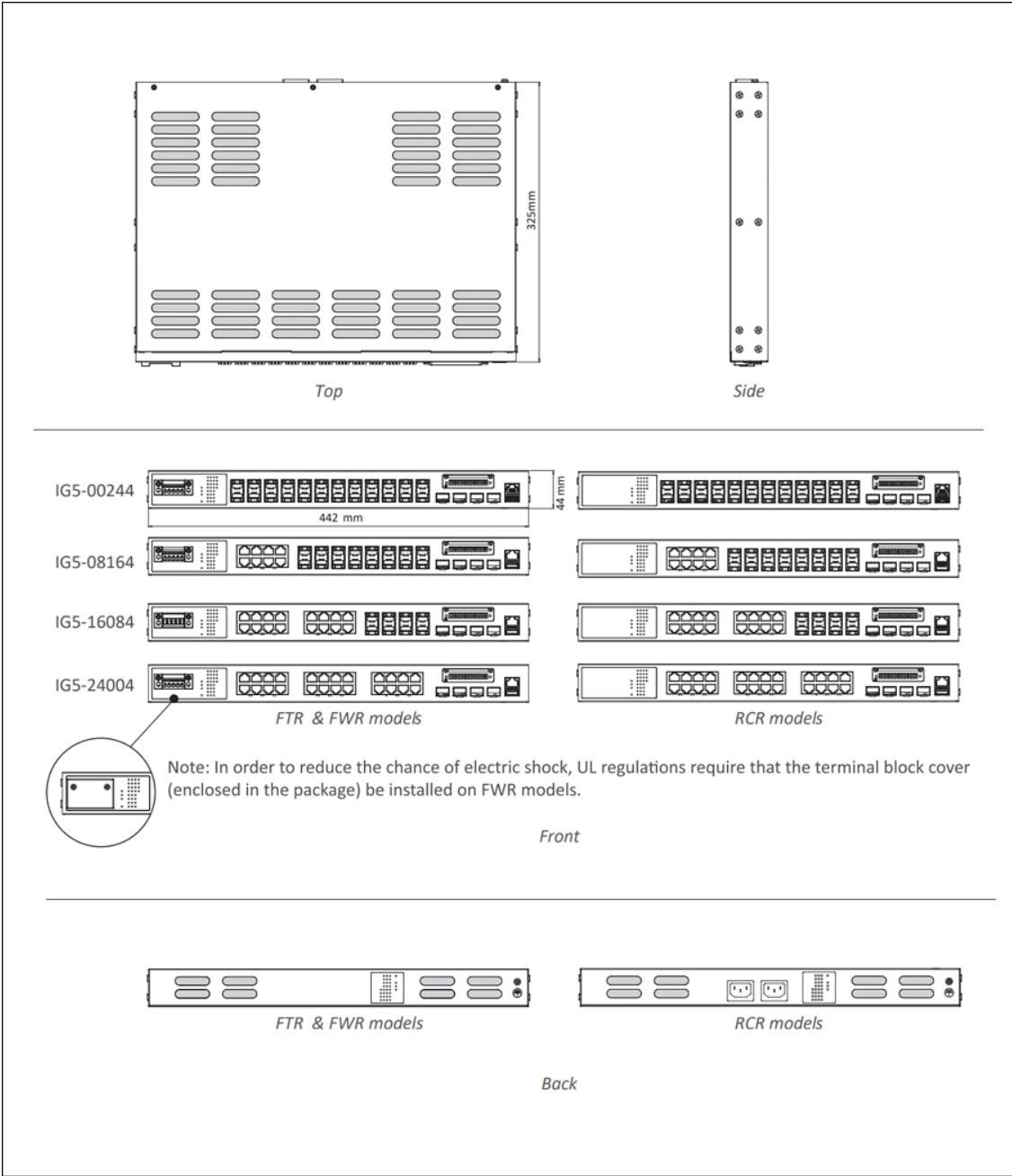
## Warranty

- **Length**
  - Limited Lifetime
- **Details**
  - [www.etherwan.com/support/warranty-policy](http://www.etherwan.com/support/warranty-policy)

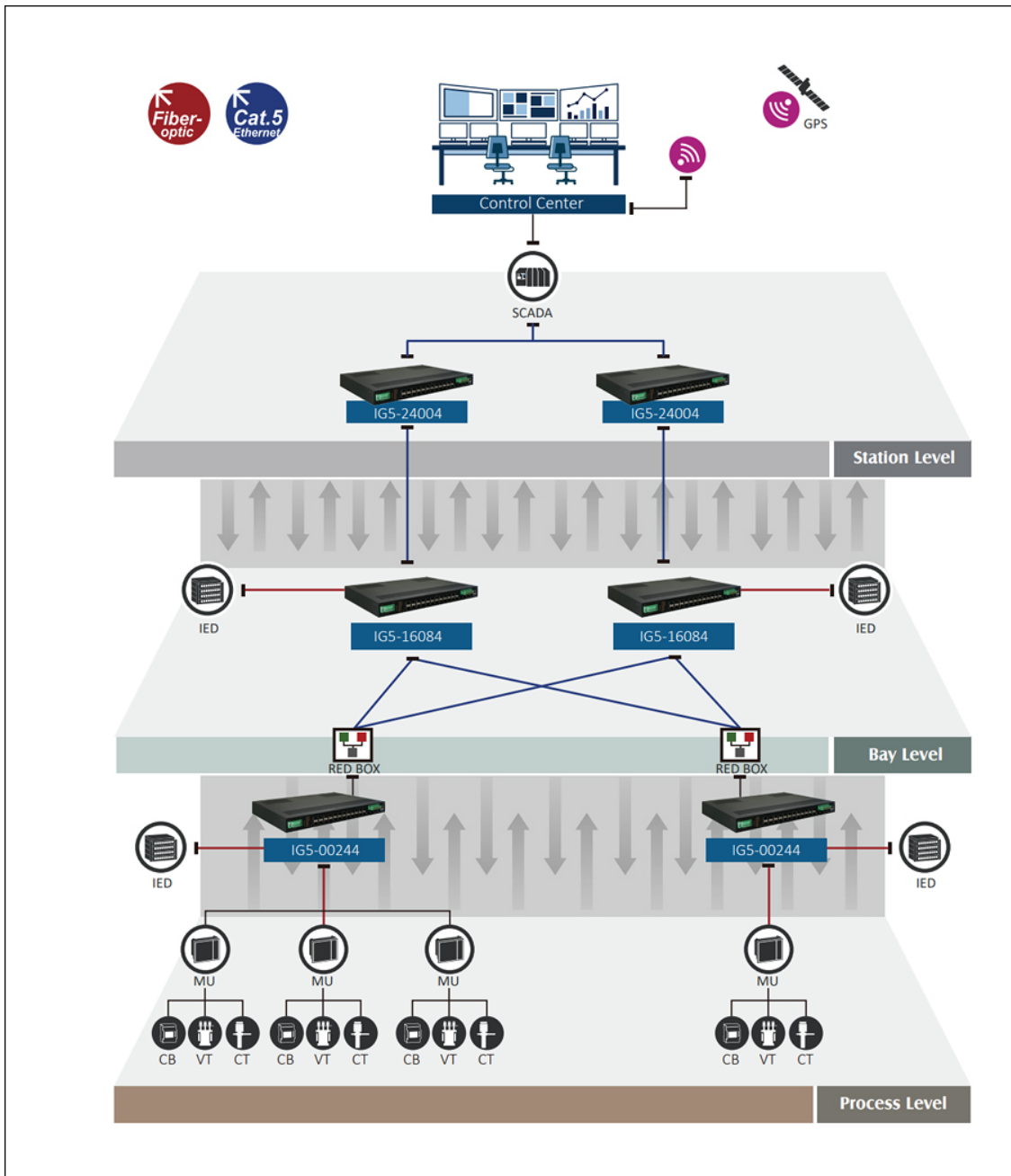
## What's Included

- **Device**
  - Ethernet Switch
- **Cables**
  - 1 Console Cable
- **Installation**
  - Mounting brackets, screws
- **Documentation**
  - Quick Install Guide
- **Power**
  - 1 AC Power Cord (RCS models)
  - 2 AC Power Cord (RCR models)

## Dimensions



Application



## Software

### **Network Management**

[eVue™ Network Configuration and Monitoring Tool](#)

### **Network Discovery**

[eLite™ Network Discovery and IP Configuration Tool](#)



**EtherWAN** Home Devices Batch Group Events Settings Screen Zoom Logout

**Device List**

IP	System Name	Group
192.168.50.12	EG99-5012	
192.168.50.62	EX709-5062	
192.168.50.254	R50	
192.168.50.11	EG99-5011	
192.168.50.63	EX74-5063	
192.168.50.14	EX779-5014	
192.168.50.61	EX71v2-5061	
192.168.50.44	EX71-5044	
192.168.50.64	EX73-5064	
192.168.50.34	EX739-5034	

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**Topology**

Online Offline Event

**Latest Events** 0 0 0

Acknowledged	ID	Severity	Time	Service	Node	Message
✓	5107	Normal	6/28/2019, 9:50:35 AM	login	server	User 'admin' logged in.
✓	5106	Normal	6/27/2019, 10:00:50 AM	login	server	User 'admin' logged in.
✓	5105	Major	6/24/2019, 1:18:23 PM	ping-monitor	192.168.1.19	Web 192.168.1.19 is down.
✓	5105	Major	6/24/2019, 1:18:23 PM	ping-monitor	192.168.1.19	Telnet 192.168.1.19 is down.
✓	5104	Normal	6/24/2019, 1:12:34 PM	login	server	User 'admin' logged in.

**eLite** List Server Firmware Configuration Help

IP Address	MAC Address
192.168.50.22	00:e0:b3:50:22:00
192.168.50.31	00:e0:b3:50:31:00
192.168.50.72	00:e0:b3:50:72:00
192.168.50.55	00:e0:b3:50:55:00
192.168.50.23	00:e0:b3:50:23:00
192.168.50.73	00:e0:b3:50:73:00
192.168.50.44	00:e0:b3:50:44:00
192.168.50.64	00:e0:b3:50:64:00
192.168.50.43	00:e0:b3:50:43:00
192.168.50.62	00:e0:b3:50:62:00
192.168.50.71	00:e0:b3:50:71:00
192.168.50.24	00:e0:b3:50:24:00

Ready

## Ordering Info

## Model

### **IG5-24004YYY**

24-port 10/100/1000BASE-T(X) + 4-port 1G/10G SFP+ Managed Ethernet Switch

### **IG5-16084YYY**

16-port 10/100/1000BASE-T(X) + 8-port 100/1000BASE SFP + 4-port 1G/10G SFP+ Managed Ethernet Switch

### **IG5-08164YYY**

8-port 10/100/1000BASE-T(X) + 16-port 100/1000BASE SFP + 4-port 1G/10G SFP+ Managed Ethernet Switch

### **IG5-00244YYY**

24-port 100/1000BASE SFP + 4-port 1G/10G SFP+ Managed Ethernet Switch

## Power Input & Operation Temp. (YYY)

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### **FTR**

24VDC to 48VDC Redundant (Terminal Block), Hardened Grade (-40 to 75°C)

### **FWR**

88-300VDC or 100-240VAC Redundant (Terminal Block), Hardened Grade (-40 to 75°C)

### **RCR**

100-240VAC Redundant (AC Inlet), Hardened Grade (-40 to 75°C)

### **FWS**

88-300VDC or 100-240VAC (Terminal Block), Hardened Grade (-40 to 75°C)

### **RCS**

100-240VAC (AC Inlet), Hardened Grade (-40 to 75°C)

## Accessories

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### Part Number

### Speed Info

### Mode

### Distance

### Operating Temperature

### Wavelength

### DDM

### **EX-0155NSP-MB2L-A**

100Mbps

Multi

2km

-40 to 85°C

1310nm

-

### **SFPMIS20M**

100Mbps

Single

20km

-40 to 85°C

1310nm

?

**SFPGIM5AM**

1000Mbps

Multi

275m/550m

-40 to 85°C

850nm

?

**SFPGIM02M**

1000Mbps

Multi

2km

-40 to 85°C

1310nm

?

**SFPGIS10M**

1000Mbps

Single

10km

-40 to 85°C

1310nm

?

**SFPTIM3AM**

10Gbps

Multi

300m

-40 to 85°C

850nm

?

**SFPTIM3AM**

10Gbps

Single

10km

-40 to 85°C

1310nm

?

**For more SFP, please visit website:**

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**Hardened 100BASE SFP Modules**

[www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)

**Hardened Gigabit SFP Modules**

[www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)

**Hardened 10G SFP+ Modules**

[www.etherwan.com/products/sfp-fiber-transceiver](http://www.etherwan.com/products/sfp-fiber-transceiver)

**DIN-Rail Power Supplies**

[www.etherwan.com/products/din-rail-power-supply](http://www.etherwan.com/products/din-rail-power-supply)



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