



# **Application Guide**

Delivering a variety of efficient networking applications

# Hotels & Resorts

Comprehensive networking equipment to satisfy customer comfort and management efficiency

PLANET hotels and resorts application provides a comprehensive collection of products to satisfy the comfort and security of guests and at the same time makes operation and management efficient. A wide range of devices including management switch, IP-PBX, IP phone, wireless AP controller, indoor and outdoor APs, SIP broadcasting system and SIP door intercom are reliable to ensure high-quality data, voice and power communications for the whole hospitality industry

Industrial 5G NR Cellular Wireless Gateway

#### **ICG-2515W-NR**

- Global 5G NR (NSA/SA)/4G LTE network with dual SIM design for cellular network redundancy
- · Concurrent dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (1200Mbps
- 4 10/100/1000T LAN ports and 1 10/100/1000T WAN port
- 2 DI and DO and 1 serial port (RS485) for Modbus applications
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- · Full security with VLAN, NAT, DMZ, routing, firewall and IP/MAC/port filtering



L3 24-Port 802.3bt PoE + 4-Port 10G LCD Switch

#### GS-6320-24UP2T2XV

- · 2.4-inch color LCD touch screen with management functions
- Layer 3 OSPFv2 dynamic routing , IPv4/IPv6 static IP routes
- · 2 10GBASE-T/N-BASE-T RJ45 ports
- · 36-60V DC and 100-240V AC redundant power for system
- ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)
- · Cybersecurity can be enhanced with SNMPv3, SSH and TLS features

Management



Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point

#### WDAP-W1800AXU

- Supports MU-MIMO, OFDMA, seamless roaming, beamforming and BSS coloring
- Simultaneous dual-band connectivity at 2.4GHz 600Mbps and 5GHz 1200Mbps
- · Supports IPv6 and port VLAN
- · Supports captive portal and RADIUS Server/Client
- USB Type C, 5V DC, 0.5A output
- Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

#### WDAP-C3000AX

- · Supports Wi-Fi mesh wireless network with Wizard
- · Supports MU-MIMO, OFDMA and seamless roaming
- Simultaneous dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (2400Mbps)
- Gigabit Ethernet Port with 802.3at PoE+ PD compliant
- · Supports multiple VLANs mapping to multiple SSIDs
- Centrally managed by PLANET NMS controller and CloudViewerPro app



#### Universal Network Management Controller with LCD Touch Screen (10"/12")

#### NMS-1000V-10/12

- Stylish TFT-LCD touch screen display and aluminum die-cast front bezel and chassis
- Auto discovery of up to 1024 devices via web interface
   Central provisioning and remotely control over each
- Central provisioning and remotely control over each managed device
- A topology view of network devices by LLDP protocol
   All-new dashboard for monitoring
- traffic and PoE usage
- Setup Wizard, alert popup message and e-mail alarm notification



#### H.265+ 4MP Smart IR Dome IP Camera

#### ICA-4480

- 1/3" progressive scan CMOS sensor and 25-meter smart IR illuminators
- Offers multi-stream video encoding in formats such as H.264(+)/ H.265(+)/MJPEG/AVI.
- 5 backlight compensation (BLC) modes: Left, Right, Up, Down, Middle.
- · Digital WDR (DWDR) and 3-dimensional noise reduction (3DNR)
- Supports IPv6, QoS, IEEE 802.1X network functions, and TLS
- Designed with an IP67-rated metal housing and cable management bracket



#### H.265+ 4MP Smart IR Bullet IP Camera

#### ICA-3480

- · Full color bullet type with 1/3" progressive scan CMOS sensor
- H.265+/H.265/H.264+/H.264 compression
- · Built-in smart IR illuminators, effective up to 25m
- Supports 5 backlight compensation (BLC) modes: Left, Right, Up, Down, Middle
- · Supports digital WDR (DWDR)
- · IP67-rated metal housing with cable management



#### H.265 16-ch 4K Network Video Recorder

#### **NVR-1600**

- H.265/H.264 and dual streaming compression technology
- Up to 4K resolution recording and playback for clear monitoring
- · PVMS and smart event for detailed monitoring
- · Multiple browsers and languages supported
- · Remote live viewing through Smart App for 24/7 viewing



#### High Definition Color PoE IP Phone

#### **VIP-1140PT**

- · 2.4-inch WVA color LCD monitor
- 3-line key with color LED
- 4 SIP identities
- · Wideband Opus HD audio
- Power over Ethernet (PoE) compliant
- QoS, TR069, auto-provisioning and multi-language



#### 1080p SIP Vandalproof Door Phone with RFID and PoE

#### HDP-1261PT

- With high protection level of IP66 and IK07, temperature range from -40°C to 70°C
- Support to open the door with RFID/IC cards, NFC, indoor switch, remote DTMF, timed open door
- Built-in 2MP wide-angle camera with infrared night-vision feature
- Compatible with SIP and ONVIF protocols
- Built-in maximum 128GB capacity TF card slot for image storage
- HD voice speech quality with built-in 2.5W speaker and Acoustic Echo Canceller



#### 7-inch SIP Indoor Touch Screen PoE Video Intercom with Built-in Wi-Fi

#### **VTS-700WP**

- · Powered by PoE or external source
- 8-zone alarm interface available for security control
- Short Circuit Output x 1/Short Circuit Input x 1/RS-485 x1
- Built-in Wi-Fi 2.4G/5G
- Standard SIP protocol compatible with modern IP Intercom systems
- Real-time image (1080P) monitoring of home and community public cameras



# oice Communications

**Outdoor Facility Control Room** 



H.265+ 4MP Smart IR Bullet IP Camera ICA-3480



L3 24-Port 802.3bt PoE + 2-Port TP 10G +2 Port Fiber 10G LCD Switch

GS-6320-24UP2T2XV



VPN Security Gateway VR-300FP



H.265 16-ch 4K Network Video Recorder NVR-1600



Internet Telephony PBX System

IPX-2200



7-inch Indoor Touch Screen PoE Video Intercom **VTS-700WP** 



Universal Network Management Controller with LCD Touch Screen (10"/12") NMS-1000V-10/12

#### Guestrooms



HD Color PoE IP Phone VIP-1140PT

#### Corridor



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP WDAP-C3000AX

#### **Hotel Lobby**



H.265+ 4MP Smart IR Dome IP Camera ICA-4480



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

WDAP-C3000AX

#### Office



Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point WDAP-W1800AXU

#### Entrance



1080p SIP Door Intercom w/RFID HDP-1261PT

#### **Shuttle Bus**



Industrial 5G NR Cellular Wireless Gateway

ICG-2515W-NR

# Digital Campus

Efficient management and extension of campus network capacity, mobility and security

As technology advances rapidly these days, how to create an efficient and reliable network application became an important issue for campus and educational network deployment. PLANET campus network solution offers a highly-integrated series of products ranging from wireless LAN, network backbone switches, network security, IP Surveillance to VoIP products that are closely interconnected to ensure the mobility to access the internet from anywhere, the security of the wired and the wireless connections and the efficiency of campus IoT structure.

### L3 24-Port 802.3bt PoE + 4-Port 10G LCD Switch **GS-5220-24UPL4XV**

- 24-Port 10/100/1000T 802.3bt PoE++
- 2.4-inch color LCD touch screen with management functions
- · ERPS ring data recovery time <10ms
- Supports PoE power up to 95 watts (Total budget: 600W)



Layer 3 24-Port 10G SFP+ + 4-Port 100G QSFP28 Managed Switch

#### XGS-6350-24X4C

- Four 40G/100GbE QSFP28 ports and 24 1G/10G SFP+ ports
- · IGMP Snooping v1/v2/v3 and PIM-DM/SM
- · IEEE 802.1Q, private VLAN and GVRP for VLAN management
- IEEE 802.1d/1w1s Spanning Tree protocol

24-port 1000X + 4-port 10G Managed Switch with DC Redundant Power

#### GS-6311-16S8C4XR

- · 10/100/1000BASE-T port x 8, shared with Port 1 to Port 8
- · 100/1000BASE-X SFP Slots x24
- · 10GBASE-X SFP+ Slots x 4
- IP routing protocol supports RIP v1/v2, OSPFv2
- SNMP v1, v2c and v3, SSHv2/TLS v1.2 secure access
- · 100~240V AC, 50/60Hz and 36~72V DC redundant power



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

#### WDAP-C3000AX

- · Supports Wi-Fi mesh wireless network with Wizard
- · Supports MU-MIMO, OFDMA and seamless roaming
- Simultaneous dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (2400Mbps)
- Gigabit Ethernet Port with 802.3at PoE+ PD compliant
- Supports multiple VLANs mapping to multiple SSIDs
- Centrally managed by PLANET NMS controller and CloudViewerPro app



Dual Band 802.11ax 3000Mbps Outdoor Wireless AP

#### WDAP-3000AX

- · Supports Wi-Fi mesh wireless network with Wizard
- Simultaneous dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (2400Mbps)
- · Supports MU-MIMO, OFDMA and seamless roaming
- 20KV surge protection for wired cable interface
- Supports IP67 rating, operating in temperature ranging from -40 to 70 degrees C
- Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app



#### Enterprise-class Universal Network Management Controller

#### NMS-500

- Auto discovery of up to 512 devices via web interface
- Central provisioning and remotely controls over each managed device
- A topology view of network devices by LLDP protocol
   SMTP alarm and syslog for managed devices
- SMTP alarm and syslog for managed devices in real-time status
- Smart AP Controller up to 512 APs
- Easy deployment with map positioning
- Dashboard and chart design for all information in one



H.265 5 Mega-pixel Smart IR Bullet IP Camera with Remote Focus and Zoom

#### ICA-M3580P

- 1/2.8" 5 Megapixel progressive scan STARVIS™ CMOS
- 2.7-13.5mm 5X motorized zoom auto focus lens
- H.265(+)/H.264(+)/JPEG/AVI/MJPEG triple-stream encoding
- WDR, 3DNR, ICR, PLANET DDNS & Easy DDNS
- · PoE & ONVIF compliant for interoperability
- · Built-in smart IR illuminators, effective up to 40 meters
- IP67-rated housing with cable management bracket



#### 16-Slot Managed Media Converter Chassis with Redundant Power Supply System

Management

Network

#### MC-1610MR/XST-705A

- Console/Telnet/Web/SNMP management
- 16 hot-swappable modular converter management
- TS-1000/802.3ah OAM remote terminal management
- Two power slots for redundant power, optional AC/-48V DC supplies



# ommunications

High Definition Touch Color Screen Smart Media Android SIP Conference Phone

#### ICF-1900

- · 7-inch color touch screen with Android 9.0 OS
- Plug and Play optional 1080p USB camera with 720P 30fps H.264 video call
- IETE SIP compliant with Transport Layer Security
- · Up to 20 SIP lines with 112 one-touch DSS keys
- Dual Gigabit and IEEE 802.3af/at PoE compliant
- Built-in Bluetooth 4.2 and 2.4G/5G Wi-Fi
- Wideband G.722 HD and Opus audio codec with handset and hands-free function



720p SIP Multi-unit Apartment Vandalproof Door Phone with REID and PoF

#### HDP-5260PT

- · 720p camera has high-performance HD video
- G.722 coding produces clearer HD voice quality
- · IP65 and IK10 enclosure
- · Supports the most popular and compatible standard SIP protocol
- · Supports video intercom, door phone and single device paging
- Access control by IP phone, DTMF code and BFID card



#### High Definition Color PoE Gigabit IP Phone

VIP-1260PT

- IETE SIP compliant with Transport Layer Security
- Wideband G.722 HD and Opus audio
- 2.8-inch color LCD with Multi-language display
- Dual Gigabit and IEEE 802.3af/at PoE compliant



#### **Academic Classroom**



Layer 3 24-port SFP+4-port 10G Stack Switch

**Outdoor Facility** 

Dual Band 802.11ax 3000Mbps Outdoor Wireless AP WDAP-3000AX

XGS3-24242



16-Slot Managed Media Converter Chassis with Redundant Power Supply

MC-1610MR



Layer 3 24-Port 10G SFP+ + 4-Port 100G QSFP28 Managed Switch

XGS-6350-24X4C



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

WDAP-C3000AX



VIP-1260PT



**Library / Student Center** 

48-port+6-port 10G Stack

SGS-6310-48T6X



24-port PoE+4-port 10G Stack Switch

SGS-6310-24P4X



Dual Band 802.11ax 3000Mbps Outdoor Wireless AP

WDAP-3000AX

Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

High Definition Color PoE Gigabit IP Phone







WDAP-C3000AX

#### **Administration Office Building**



H.265 5 Mega-pixel Smart IR Bullet IP Camera with Remote

Focus and Zoom ICA-M3580P

5GHz 802.11ac 900Mbps Outdoor Wireless CPE WBS-512AC



Renewable Energy PoE Switch

BSP-360



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

WDAP-C3000AX



Gym

Dual Band 802.11ax 3000Mbps Outdoor Wireless AP WDAP-3000AX



24-port 1000X + 4-port 10G Managed Switch with DC Redundant Power GS-6311-16S8C4XR



High Definition Touch Color Screen Smart Media Android SIP Conference Phone

ICF-1900



L3 24-Port 802.3bt PoE + 4-Port 10G LCD Switch GS-5220-24UPL4XV



HDP-5260PT



Enterprise-class Universal Network Management Controller

NMS-500



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

WDAP-C3000AX

## **Smart Buildings** for Enterprises & More

**Facilitating smart networking** system with PLANET enterprise application

To make a network of smart buildings a reality, PLANET enterprise applications provide closely controlled security within your networking system, and at the same time, they make the digital network design efficient and cost-effective. PLANET provides data centers of office buildings, banks, etc. with specially-designed color touch LCD Ethernet switches. large-scale wireless LAN controllers, network video recorders and security gateways. By utilizing our latest Network Management System (UNI-NMS,) demands for fast and safe digital transmission through the IP deployments including VoIP system, IP surveillance and wireless LAN can be centrally managed and easily controlled to ensure optimal capability and performance.

#### Enterprise-class Universal Network Management Controller

#### **NMS-500**

- · Auto discovery of up to 512 devices via web interface
- · Central provisioning and remotely controls over each managed device
- · A topology view of network devices by LLDP protocol
- · SMTP alarm and syslog for managed devices in real-time status
- · Smart AP Controller up to 512 APs
- · Easy deployment with map positioning
- · Dashboard and chart design for all information in one



#### H.265+ 4MP Full Color Bullet/Dome IP Camera

#### ICA-3480F/ICA-4480F

- Full color bullet type with 1/3" progressive scan CMOS sensor
- H.265+/H.265/H.264+/H.264 compression
- Built-in warm white light with maximum illumination distance of 25 m
- · Supports 5 backlight compensation (BLC) modes: Left, Right, Up,
- · Supports digital WDR (DWDR)
- · IP67-rated metal housing with cable management



#### Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP WDAP-C3000AX

- · Supports MU-MIMO, OFDMA and seamless roaming, beam forming, BSS coloring
- · 802.11ax 2T2R architecture with data rate of up to 3000Mbps
- · Backward compatible with IEEE 802.11 a/b/g/n/ac/ax
- · Supports captive portal and RADIUS Server/Client
- · Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app



#### Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point WDAP-W1800AXU

- · Supports MU-MIMO, OFDMA, seamless roaming, beamforming and BSS coloring
- · Simultaneous dual-band connectivity at 2.4GHz 600Mbps and 5GHz 1200Mbps
- · Supports IPv6 and port VLAN
- · Supports captive portal and RADIUS Server/Client
- · USB Type C, 5V DC, 0.5A output
- · Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app



#### High Definition Color PoE Gigabit IP Phone VIP-1260PT

- · IETE SIP compliant with Transport Layer Security
- · Wideband G.722 HD and Opus audio
- · 2.8-inch color LCD with Multi-language display
- · Dual Gigabit and IEEE 802.3af/at PoE compliant



#### Internet Telephony PBX System IPX-2200

- · 80 concurrent calls and up to 200 registers
- · HD voice codec G.722 for perfect voice quality
- Built-in SIP Proxy Server following RFC 3261
- · Maximum 8 ports FXO/FXS/GSM (on 2 slots)



#### High Definition Touch Color Screen Smart Media Android SIP Conference Phone

#### ICF-1900

- · 7-inch color touch screen with Android 9.0 OS
- · Plug and Play optional 1080p USB camera with 720P 30fps H.264 video call
- · IETE SIP compliant with Transport Layer Security
- · Up to 20 SIP lines with 112 one-touch DSS keys
- · Dual Gigabit and IEEE 802.3af/at PoE compliant
- Built-in Bluetooth 4.2 and 2.4G/5G Wi-Fi
- · Wideband G.722 HD and Opus audio coded with handset and hands-free function



#### 6-slot Layer 3 IPv6/IPv4 Routing Chassis Switch CS-6306R

- · 192-port 10/100/1000BASE-T copper
- · 192 1000BASE-SX/LX SFP fiber slots
- · 64 10G XFP fiber slots
- · 16 40G QSFP+ fiber slots
- · 19-inch. 9U rack-mount



#### 24-port PoE++ +4-port 10G LCD Switch

#### GS-6320-24UP2T2XV

- 10/100/1000BASE-T with 802.3bt PoE++ port x 24
- R model supports 100~240V AC/48~60V DC redundant power
- · 1G/10G SFP+ port x 2
- · 10G BASE-T RJ45 port x 2
- · 600-watt PoE budget
- · Up to 95 watts per PoE port



#### VPN Security Gateway

#### VR-300FW-NR

- · Dual-WAN failover and Dual-WAN load balancing
- SSL VPN and robust hybrid VPN (IPSec/SSL/L2TP over IPSec)
- · Stateful Packet Inspection (SPI) firewall and content filtering
- Blocking DoS/DDOS attack, port range forwarding,
- · PLANET DDNS, IPv6, SNMP, Wireless AP management
- Compliant with IEEE 802.11a/b/g/n/ac wireless technology
- · IP30 metal case, DIN-rail and wall-mount designs
- · PLANET Universal Network Management System





#### **Work Space**



Dual Band 802.11ax 3000Mbps Outdoor Wireless AP WDAP-C3000AX



Dual Band 802.11ax 1800Mbps In-wall Wireless Access Point WDAP-W1800AXU



High Definition Color PoE Gigabit IP Phone VIP-1260PT

#### **Control Center**



Enterprise-class Universal Network Management Controller

NMS-500

#### **Data Center**



6-slot Layer 3 IPv6/IPv4 Routing Chassis Switch CS-6306R



Internet Telephony PBX System IPX-2200





Enterprise-class Universal Network Management Controller NMS-500



24-port PoE++ +4-port 10G LCD Switch GS-6320-24UP2T2XV



VPN Security Gateway
VR-300FW-NR

#### **Entrance**



H.265+ 4MP Smart IR Bullet IP Camera ICA-3480F



H.265+ 4MP Full Color Dome IP Camera ICA-4480F

#### **Meeting Room**



High Definition Touch Color Screen Smart Media Android SIP Conference Phone ICF-1900



## **Factory Automation**

Designed for reliable, secure and smart industrial network Infrastructures

PLANET factory automation application is one of its many Industrial Ethernet Solutions that provide highly-reliable and smart solutions to ensure continuous and efficient operation for the IIoT environment. The Industrial Ethernet upgrades traditional, proprietary factory floor networks to a low-cost, highperformance, and scalable architecture. PLANET provides a complete product portfolio that is compliant with major IE protocols such as Modbus TCP. EtherCAT, and EN50155 for information level, control level, and device level in the Industrial Ethernet network.

#### Flat-type 4-port PoE LCD Router WGR-500-4PV

- · 2.4-inch color LCD touch screen with management functions
- · 4-port 10/100/1000BASE-T with 802.3at PoE+
- · 802.1Q VLAN and IGMP proxy
- · PoE management
- IPv6 Support for IoT Networking
- · Secure Firewall Protection





#### Industrial 4-Port RS232/RS422/RS485 Serial Device Server

#### ICS-2400T

- 4 RS232/422/485 port to 10/100BASE-TX
- · IP30 metal case protection
- -40 to 75 degrees C operating temperature
- · TCP Server/Client, UDP Client, Virtual COM, Telnet Server, Pair Connection Remote/Local Modes
- · 12 to 48V DC, redundant power with polarity reverse protect function



#### Industrial 5GHz 802.11ax 2400Mbps Wireless Access Point

#### **IAP-2400AX**

- 5GHz-band, 4T4R connectivity at 2400Mbps
- · Supports MU-MIMO, OFDMA and seamless roaming, beamforming and BSS coloring
- Backward compatible with IEEE 802.11a/an/ac wireless technology
- · Multiple operation modes: AP, repeater and gateway mode options
- · Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app
- · Effective fault alarm and DI/DO alert for better protection



#### Industrial L3 4-Port 2.5GBASE-T 802.3bt PoE + 2-Port 10G SFP+ Managed Ethernet Switch IGS-6325-4UP2X

- · All 24 ports are compliant with IEEE802.3bt, delivering 95W per port with a total of 1440W.
- OSPFv2/v3, RIPv2 dynamic routing and IPv4/IPv6 static routing · 10GBASE-SR/LR SFP+ slots, compatible with 1G/2.5G SFP
- · Supports ITU-G.8032 Ethernet Ring Protection Switch (ERPS)
- · Modbus TCP protocol for device management and monitoring
- · ONVIF support allows easy integration with video IP surveillance systems



#### Industrial 1-port RS232/422/485 Modbus Gateway **IMG-2100T**

- 1-port 10/100BASE-TX
- · 1 RS232 with DB9 interface
- 1 RS422 or RS485 with terminal block interface
- RTU Master, RTU Slave, ASCII Master, and ASCII Slave operation modes
- · Built-in IP-based Web interface and telnet interface for remote management
- 9 to 48V DC / 24V AC, redundant power
- -40 to 75 degrees C operating temperature
- · IP30 metal case



#### Industrial 16-port PoE Switch

#### IGS-20160HPT

- · 16-port 10/100/1000T with PoE+ plus 2-port 10/100/1000T + 2-port 1G/2.5G SFP
- · IPv6/IPv4 Web, Telnet and SNMP management
- · 802.1Q VLAN, MSTP and IGMP snooping
- · ERPS ring supported
- · Static route supported
- · -40 to 75 degrees C wide operating temperature
- · DI and DO supported



#### 16-ch EtherCAT Slave I/O Module IECS-1116-DI/IECS-1116-DO

- · Built-in isolated 16 digital inputs
- · 2 x RJ45 bus interface
- · LED indicators for the input status
- · Removable terminal block connector
- · Distance between stations up to 100m (100BASE-TX)
- · EtherCAT conformance test tool verified



#### Industrial EtherCAT Media Converter Kit IECC-210-KIT

- · Built-in isolated 16 digital outputs
- · 2 x RJ45 bus interface
- · LED indicators for the input status
- · Removable terminal block connector
- Distance between stations up to 100m (100BASE-TX)
- · EtherCAT conformance test tool verified



#### LCD Touch Screen (10"/12") NMS-1000V-10/12

· Stylish TFT-LCD touch screen display and aluminum die-cast front bezel and chassis

Universal Network Management Controller with

- · Auto discovery of up to 1024 devices via web interface
- · Central provisioning and remotely control over each managed device
- · A topology view of network devices by LLDP protocol
- · All-new dashboard for monitoring traffic and PoE usage
- · Setup Wizard, alert popup message and e-mail alarm notification



#### H.265+ 16-ch 4K Network Video Recorder **NVR-1600**

- · Scheduled recording of 16 IP cameras simultaneously
- Supports H.265/H.264/H.265+/H.264+ compression
- · Supports operation simultaneously for Preview, Recording, Playback, Live and Backup
- · Multiple event detections like motion detection, video loss and PLANET AI IP camera event management



#### H.265 5 Mega-pixel Smart IR Bullet IP Camera with Remote Focus and Zoom

#### ICA-M3580P

- 1/2.8" 5 Megapixel progressive scan STARVIS™ CMOS
- · 2.7-13.5mm 5X motorized zoom auto focus lens
- · H.265(+)/H.264(+)/JPEG/AVI/MJPEG triple-stream encoding
- · WDR, 3DNR, ICR, PLANET DDNS & Easy DDNS
- PoE & ONVIF compliant for interoperability
- · Built-in smart IR illuminators, effective up to 40 meters
- · IP67-rated housing with cable management bracket



#### H.265 5 Mega-pixel Smart IR Dome IP Camera ICA-M4580P

- 1/2.8" 5 Megapixel progressive scan STARVIS™ CMOS
- 2.7-13.5mm 5X motorized zoom auto focus lens
- · H.265(+)/H.264(+)/JPEG/AVI/MJPEG triple-stream encoding
- · WDR, 3DNR, ICR, PLANET DDNS & Easy DDNS
- · PoE & ONVIF compliant for interoperability
- · Built-in smart IR illuminators, effective up to 30 meters
- · IP67-rated housing for rigorous environment





Network Infrastructure

#### M2M Station



Industrial 5GHz 802.11ax 2400Mbps Wireless Access Point IAP-2400AX



H.265 5 Mega-pixel Smart IR Dome IP Camera ICA-M4580P



Industrial L3 4-Port 2.5GBASE-T 802.3bt PoE + 2-Port 10G SFP+ Managed Ethernet Switch IGS-6325-4UP2X



Industrial 4-Port Serial Device Server ICS-2400T



Industrial 1-port RS232/422/485 Modbus Gateway IMG-2100T



Flat-type 4-port PoE LCD Router WGR-500-4PV



Universal Network Management Controller with LCD Touch Screen (10"/12")

NMS-1000V-10/12

#### Storage/Warehouse



5 Mega-pixel Smart IR Bullet IP Camera ICA-M3580P



H.265+ 16-ch 4K Network Video Recorder NVR-1600



Industrial 16-port PoE Switch IGS-20160HPT



Industrial 3-Port RJ45 + 1-Port SFP EtherCAT Junction Slave

IECJ-410FT

Industrial 3-Port
EtherCAT Junction Slave
IECJ-300

Industrial 4-Port
EtherCAT Junction Slave
IECJ-400



Industrial EtherCAT Media Converter Kit IECC-210-KIT



IECS-1116-DO

16-ch EtherCAT Slave I/O Module

**Production Line** 



16-ch EtherCAT Slave I/O Module IECS-1116-DI

## Intelligent **Transportation System**

**Innovative transportation** network with comprehensive **IP** solutions

PLANET covers a wide range of Intelligent Transportation System (ITS) applications for the railway, metro system and highway networking deployments. As all of these ITS network interfaces require long distance, high-bandwidth and real-time data transmission, PLANET's comprehensive product line provides robust, reliable and secure solutions to ensure uninterrupted high-quality transmission. Featuring ITU-T under G.8032 Recommendation, it provides sub-50ms protection and recovery switching for Ethernet traffic in a ring topology and at the same time ensures that there are no loops formed at the Ethernet layer.

#### **Metro System**

#### H.265 5 Mega-pixel Smart IR Dome IP Camera ICA-M4580P

- 1/2.8" 5 Megapixel progressive scan STARVIS™ CMOS 2.7-13.5mm 5X motorized zoom auto focus lens
- · H.265(+)/H.264(+)/JPEG/AVI/MJPEG triple-stream encoding
- · WDR, 3DNR, ICR, PLANET DDNS & Easy DDNS
- PoE & ONVIF compliant for interoperability
- · Built-in smart IR illuminators, effective up to
- · IP67-rated housing for rigorous environment



#### EN50155 4G LTE/GPS/Wi-Fi Gateway

#### VCG-1500WG-LTE

- · One SIM slot and one 4G LTE antenna for network connection 4 10/100TX LAN ports and 1 10/100TX WAN port
- · Supports Wi-Fi 802.11 b/g/n for mobile client
- connectivity
- GPS antenna allows to detect the location via sat nav system
- Supports NAT, DMZ, MAC/Application/IP filter and static routing
- Supports CMS and SNMP for remote management



#### Enterprise-class Universal Network Management Controller **NMS-500**

- · Auto discovery of up to 512 devices via web interface
- · Central provisioning and remotely control over each managed device
- · A topology view of network devices by LLDP protocol
- The status of a network can be reported via system event and syslog
- · SMTP alarm for managed devices in real-time status
- Built-in PLANET AP controller ( SAPC ) and RADIUS authentication function



Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE+ 2-Port 10/100/1000T Managed Ethernet Switch

#### IGS-5227X-4P2T

- · IP67 aluminum case and M12 Ethernet conntectors
- -40 to 75 degrees C wide operating temperature
- 12~48V DC redundant power and 144-watt PoE budget
- · PoE schedule, scheduled Power recycling and PD alive check functions
- ERPS Ring Data Recovery time < 50ms</li>
- IPv4/IPv6 Layer 3 static routing and route summarization



#### 2-port RS232/422/485 Modbus Gateway

- · Supports Modbus TCP/RTU/ASCII Slave and Master operation modes
- Master mode supports 32 TCP slave connection requests

Management

- · Slave mode supports 32 TCP master connections
- · Supports Web and telnet management
- · Compact size and wall-mounted design without space limitation



Industrial 2-Port RS232/RS422/RS485 Serial Device Server

#### ICS-2200T

- 2 RS232/422/485 ports to 10/100 BASE-TX
- · TCP Server/Client, UDP Client, Virtual COM, Telnet Server, Pair Connection-remote/ local modes
- 12~48VDC, redundant power with polarity reverse protection function
- 40 to 75 degrees C operating temperature
- IP 30 metal case



Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP + 2-Port 10G SFP+ Managed Ethernet Switch

#### IGS-6329-8UP2S2X

- EN 61000-6-2/6-4 EMC standards for heavy industrial environments
- · 360-watt PoE budget, intelligent PoE management
- 90W 802.3bt PoE++, 95W PoH/60W force mode or 36W PoE+ operation mode can be selected
- · Layer 3 OSPFv2/v3 dynamic routing, IPv4/IPv6 static IP routes
- ITÚ-T G.8032 ERPS
- · Cybersecurity can be enhanced with SNMPv3, SSHv2 and TLSv1.2 features



#### **Highway**

#### Industrial 5G NR Compact Cellular Wireless Gateway **ICG-2210W-NR**

- 5G NR(NSA/SA)/4G LTE network with dual micro-SIM design for cellular network redundancy
- · Multi VPN with IPSec, OpenVPN, PPTP, L2TP, GRE
- · Full security with Cybersecurity, VLAN, NAT, DMZ, and IP/MAC/Port filtering
- Stateful Packet Inspection (SPI) firewall and content filtering
- · IP30 Metal and compact design
- -40 to 75 degrees C operating temperature



H.265 5 Mega-pixel Smart IR Bullet IP Camera with Remote Focus and Zoom

- · 1/2.8" 5 Megapixel progressive scan STARVIS™ CMOS
- 2.7-13.5mm 5X motorized zoom auto focus lens
- · H.265(+)/H.264(+)/JPEG/AVI/MJPEG triple-stream encoding
- · WDR, 3DNR, ICR, PLANET DDNS & Easy DDNS
- · PoE & ONVIF compliant for interoperability
- · Built-in smart IR illuminators, effective up to 40 meters
- · IP67-rated housing with cable management bracket



#### 1-Port Long Reach PoE over coax Extender Kit (LRP-101CH + LRP-101CE)

#### LRP-101C-KIT

- · Power and Ethernet data transmission of 1,000m over coaxial cabling
- · Complies with IEEE 802.3af / IEEE 802.3at Power over Ethernet PD on RJ45 port
- · Auto detects remote powered device (PD)
- · Compact size, DIN-rail and wall-mount design
- · Plug and Play; no PC required
- -20 to 70 degrees C operating temperature



#### 8-port LRP Managed Switch LRP-822CS

- · 8 100Mbps BNC female ports with LRP Inject funtion
- 2 10/100/1000 BASE-T Gigabit RJ45 copper ports
- 2 100/1000 BASE-X mini-GBIC/SFP slots
- · Supports PoE power up to 36W for each PoE port
- 802.1Q VLAN, MSTP and 1GMP Snooping
- · IPv6/IPv4 ACL, QoS supported





#### Industrial Flat-type PoE Switch

#### WGS-5225-8UP2SV

- Maximum 720-watt PoE budget, intelligent PoE management
   Per port configurable 90W 802.3bt PoE++/95W PoH/60W Force mode/36W PoE+ operating modes
- 2.4-inch color LCD touch screen with management and diagnostic functions
- ITU-T G.8032 Ethernet Ring Protection Switching (ERPS) data recovery time <10ms
- · Intelligent PD alive check, PoE schedule, scheduled power recycling
- · Fanless cooling system, high efficiency thermal design



# Platform/On the Train H.265 5 Mega-pixel Smart IR Dome IP Camera ICA-M4580P Ticket Booth Platform/On the Train 4-port PoE + 2-port TP Switch IGS-5227X-4P2T EN50155 4G LITE/GPS/Wi-Fi Gateway VCG-1500WG-LTE

Long Reach PoE over coax Extender LRP-101C-KIT

Highway

5 Mega-pixel Smart IR

Bullet IP Camera

ICA-M3580P

Gate

Industrial 2-Port RS232/ RS422/RS485 Serial Device Server ICS-2200T



2-port RS232/422/485 Modbus Gateway MG-120

Control Center Bus Electric Box



Industrial 8-Port PoE Switch
IGS-6329-8UP2S2X



Universal Network Management Controller NMS-500



Industrial 5G NR Compact Cellular Wireless Gateway ICG-2210W-NR



8-port LRP Managed Switch LRP-822CS



**Control Center** 

Industrial Flat-type 8-Port PoE bt Switch WGS-5225-8UP2SV

# **Smart Environments**

AloT, LoRa and LoRaWAN
Applications for Long-range
Network Deployments

PLANET AloT, LoRa and LoRaWAN products are designed for smart environments as they feature long-range transmission capability with less power consumption. PLANET LoRa gateways act as a smart hub between end devices (nodes) and application severs. LoRa facilities can help solve some of the biggest challenges facing our planet like energy management, infrastructure efficiency, and more.

Thus, they are definitely a must for smar agriculture, buildings, cities, homes industries, enterprises, and more.

#### **Control Center**



Renewable Energy Management Controller with LCD Touch Screen (10"/12")

NMS-360V-10/12



Renewable Energy Management Controller NMS-360

Dual Band 802.11ax 3000Mbps Outdoor Wireless AP

WDAP-3000AX

**Smart Facilities** 



H.265+ 4MP Smart IR Bullet IP Camera ICA-3480



Industrial IP30 LoRa Node Controller **LN1130** 



LoRaWAN Temperature & Humidity Sensor

LS200-TH



#### Remote Networking



Industrial L3 8-Port 802.3at PoE + 2-Port 1G/2.5G SFP + 2-Port 10G SFP+ Ethernet Switch

IGS-5225-8P2S2X



Renewable Energy PoE Switch

**BSP-360** 



Industrial 5G NR Outdoor Unit **FWA-2100-NR** 



Industrial LoRaWAN Gateway with 5-Port 10/100/1000T

LCG-300

#### Intelligent Factory



Industrial 5G NR Cellular Wireless Gateway ICG-2515FW-NR



Industrial LoRaWAN Wireless Gateway with 5-Port 10/100/1000T LCG-300W



Indoor IP30 LoRa Node Controller LN1130/LN1140

# 1111

Wi-Fi 6 VPN Security Gateway / Router IVR-300W/VR-300PW6A

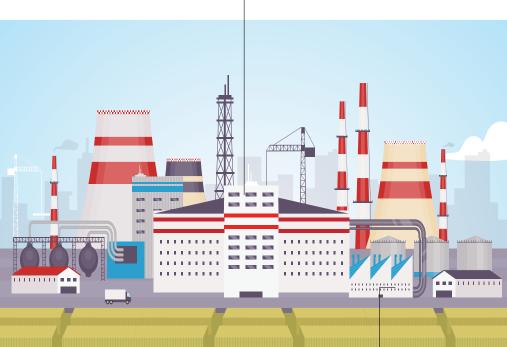


**Indoor Work Space** 

Dual Band 802.11ax 3000Mbps Outdoor Wireless AP WDAP-C3000AX



Industrial 5GHz 802.11ax 2400Mbps Wireless Access Point with 5 10/100/1000T LAN Ports IAP-2400AX





#### **Control Center**



#### Vehicle



Railway

## - 0 3 0000000 PM

Universal Network Management Central Controller UNC-NMS



Universal Network Management Controller with LCD Touch Screen

NMS-1000V-10/12



Industrial L3 24-Port 10/100/ 1000T 802.3at PoE + 4-Port 10G SFP+ Managed Ethernet Switch IGS-6325-24P4X



Industrial Single-Port Multi-Gigabit 802.3bt PoE++ Injector

IPOE-171-95W



EN50155 4G LTE/GPS/Wi-Fi Gateway

VCG-1500WG-LTE

Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE+ 2-Port 10/100/1000T Managed Ethernet Switch

IGS-5227X-4P2T

Industrial L3 8-Port 10/100/1000T 802.3at PoE + 2-Port 1G/2.5G SFP + 2-Port 10G SFP+ Managed Ethernet Switch

#### IGS-5225-8P2S2X

- · 8-port 10/100/1000BASE-T with 802.3at PoE+
- · 240-watt PoE budget/remote PoE power control
- -40 ~ 75 degrees C wide operating temperature
- · 48 ~ 56V DC redundant power design
- IEEE 802.1w/1s STP, IEEE 802.1Q VLAN and IGMP snooping v2 and v3
- ERPS ring supported
- L3 static route and OSPFv2 supported
- · DI and DO supported



Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE+ 2-Port 10/100/1000T Managed Ethernet Switch

#### IGS-5227X-4P2T

- · IP67 aluminum case, outdoor installation
- Waterproof and dustproof M12 Ethernet connector against vibration and shock
- -40 to 75 degrees C wide operating temperature
- · 12~48V DC redundant power design
- · 144-watt PoE budget/remote PoE power control
- · PoE schedule, scheduled rower recycling and PD alive check functions
- · ERPS Ring Data Recovery time < 50ms
- · IPv4/IPv6 Layer 3 static routing and route summarization



Industrial L3 24-Port 10/100/1000T 802.3at PoE + 4-Port 10G SFP+ Managed Ethernet Switch

#### IGS-6325-24P4X

- Hardware-based IPv4/IPv6 Layer 3 static routing and OSPFv2
- Supports ITU-G.8032 Ethernet Ring Protection Switching (ERPS)
- Supports PoE Power up to 36 watts for each PoE port
- · PoE schedule, scheduled power recycling, PD alive check
- · IPv6 Web interface; SNMP v1, v2c and v3; SSH/SSL management
- Redundant power design: Dual 48~56V
- IP30 metal case: rack-mount design
- -40 to 75 degrees C operating temperature



Industrial Renewable Power 5-Port Gigabit Managed Switch/ Router with 4-Port 802.3at PoE+

#### **BSP-360**

- · 4-port 10/100/1000BASE-T with 802.3at PoE+
- 1-port 10/100/1000BASE-T WAN
- 1 24V DC power output up to 48W
- · -10~60 degrees C operating temperature
- MPPT Charge Controller with support up to 400W green power
- · Managed by NMS-360 controller
- USB backup



Renewable Energy Management Controller with LCD Touch Screen (10"/12")

#### NMS-360V-10/12

- · Auto discovery of up to 512 BSP-360 switches and up to 1024 PoE IP cameras
- · Central provisioning and remotely control over each managed device
- · Dashboard for Green Power, PoE Usage, Traffic and Device Event
- · Setup Wizard, and e-mail alarm notification
- Map viewing and IP cam snapshots
- · Backup and restoration via USB 3.0
- Stylish 10"/12" TFT-LCD touch screen display (NMS-360V)



#### Renewable Energy Management Controller

#### NMS-360

- · Auto discovery of up to 512 BSP-360 switches and up to 1024 PoE IP cameras
- Central provisioning and remotely control over each managed device
- Dashboard for Green Power, PoE Usage, Traffic and Device Event
- · Setup Wizard, and e-mail alarm notification
- Map viewing and IP cam snapshots
- Backup and restoration via USB 3.0



#### Outdoor IP67 LoRa Node Controller

#### LN501

- · Converts serial and I/O data to LoRa environment
- · Supports RS232, RS485, DI and DO interfaces
- Compliant with LoRaWAN® 1.0/1.0.2 class C
- Supports EU868, AU915, US915 and AS923



#### LoRaWAN Temperature & Humidity Sensor

#### LS200-TH

- · Ultra low power consumption
- Long transmission distance up to 10km with line of sight
- IP65 waterproof design
- · Compliant with LoRaWAN gateway



#### Industrial LoRaWAN Gateway

#### LCG-300

- · 8 programmable parallel demodulation paths
- Supports Frequency Band EU868/US915/AS923 MHz Sub 1G
- · Web UI for LoRa and network configuration
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- DC 9 to 54V redundant power; -40 to 75 degrees C operating temperature
- · IP30 metal case with DIN-rail or wall-mount design



#### Industrial LoRaWAN Wireless Gateway

#### **LCG-300W**

- · 8 programmable parallel demodulation paths
- Supports Frequency Band EU868/US915/AS923 MHz Sub 1G
- Web UI for LoRa and network configuration
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- DC 9 to 54V redundant power:
- -40 to 75 degrees C operating temperature
- · IP30 metal case with DIN-rail or wall-mount desig



#### Indoor IP30 LoRa Node Controller

#### LN1130/LN1140

- · Ultra-wide-distance transmission up to 10km with line of sight
- Easy to connect with multiple wired sensors through RS232/RS485 interfaces (LN1130)
- · 2 DI/DO interfaces for operating application (LN1140)
- Triggers multiple conditions and actions
- Compliant with standard LoRaWAN gateways and network servers
- 9 to 48V DC power with reverse polarity protection (AC 24V power adapter acceptable)
- Industrial metal case IP30 design with -40°C~75 temperature range



#### IAP-2400AX

- · Supports MU-MIMO, OFDMA, seamless roaming, beamforming and BSS coloring
- · Single connectivity in 5GHz band (2400Mbps)
- · Supports captive portal and RADIUS server
- · Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app
- 2 x digital input, 2 x digital output
- 9-54V DC redundant power with reverse polarity protection



Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless AP

#### WDAP-C3000AX

**WDAP-3000AX** 

- · Supports Wi-Fi mesh wireless network with Wizard
- · Supports MU-MIMO, OFDMA and seamless roaming
- · Simultaneous dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (2400Mbps)

· Simultaneous dual-band connectivity in 2.4GHz (600Mbps) and 5GHz (2400Mbps)

· Supports IP67 rating, operating in temperature ranging from -40 to 70 degrees C

Centrally managed by PLANET NMS controller and PLANET CloudViewerPro app

- · Gigabit Ethernet Port with 802.3at PoE+ PD compliant
- Supports multiple VLANs mapping to multiple SSIDs

· Supports Wi-Fi mesh wireless network with Wizard

· Supports MU-MIMO, OFDMA and seamless roaming

· 20KV surge protection for wired cable interface

· Centrally managed by PLANET NMS controller and CloudViewerPro app

Dual Band 802.11ax 3000Mbps Outdoor Wireless AP



#### Industrial 5-Port 10/100/1000T VPN Security Gateway with Redundant Power

#### **IVR-300W**

- · Dual-WAN failover and load balancing
- · Static Packet Inspection (SPI) firewall and blocks DoS/DDoS attack
- Full security with Cybersecurity, VLAN, NAT, DMZ, Static/Dynamic routing, and IP/MAC/Port filtering
- Multiple VPN with IPSEC, OpenVPN, PPTP, L2TP, GRE and VPN Failover
- · PLANET UNI-NMS, Easy DDNS and Wireless AP Management
- · Wi-Fi compliant IEEE 802.11b/g/n/ax dual-band for mobile client connectivity (IVR-300W)
- · Compliant with IEEE 802.3af/at PoE interface and PoE management (IVR-300P)
- -40 to 75 degrees C operating temperature and fanless design



#### Industrial 5G NR Outdoor Unit

#### FWA-2100-NR

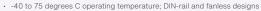
- 5G NR(NSA/SA)/4G LTE network with dual nano-SIM design for cellular network redundancy
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP)
- · Full security with Cybersecurity, DMZ, and IP/MAC/Port filtering
- · Stateful Packet Inspection (SPI) firewall and content filtering
- · -20 to 60 degrees C operating temperature
- · IP68 rating waterproof



#### Industrial 5G NR Cellular Wireless Gateway with 1-Port 1000X SFP

#### ICG-2515FW-NR

- · Global 5G NR (NSA/SA)/4G LTE network with dual SIM design for cellular network redundancy)
- · One 1000BASE-X SFP slot for LAN/WAN interface
- 2 x DI/DO and 1 serial port (RS485) for Modbus applications
- SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)







#### Wi-Fi 6 AX2400 2.4GHz/5GHz VPN Security Router with 4-Port 802.3at PoE+

#### VR-300PW6A

- · Selectable dual-band connectivity in 2.4GHz (600Mbps) or 5GHz (2400Mbps)
- · Dual-WAN failover and Dual-WAN load balancing
- · SSL VPN and robust hybrid VPN (IPSec/PPTP/L2TP over IPSec)
- · High Availability, AP Controller, Captive Portal and RADIUS
- · Compliant with the IEEE 802.3at PoE+ with PD alive check/schedule management
- · PLANET Universal Network Management System and CloudViewerPro app supported



#### H.265+ 4MP Smart IR Bullet IP Camera

#### ICA-3480

- · Full color bullet type with 1/3" progressive scan CMOS sensor
- H.265+/H.265/H.264+/H.264 compression
- · Built-in smart IR illuminators, effective up to 25m
- · Supports 5 backlight compensation (BLC) modes: Left, Right, Up, Down, Middle
- Supports digital WDR (DWDR)
- · IP67-rated metal housing with cable management



#### Universal Network Management Controller with LCD Touch Screen (10"/12")

#### NMS-1000V-10/12

- · Stylish TFT-LCD touch screen display and aluminum die-cast front bezel and chassis
- · Auto discovery of up to 1024 devices via web interface
- · Central provisioning and remotely control over each managed device
- · A topology view of network devices by LLDP protocol
- · All-new dashboard for monitoring traffic and PoE usage
- · Setup Wizard, alert popup message and e-mail alarm notification



#### Universal Network Management Central Controller with LCD & 6 10/100/1000T LAN Ports (1024 x 100 nodes)

#### **UNC-NMS**

- 6 x 10/100/1000BASE-T Gigabit Ethernet RJ45 ports
- · Providing the at-a-glance view of center system, site summary, site Map, traffic, PoE
- · Show Top 10 Event Report, History Comparison function, Critical Events for devices
- · A topology of network devices compliant with MQTT, SNMP, ONVIF, Smart Discovery and LLTD Protocol with Map or not
- · Email alerts for the administrator via the SMTP server







#### **PLANET Technology Corporation**