Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T

Making Network Connection Easy with 4G LTE Cellular Gateway

PLANET ICG-2510WG-LTE is a reliable, secure and high-bandwidth communications industrial-grade cellular gateway for demanding mobile applications, M2M (machine-to-machine) and IoT deployments. It features 4G LTE (Long Term Evolution), 2.4G/5G Wi-Fi, five Ethernet ports (4 LAN and 1 WAN), serial console port, DI and DO interfaces, and VPN technology bundled in a compact yet rugged metal case. It establishes a fast cellular connection between Ethernet and serial port equipped devices.

High-performance 4G LTE

The ICG-2510WG-LTE supports LTE 2x1 DL MIMO technology which can reach a download (DL) speed of up to 150Mbps and an upload (UL) speed of 50Mbps. The Cellular Gateway also supports multi-band connectivity including LTE FDD/ TDD, WCDMA and GSM for a wide range of applications.

Dual SIM Design

To enhance reliability, the ICG-2510WG-LTE is equipped with dual SIM slots that support failover and roaming over to ensure uninterrupted connectivity for mission-critical cellular communications. Besides, the ICG-2510WG-LTE supports load balance function to improve network efficiency. It provides a more flexible and easier way for users to create an instant network sharing service via 4G LTE whenever in public places like transportation, outdoor event, etc.

Benefits

- Dual module SIMs for network load balancing and redundancy
- Wi-Fi compliant IEEE 802.11b/g/n/ac dual-band for mobile client connectivity
- 5-port Gigabit Ethernet, built-in redundant VRRP protocol
- 2 DI, 1DO and 1 serial console port (RS232 or RS485) for Modbus applications
- Multiple VPNs with IPSEC, OpenVPN, PPTP, L2TP, GRE and VPN Failover
- Full security with VLAN, NAT, DMZ, static routing, firewall and IP/MAC/port filtering
- Supports CMS for remote management
- -35 to 75 degrees C operating temperature and fanless design
- GPS antenna allows to detect the location via sat nav system (for ICG-2510WG-LTE only)

Physical Port

- **Four 10/100/1000BASE-T** RJ45 LAN ports, auto-negotiation, auto MDI/MDI-X
- **One 10/100/1000BASE-T** RJ45 WAN port, auto-negotiation, auto MDI/MDI-X
- **Two** 4G LTE antennas
- **One** 2.4G/5G Wi-Fi antenna
- **Two** SIM card slots
- **One** GPS antenna
- **One** serial console port (RS232 or RS485)
- **One** reset button
- **One** MicroSD slot to save files for serial port data

Cellular Interface

- Supports multi-band connectivity with FDD LTE/ TDD LTE/ WCDMA/ GSM/ LTE Cat4
- Supports failover and load balancing
- Built-in SIM and broadband backup for network redundancy

GPS Included

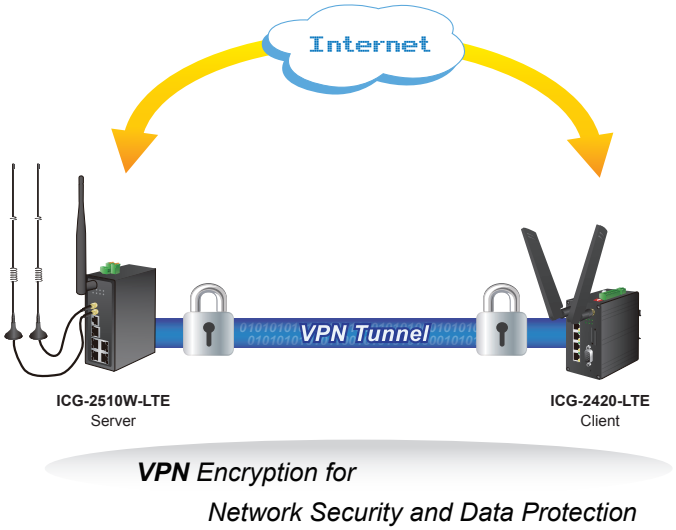
The ICG-2510WG-LTE is equipped with one convenient feature and that is GPS (global positioning system). It is a positioning system based on a network of satellites that continuously transmits necessary data. More signals transmitted from more satellites can triangulate its location on the ground, meaning any location can be easily tracked.

Dual-band WLAN Solution

PLANET ICG-2510WG-LTE, adopting the IEEE 802.11b/g/n/ac standard, provides a high-speed transmission of power and data, meaning two remote nodes in the 5GHz frequency band can be bridged. The 2.4GHz wireless connection can also be used simultaneously. The Wireless Protected Access (WPA/WPA2 with TKIP/AES) and Wireless Encryption Protocol (WEP) features enhance the level of transmission security and access control over wireless LAN.

Cost-effective VPN Solution

The ICG-2510WG-LTE provides a complete data security and privacy feature for access and exchange of sensitive data. The full VPN capability of the ICG-2510WG-LTE including built-in PPTP, L2TP, OpenVPN, GRE and IPSec VPN functions with DES/3DES/AES encryption and MD5/SHA-1/SHA-2 authentication makes the shared connection more secure and flexible. The IPSec VPN also makes the private tunnel over Internet more secure for enterprises doing business transactions.



***VPN** Encryption for*
Network Security and Data Protection

- Two detachable antennas for 4G LTE connection
- LED indicators for signal strength and connection status

Wi-Fi Interface

- Complies with IEEE 802.11b/g/n/ac 2.4/5GHz
- Supports AP, Client, Repeater and Repeater Bridge modes
- One detachable dual band antenna for wireless connection
- 64/128-bit WEP, WPA/WPA2 with TKIP/AES encryption
- LED indicator for connection status

Industrial Case and Installation

- IP30 metal case
- DIN-rail/desktop design
- Power requirement: 9~36V DC
- Supports EFT protection for 1.5KV DC power and 15KV DC Ethernet ESD protection
- -35 to 75 degrees C operating temperature

Digital Input and Digital Output

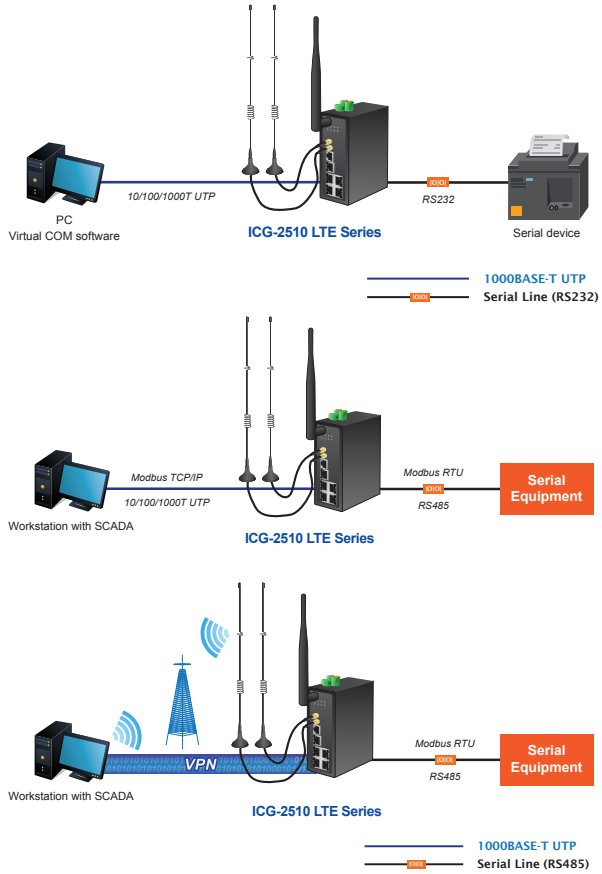
- 2 digital input (DI)
- 1 digital output (DO)
- 1 relay

Advanced Features

- Supports NAT, demilitarized zone (DMZ), port forwarding and virtual IP mapping
- Supports VLAN to improve the performance of a network or apply appropriate security features
- Supports static routing and dynamic routing for gateway and router operating modes
- Supports QoS to manage WAN bandwidth
- Supports PPTP, L2TP, OpenVPN, IPSec and GRE VPN modes
- Supports IPSec (3DES, AES128, AES256, MD5, SHA1, SHA2-256, SHA2-512)
- Supports TCP, UDP, TCP Server and Modbus TCP
- Supports Dynamic DNS and PLANET DDNS
- Provides firewall and access policy functions
- Supports WAN connection types: DHCP-4G, DHCP Client, Static IP, PPPoE Client, 3G Link1, 3G Link 2, DHCP-Backup 4G

Remote Manageable Solution for Ethernet to RS232/RS485 Application

PLANET ICG-2510WG-LTE's serial RS232/RS485 communication interface can be converted over the Fast Ethernet networking. It can operate as a virtual server or client where IP-based serial equipment can be managed. The ICG-2510WG-LTE helps save the network administrator's valuable time in detecting and locating network problems, rather than visual inspection of cabling and equipment.



- Secures network connection
  - WAN access
  - URL filter
  - Packet filter
  - MAC filter

Management

- Switch management interfaces
  - Console/Telnet Command Line interface
  - Web user interface management
  - SNMP v1, v2c
  - SSH secure access
- Keep Alive (schedule reboot)
- System Maintenance
  - Firmware upload via HTTP
  - Reset button for system reboot or reset to factory default
  - Configuration backup and restore
- System log
- Remote system log
- NTP (Network Time Protocol) client support
- Supports CMS to manage multiple devices

Superior Management Functions

For networking management features, the ICG-2510WG-LTE provides such functions as DHCP server, DMZ and port forwarding, as well as full secure functions including Network Address Translation (NAT), WAN access policy, URL/Packet/MAC filtering. The ICG-2510WG-LTE has 4G and WAN connection failover characteristics, which can automatically switch over to the redundant, stable WAN connection to keep users always online without missing any fascinating moments.

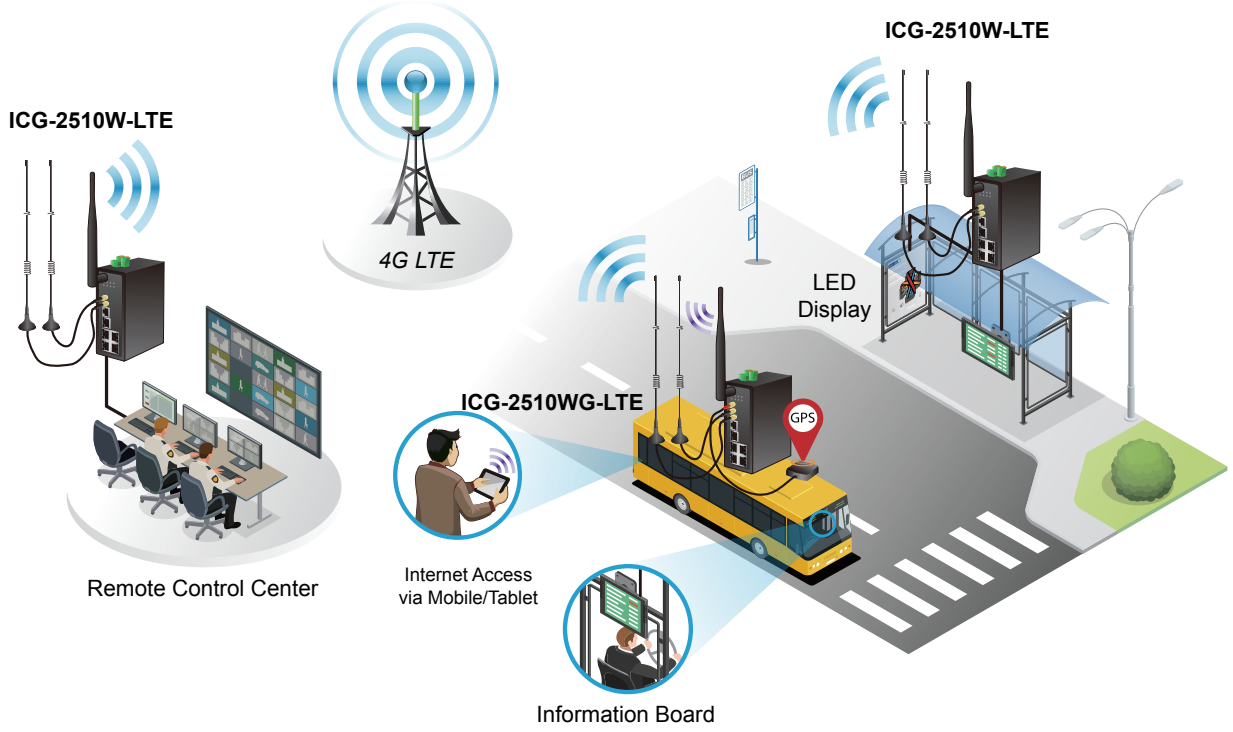
User-friendly and Secure Management

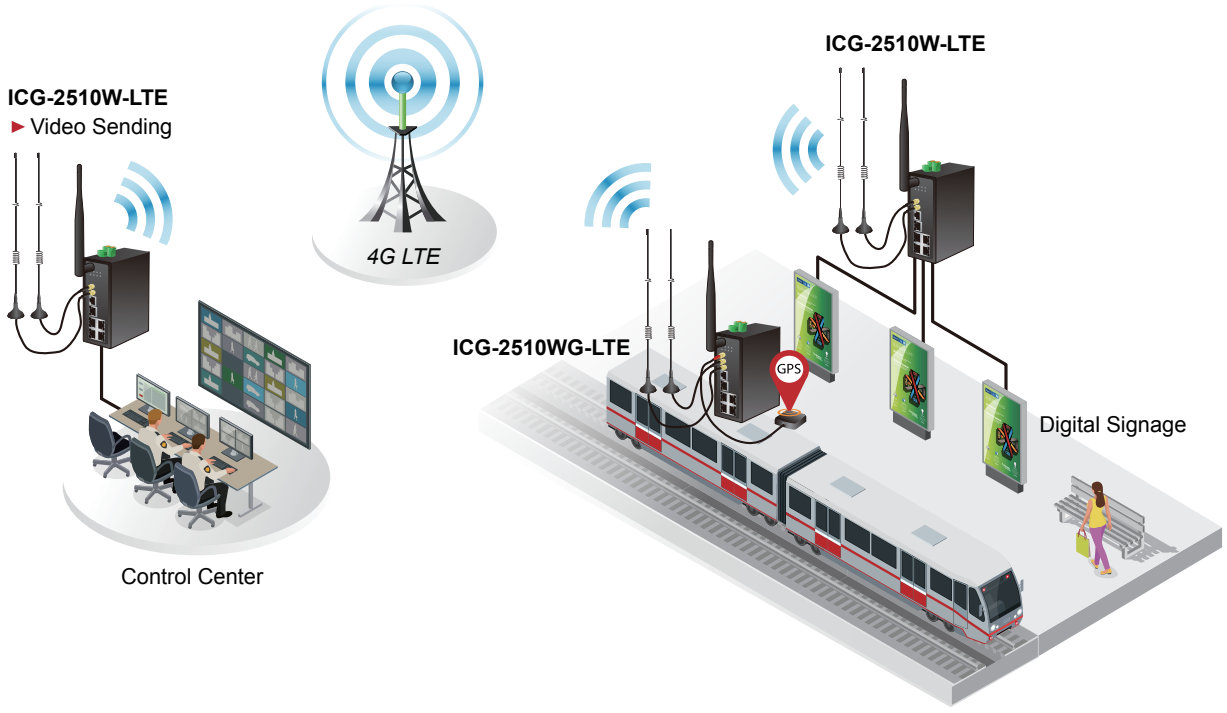
For efficient management, the ICG-2510WG-LTE is equipped with console, web, SNMP and CMS (Central Management System) management interfaces. With the built-in web-based management interface, the ICG-2510WG-LTE offers an easy-to-use, platform-independent management and configuration facility. The ICG-2510WG-LTE supports SNMP and it can be managed via any management software based on the standard SNMP v1 or v2 Protocol. Moreover, the ICG-2510WG-LTE offers the remotely secure management by supporting SSH connection where the packet content can be encrypted at each session. The CMS is able to manage multiple devices and achieve instant status.

Applications

4G LTE Cellular Communication Solution

PLANET ICG-2510WG-LTE adopts 4G LTE cellular technology and thus breaks the 100m limitation of RJ45 transmission. Besides, integrating with an 802.11b/g/n/ac (2.4GHz/5GHz) access point, users can access to the Internet easily. To avoid data loss affected by an unexpected breakdown connection on the part of ISP, the ICG-2510WG-LTE provides dual SIM card slots, failover, load balance functions and advanced features like VLAN, VPN, Modbus, GPS, and CMS to cover more applications.





Specifications

Product	ICG-2510WG-LTE
Hardware Specifications	
Copper Ports	4 LAN 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports 1 WAN 10/100/1000BASE-T RJ45 auto-MDI/MDI-X port
Serial Interface	DB9 to RJ45 serial console port ■ TCP/UDP PAD mode ■ Modbus (ASCII, DTU, variable) ■ PPP ■ Reverse Telnet
SIM Interface	2 SIM card slots with mini SIM card tray
Cellular Antenna	2 5dBi external antennas with SMA connectors for LTE
Wi-Fi Antenna	1 1dBi (2.4~2.5G)/3dBi (5.15~5.85G) external antenna with RP-SMA-J connector for dual-band Wi-Fi
GPS Antenna	1 28dB gain external antennas with SMA connectors - 3m
DI & DO Interfaces	■ 2 Digital Input (DI) ■ 1 Digital Output(DO) ■ 1 Relay Input ON Voltage: DC 5 -30 V Input OOFF Voltage: DC 0-3 V Output < 50mA@DC 30V Relay: AC 250V/DC 30V, 1A
Connector	1 removable 2-pin terminal block for power input 2 removable 3-pin terminal block for DI/DO and relay interface
Storage	1 MicroSD (TF) slot for saving serial port data
Switch Architecture	Store-and-Forward
Flow Control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex
Reset Button	< 15 sec: Factory default
Surge Protection	1.5KV DC
ESD Protection	15KV DC
Enclosure	IP30 metal case
Installation	DIN rail, desktop
LED Indicators	System: PWR (Blue) SYS (Blue) Wireless Interface : WiFi Active (Blue) Ethernet Interfaces (Port1-4 and WAN Port): LNK/ACT (Green) LTE SIM and Signal : SIM1 and SIM2 (Blue) LTE signal: High and low (Blue)
Dimensions (W x D x H)	133 x 115.7 x 45 mm
Weight	564g
Power Requirements – DC	9~36V DC, 1.5A
Power Consumption	8.4 watts/28.6 BTU
Multi Band Supports	
EU Model	■ FDD LTE B1/B3/B5/B7/B8/B20 (2100/1800/850/2600/900/800) ■ TDD LTE B38/B40/B41 (2600/2300/2500) ■ WCDMA B1/B5/B8 (2100/850/900) ■ GSM/EDGE B3/B8 (1800/900)
US Model	■ FDD LTE B2/B4/B12 (1900/AWS1700/700) ■ WCDMA B2/B4/B5 (1900/AWS1700/850)
LTE Data Rate	1.4/3/5/10/15/20MHz bandwidth: 150Mbps (DL), 50Mbps (UL)
Wireless Specifications	
Standard	IEEE 802.11 b/g/n/ac
Wireless Mode	AP, Client, Repeater, Repeater Bridge
Band Mode	2.4G and 5G concurrent mode
Frequency Range	2.4GHz FCC: 2.412~2.462GHz ETSI: 2.412~2.472GHz 5GHz FCC: 5.180~5.240GHz, 5.745~5.825GHz ETSI: 5.180~5.700GHz

Operating Channels	FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 Channels) ETSI: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 (16 Channels) *5GHz channel list will vary in different countries according to their regulations.
Channel Width	20MHz, 40MHz, 80MHz
Encryption Security	WEP, WPA Personal, WPA Enterprise, WPA2 Personal, WPA2 Enterprise, WPA2 Personal Mixed, WPA2 Enterprise Mixed
Data Rate	Up to 300Mbps
Max. Transmit Power (dBm)	26
Max. Clients	30
Advanced Functions	
VPN	■ PPTP server and PPTP client ■ L2TP server and L2TP client ■ Open server and Open client ■ IPSec ■ GRE Tunnel Number ■ PPTP: 1 ■ L2TP: 1 ■ OpenVPN: 1 ■ IPSec: 12 ■ GRE: 12
WAN Connection Types	DHCP-4G, DHCP Client, Static IP, PPPoE Client, 3G Link1, 3G Link 2, DHCP-Backup 4G
Secure Network	WAN access, URL filter, Packet filter, MAC filter
Other	Supports demilitarized zone (DMZ) Supports QoS for bandwidth management Supports VLAN, 15 VLAN ID Supports Modbus TCP (only functions with console) Supports Port Forwarding Supports Dynamic DNS and PLANET DDNS Supports NTP client
Management	
Basic Management Interfaces	Console, Telnet, HTTP, HTTPS, SNMP v1, v2c, CMS
Secure Management Interfaces	SSH
SNMP MIBs	RFC 1158 MIB RFC 1213 MIB RFC 1269 MIB RFC 1271 MIB RFC-1285 MIB RFC 1316 MIB RFC 1381 MIB RFC 1382 MIB RFC 1414 MIB
Standards Conformance	
Regulatory Compliance	CE
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3x flow control and back pressure IEEE 802.11 b/g/n IEEE 802.11 ac RFC 768 UDP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP
Environment	
Operating	Temperature: -35 ~ 75 degrees C Relative humidity: 90%@60 degrees C (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative humidity: 90%@60 degrees C (non-condensing)

Ordering Information

ICG-2510WG-LTE-EU	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T(2 Module SIM Card Slots, 802.11ac, GPS, 1 RS232/RS485, DI/DO, -35~75 degrees C, LTE Band B1/B3/B5/B7/B8/B20)
ICG-2510WG-LTE-US	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T(2 Module SIM Card Slots, 802.11ac, GPS, 1 RS232/RS485, DI/DO, -35~75 degrees C, LTE Band B2/B4/B12)

Related Products

ICG-2510W-LTE-EU	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T (2 Module SIM Card Slots, 802.11ac, 1 RS232/RS485, DI/DO, -35~75 degrees C, LTE Band B1/B3/B5/B7/B8/B20)
ICG-2510W-LTE-US	Industrial 4G LTE Cellular Wireless Gateway with 5-Port 10/100/1000T (2 Module SIM Card Slots, 802.11ac, 1 RS232/RS485, DI/DO, -35~75 degrees C, LTE Band B2/B4/B12)
ICG-2420G-LTE-EU	Industrial 4G LTE Cellular Gateway with 4-Port 10/100TX (2 SIM Card Slots, 2 RS232, 1 RS485, DI/DO, GPS, -20~70 degrees C, LTE Band B1/B3/B5/B7/B8/B20)
ICG-2420G-LTE-US	Industrial 4G LTE Cellular Gateway with 4-Port 10/100TX (2 SIM Card Slots, 2 RS232, 1 RS485, DI/DO, GPS, -20~70 degrees C, LTE Band B2/B4/B12)
ICG-2420-LTE-EU	Industrial 4G LTE Cellular Gateway with 4-Port 10/100TX (2 SIM Card Slots, 2 RS232, 1 RS485, DI/DO, -20~70 degrees C, LTE Band B1/B3/B5/B7/B8/B20)
ICG-2420-LTE-US	Industrial 4G LTE Cellular Gateway with 4-Port 10/100TX (2 SIM Card Slots, 2 RS232, 1 RS485, DI/DO, -20~70 degrees C, LTE Band B2/B4/B12)
VCG-1500WG-LTE-EU	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX (1-SIM Card Slot, 802.11n, GPS, -25~65 degrees C, LTE Band B1/B3/B5/B7/B8/B20)
VCG-1500WG-LTE-US	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX (1-SIM Card Slot, 802.11n, GPS, -25~65 degrees C, LTE Band B2/B4/B5/B13/B17/B25)
PWR-40-24	40W 24V DC Single Output Industrial DIN Rail Power Supply (-20 ~ 70 degrees C)

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