Wireless Solution
Product Brochure

Vol. Wireless 1.07.03

ICP DAS

www.icpdas.com

Automation T

Machine Automation

Motionnet Solutions

ET-M8194H

Motion Card

Energy Solutions

PMC

PM-3133/PM-3133-MTCP

Current Sensor Voltage Attenuator

PM-3112/PM-3114

PM-4324

IoT Solutions

IoTstar

amazon web services™

Microsoft Azure

IBM Bluemix™

UA-5200

WISE-7500

WISE-7000

DL Series

MiniOS7

Linux

IoTstar

ISaGRAF/Win-GRAF

HMIWorks

RTU Center

NAPOPC

InduSoft

Softw

PAC

ICP DAS

I/O

XPAC

μPAC

WinPAC

ViewPAC

LinPAC

WISE

PAC

Multi-Port Serial Card

PDS/DS/tDS

Switch

EXPANSION

RU-87Pn

ET-87Pn

iDCS-8830

PROFIBUS

CAN

I-8K/I-87K

X-board

XW-board XV-board

RS-485/RS-422/ RS-232

Total Solutions

M2M

WISE-5800

MQ-7200   PIR/RPIR Series

iCAM series

SMS series
(GT-500 series)

RTU series
(GT-540/G-4500)

GRP series
(GRP-500 series)

G-4500 series   GTM-20x series   RMV series
(M2M-700 series)

Building Automation

HMI & ViewPAC
(SV-2201-CE7/VP-25W1/VP-4131)

Tiny I/O Series

IR-310-RM

LC series

IR-210/IR-712A

TouchPAD

Windows XP Embedded

Windows CE

UniDAQ   VxComm Driver/Utility   Visual Studio.NET   WISE   VCEP   eLogger   EzDataLogger   SMS_DB

ware

PC Card

P AS

Communication

Gateway   Converter   RF   GSM/GPRS   ZigBee   Wi-Fi

WIRED

Ethernet   CAN   PROFIBUS PROFINET   USB   EtherCAT   BACnet   EtherNet/IP   HART   WISE

WIRELESS

3G/4G   ZigBee (ZT Series)   IR   Wi-Fi

ICP DAS

ICP DAS was established in 1993 and is strongly focused on innovation and the enhancement of industrial automation technology. ICP DAS continuously endeavors to develop a comprehensive selection of products ranging from remote I/O controllers, distributed I/O modules, I/O data acquisition boards, programmable automation controllers, industrial communication modules, web-related products, motion control systems, SCADA/HMI software to automation solutions for applications critical to energy management, motion automation, smart factories, intelligent buildings, and smart cities. Our ambition is to provide a wide range of high-quality products and versatile applications, together with prompt and efficient service, that can be implemented to assist in the continued success of our clients worldwide.

Taiwan Headquarters & 1st Factory (Hsinchu)

Our Intelligent Solutions and Comprehensive Service, Your Key to Success.

The inevitable trend toward the implementation of the Internet of Things (IoT) and Industry 4.0 currently leads global cooperation and technology development, and the future demands and business opportunities in this area are potentially unlimited. We believe that one of the key success factors in the advancement of the automation industry is intelligence. Now, however, the evolution of the industry has entered into a phase of intelligent automation, ranging from a single domain with a limited scale to encompassing multiple domains on a significantly expanded scale. Consequently, ICP DAS has transformed itself from simply a hardware provider to a provider of total automation solutions and service integration. As a result, our role in this industry has also been constantly evolving.

When looking back on our past development, we have come to realize that ICP DAS has already been intrinsically involved in the world of IoT and Industry 4.0.The integrated solutions provided by ICP DAS are a combination of both tangible products and intangible services which cover a variety of integrated application services and industry-oriented fields, including:

▶ M2M /IOT	▶ Machine Automation	▶ Panel Solutions
▶ Energy Management	▶ Building Automation	▶ SCADA, InduSoft Solutions

In addition to our close cooperation with worldwide distributors, ICP DAS has forged strong partnerships with those clients who have domain knowledge. We integrate the expertise of our clients with our ability for customization to offer products and services in line with needs. ICP DAS helps our customers to achieve success and that is both our goal and our passion.

At ICP DAS, we are committed to leveraging our considerable experience, our highly professional R&D capabilities, and our innovative products, as well as our dedication to service, in order to work together with you to seize the unquestionable future business opportunities that will arise from the increasing adoption of both IoT and Industry 4.0.

Taiwan 2nd Factory (Hsinchu)

China Training Center (Wuhan)

Wireless Solution

1. WLAN Products

Nowadays, Wireless LAN applications are very popular. They're not only faster than traditional industrial transmissions, i.e. RS-232, RS-485, RS-422 etc, but are also able to minimize the need for troublesome wiring tasks and have a higher mobility than an Ethernet network.

Classified Index		Model Name
WLAN Remote Maintenance Device		M2M-711D
CAN to Wi-Fi Converter		I-7540D-WF
Ethernet to Wi-Fi Bridge		WF-2571
WLAN Gateway		RMV-760D-MTCP
Wi-Fi Access Point		APW77BAM
Ethernet/UART to Wi-Fi Converter		IOP760AM
Ethernet/UART/Wi-Fi to 4G LTE Converter		IOG761AM, IOG851
Wi-Fi I/O Modules	Thermocouple, Voltage & Current Input Module	WF-2017, WF-2019
	RTD Input Module	WF-2015
	Digital I/O Module	WF-2042, WF-2051, WF-2055
	Relay Output & Digital Input Module	WF-2060, WFM-R14
	Multifunction I/O Module	WF-2026

## ▼ WLAN Remote Maintenance Device

M2M-711D

Features:
- Supports static IP/DHCP (Ad Hoc mode don't support DHCP)
- Ethernet Protocol: TCP, UDP, IP, ICMP, ARP,RARP
- Provide dynamic DNS function
- Support IEEE 802.11 b/g for Wi-Fi mode and Ad Hoc mode
- Support WEP-64,WEP-128, WPA-TKIP and WPA2-AES encryption for Wi-Fi mode
- Support WEP-64,WEP-128 encryption for Ad Hoc mode
- Provides 1~13 RF channels
- Auto control channel in AP mode
- Ad Hoc mode transmission range up to 100 m (Line of sight)
- Accommodate with M-4132, M2M-720A, M2M-710D
- Web-based administration

Introduction:
The M2M-711D module is specially designed for the remote maintenance and upgrading the serial to network application solution. Users can choose Ethernet mode or Wi-Fi mode to do the pair connection, which provides TCP data tunneling between two serial devices.

In addition to M2M-710D original features, it has the Ad Hoc mode of operation. This operation mode can be used to extend the distance of RS232/485 network without Wi-Fi AP and Ethernet Hub.
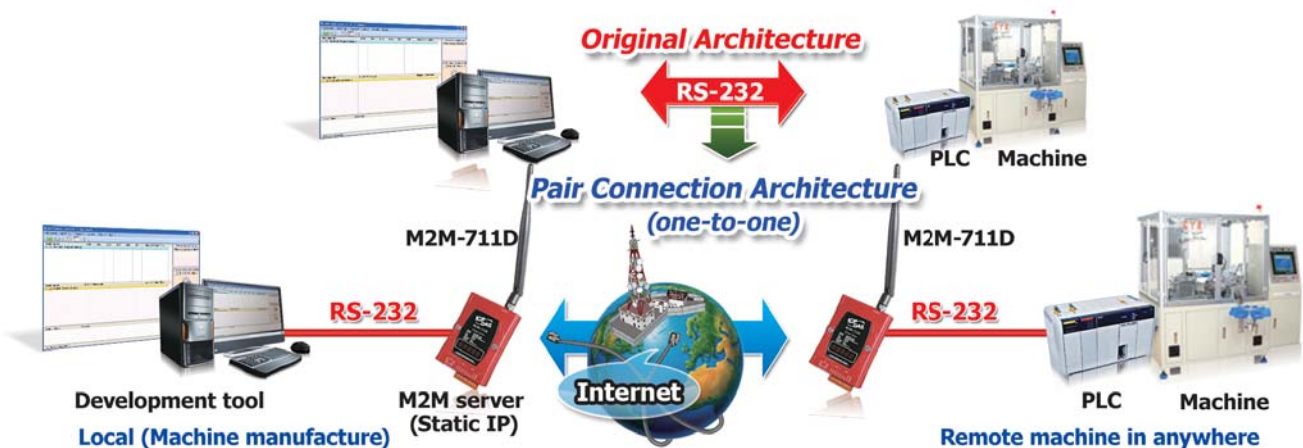
▼ CAN to Wi-Fi Converter

I-7540D-WF

Features:

- IEEE 802.11b/g compliant
- Wireless data transmission via WLAN
- Two different operation modes: infrastructure and ad-hoc
- Point to point or point to multi-points connection via WLAN
- Support WEP, WPA and WPA2 encryption for WLAN
- CAN 2.0A/2.0B compliant
- Connect CAN networks via a WLAN bridge
- Communication efficiency:
  one-way is up to 700 fps (client->server, server->client),
  two-way 350 fps (client<=>server)
- Wireless communication: 100 m (Without PA) / 300 m (With PA)

Introduction:

I-7540D-WF supports the wireless transmission of CAN data between various CAN networks or a CAN network and a WLAN network according to the 802.11b/g standard. I-7540D-WF is highly suitable for connecting mobile (e.g., vehicles or machines) or stationary CAN networks and often used for short ranges up to 100 or 300 m.(TCP data protocols are available.) Using an appropriately configured router, CAN data can be transmitted over the Internet. There are two operating modes in the I-7540D-WF: access point mode and ad-hoc mode. In the access point mode, the data connection takes place over one or several WLAN access points that are often part of the company's internal IT infrastructure. In the ad-hoc mode, a direct connection is established between a single I-7540D-WF device and a PC (with an integrated WLAN interface), or with a second I-7540D-WF device. In this way, the I-7540D-WF can be used as a CAN diagnosis interface. The wireless connection that established between two I-7540D-WF can be used instead of a cable, and enables the connection of CAN networks.

▼ WLAN Gateway

RMV-760D-MTCP

Modbus TCP/RTU Data-Exchange
with Wi-Fi Interface Gateway

Features:

- Supports pair-connection applications
- Application Modes: Virtual COM, MB TCP Server/Client, MB RTU Master/Slave
- Supports static IP/DHCP (Ad Hoc mode don't support DHCP)
- Ethernet Protocol: TCP, UDP, IP, ICMP, ARP, RARP
- Support IEEE 802.11 b/g for Wi-Fi mode and Ad Hoc mode
- Support WEP-64, WEP-128, WPA-TKIP and WPA2-AES encryption for Wi-Fi mode
- Support WEP-64, WEP-128 encryption for Ad Hoc mode
- Auto control channel in AP mode

Introduction:

RMV-760D-MTCP is a Modbus TCP/RTU gateway. It exchanges Modbus command from Modbus TCP/RTU master to Modbus RTU/TCP slave. Modbus TCP command can be transceived not only Ethernet port but also Wi-Fi interface. It supports VxComm and Pair-Connection functions. Users can choose Ethernet mode or Wi-Fi mode to implement the pair connection, which provides TCP data tunneling between two serial devices.

▼ Wi-Fi I/O Modules

The WF-2000 and tWF series are the Wi-Fi I/O modules. The WF-2000 and tWF series in WLAN connection comply with the IEEE 802.11 b/g standards. With the popularity of 802.11 network infrastructure, the WF-2000 and tWF series make an easy way to incorporate wireless connectivity into monitoring and control systems. The WF-2000 and tWF series also support Modbus/TCP and UDP protocol and the network encryption configuration, which make perfect integration to SCADA software and offer easy and safe access for users from anytime and anywhere.

☑ RTD, Thermocouple, Voltage & Current Input Module

Model Name	AI		
	Channel	Voltage and Current Input	Sensor Input
WF-2015	6	-	RTD: Pt100, Pt1000, Ni120, Cu100, Cu1000
WF-2017	8/16 (DIFF/SE)	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, 0 ~ +20 mA, +4 ~ +20 mA, ±20 mA	-
WF-2019	10	±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5 V, ±5 V, ±10 V, ±20 mA	Thermocouple: J, K, T, E, R, S, B, N, C

☑ Digital I/O Module

Model Name	DI/Counter			DO			
	Channel	Contact	Sink/Source	Channel	Type	Sink/Source	Max. Load Current @ 25°C
WF-2042	-	-	-	16	Open Collector	Sink	700 mA/channel
WF-2051	16	Dry, Wet	Dry: Source Wet: Sink/Source	-	-	-	-
WF-2055	8	Dry, Wet	Dry: Source Wet: Sink/Source	8	Open Collector	Sink	700 mA/channel

☑ Relay Output & Digital Input Module

Model Name	DI/Counter			Relay Output		
	Channel	Contact	Sink/Source	Channel	Relay (Type)	Max. Load Current @ 25°C
WF-2060	6	Dry, Wet	Dry: Source Wet: Sink/Source	6	Power Relay (Form A)	5.0 A/channel
WFM-R14	-	-	-	14	2 Power Relays (Form A) 12 Power Relays (Form C)	5.0 A/channel (Form A) 6.0 A/channel (Form C)

☑ Multifunction Module

Model Name	AI		AO		DI/Counter		DO	
	Channel	Voltage and Current Input	Channel	Voltage and Current Output	Channel	Contact	Channel	Type
WF-2026	5	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, 0 ~ 20 mA, 4 ~ 20 mA, ±20 mA	2	0 ~ 5 V, 0 ~ 10 V, ±5 V, ±10 V, 0 ~ 20 mA, 4 ~ 20 mA	2	Dry (Source)	3	Open Collector (Sink)

☑ Tiny Series Digital I/O Module

Model Name	DI		DO	
	Channel	Contact	Channel	Type
tWF-PD4R3	4	Dry	3	Relay DC30V/2A, AC250V/0.25A
tWF-R6	-	-	6	Relay DC30V/2A, AC250V/0.25A
tWF-PD8	8	Dry	-	-

Application architecture:

Multi-platform Remote Access Software:

Real-time data from the WF-2000 I/O module can be accessed from anywhere and at any time using the WF IO Utility and iOS App

Download:
1. Download by iTunes App Store Search keyword: WF2000

Compatibility:
Requires iOS 8.1 or later. Compatible with iPhone, iPad, and iPod touch
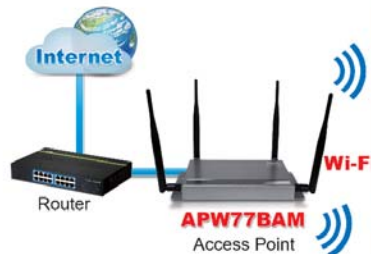
▼ Wi-Fi Access Point

APW77BAM

Features:

- ■ Thin AP
- ■ Wall-Mount Wi-Fi Access Point
- ■ IEEE 802.11a/b/g/n/ac Wi-Fi Compliance
- ■ Configurable AP Transmit Power and Channel
- ■ Supports WEP, WPA, WPA2, WPA-PSK, WPA2-PSK and 802.1x
- ■ Segmented guest and corporate access with multiple SSIDs
- ■ One IEEE 802.3 af (PoE), or DC12V/1A
- ■ Roaming
- ■ WDS/Repeater/Client Modes
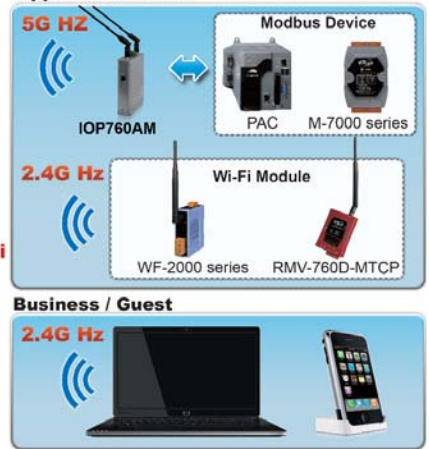- ■ Point-to-Point and Point-to-Multipoint Bridging
- ■ AP Load Balance
- ■ Website Configuration Interface

Introduction:

The APW77BAM is designed for medium-sized businesses to extend the existing networks and has the ability to operate in different modes and can be used in a wide variety of wireless applications. Its Universal Repeater Mode not only has an easier way for setup, but also provides better performance and compatibility to create a larger wireless network infrastructure by linking up other access points. It also supports Multiple-SSID function to simultaneously emulate 8 APs with different ESSIDs and separate packets via VLAN IDs.

Connection Diagram:

Applications:

AP Only Mode

Client Mode

Multiple SSIDs for managing different groups

WDS Only Mode for Wired network Extension

Universal Repeater Mode (Client + AP) for Wireless LAN Extension

WDS Hybrid Mode (WDS + AP) for Wireless LAN Extension

Concurrent Dual Band AP (5GHz + 2.4GHz) for Wireless LAN Extension
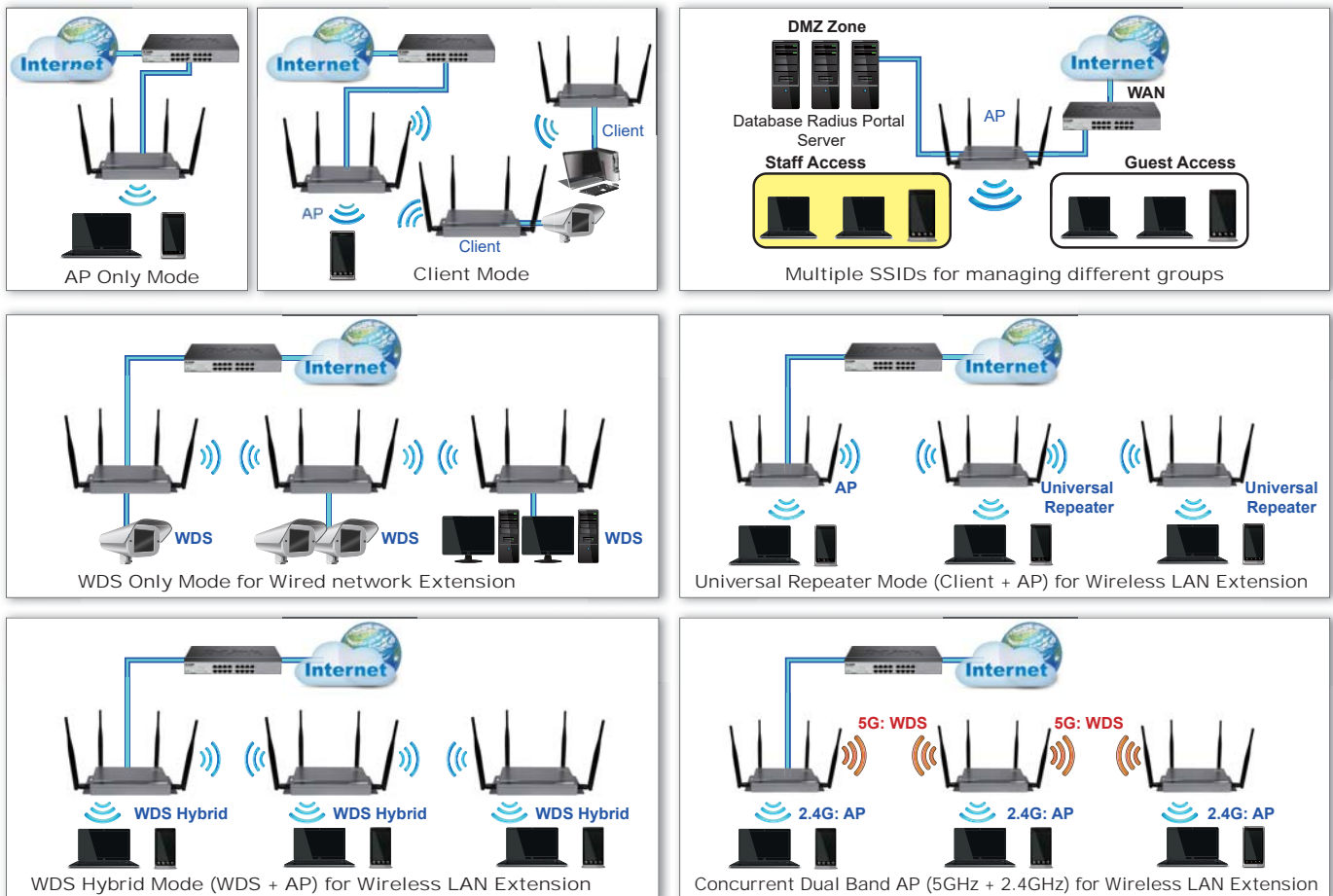
▼ Ethernet / UART to Wi-Fi Converter

IOP760AM

Features:
- Wi-Fi Uplink or Ethernet WAN Connection
- One RS-232/485 for Modbus RTU Connection
- IEEE 802.11a/b/g/n/ac Wi-Fi Compliance
- One LAN Port for Linking Local Ethernet Devices
- One DI/One DO For Device Triggering or Event Reporting
- Designed by Solid And Easy to Mount Metal Body
- Wi-Fi/Ethernet/UART Bridge
- Roaming
- Command Line Interface (CLI)
- Website Configuration Interface
- Modbus Connections
- Router Mode

Introduction:

The IOP760AM is absolutely the right choice for wireless M2M (Machine-to-Machine) applications. With built-in high performance IEEE802.11a/b/g/n/ac compliant Wi-Fi uplink or multi-mode access point function, you can connect all your devices wirelessly while the wired eploying is too difficult or not feasible. Besides, with VPN tunneling technology, remote sites easily become a part of Intranet, and all data are transmitted in a secure (256-bit AESencryption) link. IOP760AM is loaded with luxuriant security features including VPN, firewall, NAT, port forwarding, DHCP server and many other powerful features for complex and demanding business and M2M applications. The redundancy design in fallback 9 ~ 48 VDC power terminal and VRRP function makes the device as a back-up in power, network connection and data transmission without lost.
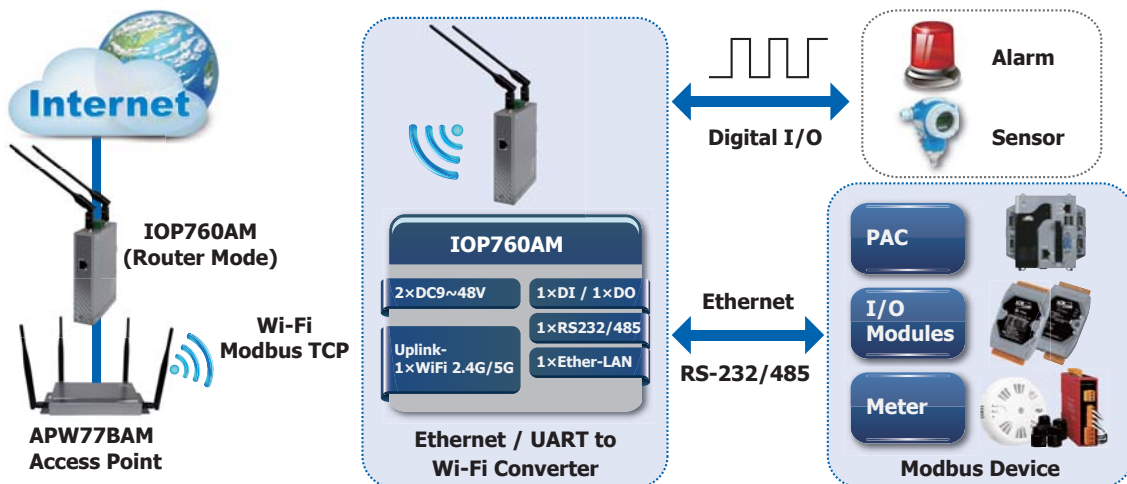
Applications:
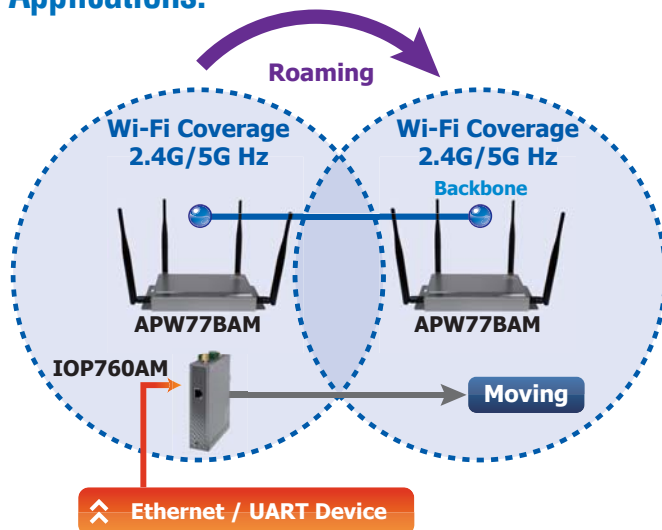

Function:
- To deploy an Ethernet/UART to Wi-Fi Converter for industrial automation.

Description:
- The easiest way to deploy an Ethernet/UART to Wi-Fi Converter for connecting your industrial automation or telemetry equipments to the local / remote management center with wireless solution.
- With 802.11n/ac (2.4G/5GHz selectable) as connection interface, it is simple to connect with existing wireless local data network.
- The most cost-effective product for you with robust design for secure internet access, variable voltage range, wide temperature range.
- Wi-Fi Roaming applications with APW77BAM

▼ Ethernet / UART / Wi-Fi to 4G LTE Converter

IOG761AM   IOG851

Features:

- 1 × embedded LTE module with dual-SIM failover for reliable and efficient access.
- 3(4) × FE LAN port with tag based and port based VLANs easily to group control and relocate traffic pattern.
- Wi-Fi standard
  - ☐ IOG761AM supports IEEE 802.11 n 2T2R (2.4G Hz)
  - ☐ IOG851 supports IEEE 802.11n/ac 2T2R (2.4G/5G Hz selectable)
- 1 × DB9 (RS232/RS485) interface for Modbus RTU/ASCII and various serial communication protocol, and 1 × DI, 1 × DO for device triggering or event reporting.

Introduction:

The IOG761AM and IOG851 are loaded with powerful features for complex and demanding business and M2M (Machine to Machine) applications. The redundancy design in fallback 9 ~ 48 V_{DC} power terminal, dual SIM cards and VRRP function makes the device as a back-up in power, network connection and data transmission without lost.

Applications:
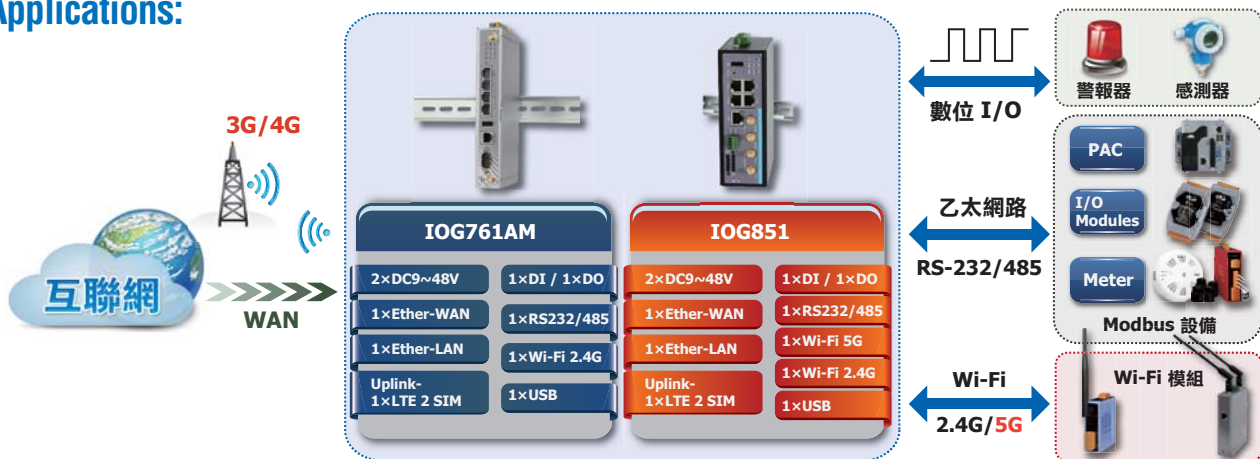
Device		
Model Name	**IOG761AM**	**IOG851**
Pictures		
Device Interface		
Uplink	1 × LTE module (dual SIM), 1 × RJ45 FE (configurable)	
Ethernet	3(4) × RJ45 FE	
Wi-Fi	IEEE802.11n 2T2R (2.4G Hz)	IEEE802.11n/ac 2T2R (2.4G/5G Hz selectable)
Communication Bus	1 × DB9 RS232/RS485	
I/O	1 × DI ("Logic 0": 0 ~ 2V, "Logic 1": 5V ~ 30V), 1 × DO (Relay Mode, up to 30V / 1A)	
Management Port	1 × RJ12 RS232 (Console)	
Log Storage	1 × USB 2.0	
Cellular Band	LTE: 800/900/1800/2100/2300/2600 MHz, UMTS: 850/900/1900/2100 MHz, GPRS/EDGE: 850/900/1800/1900 MHz	
Antenna	2 × 5dBi detachable ant. (Wi-Fi), 2 × 3dBi detachable ant. (3G/4G)	
Power Source	Dual DC 9V ~ 48V	

▼ Wi-Fi solution for AGV system

The AGV (Automated Guided Vehicle) system is more and more popular in the warehouse management. People can control their AGV system via the wireless interface. Wi-Fi is the proper media for the AGV application. It provides the large bandwidth transmission for the film of the camera. It is also expandable. If you want to extend your communication distance, you can add more Wi-Fi devices for the larger coverage.
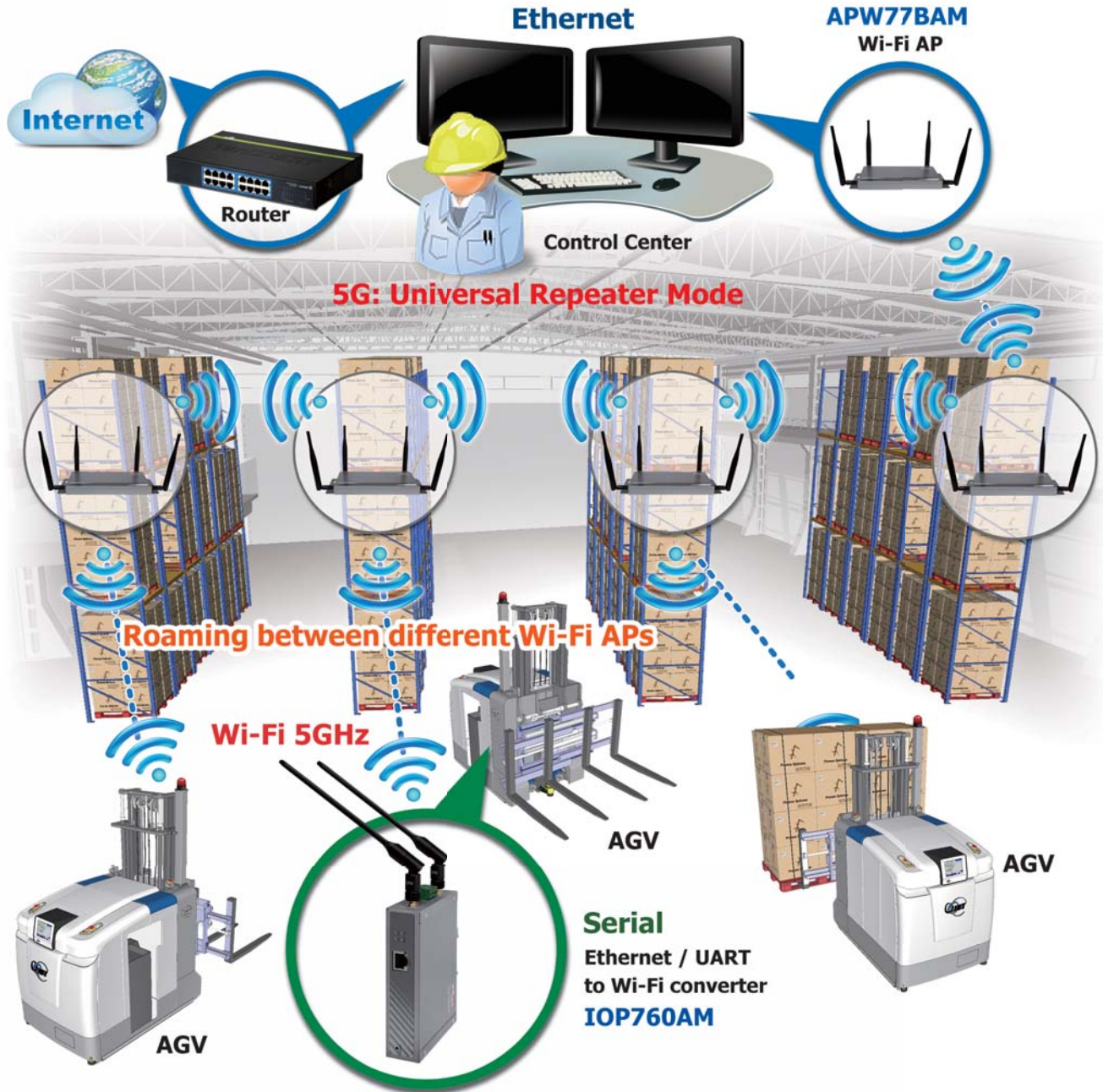

ICPDAS provides a better Wi-Fi solution for the AGV system. IOP760AM and APW77BAM support IEEE 802.11 ac (5GHz) and Wi-Fi roaming. IEEE 802.11 ac works in the 5GHz band, and it does not be influenced by 2.4GHz (802.11 b/g/n) or another ISM band devices. Wi-Fi roaming can make the communication stable between APs (APW77BAM). APW77BAM is a thin AP. It is convenient for monitoring and extending the Wi-Fi coverage range. The Wi-Fi converter IOP760AM provides one RS-232 and one Ethernet interface. The AGV can work via different interface. That is adaptable and convenient for AGV application.

Model	Description
APW77BAM CR	Wi-Fi Access Point (with category A plug type)
APW77BAM-EU CR	Wi-Fi Access Point (with category E plug type)
IOP760AM CR	Ethernet/UART to Wi-Fi Converter (with category A plug type)
IOP760AM-EU CR	Ethernet/UART to Wi-Fi Converter (with category E plug type)

▼ IOP760AM Application Mode

The IOP760AM is a powerful wireless M2M (Machine-to-Machine) solution. Users can connect all your devices wirelessly while the wire deploying is too difficult or not feasible. There are 4 popular application modes: Modbus Router, Fieldbus Bridge, Point-to-Point and Roaming Threshold.
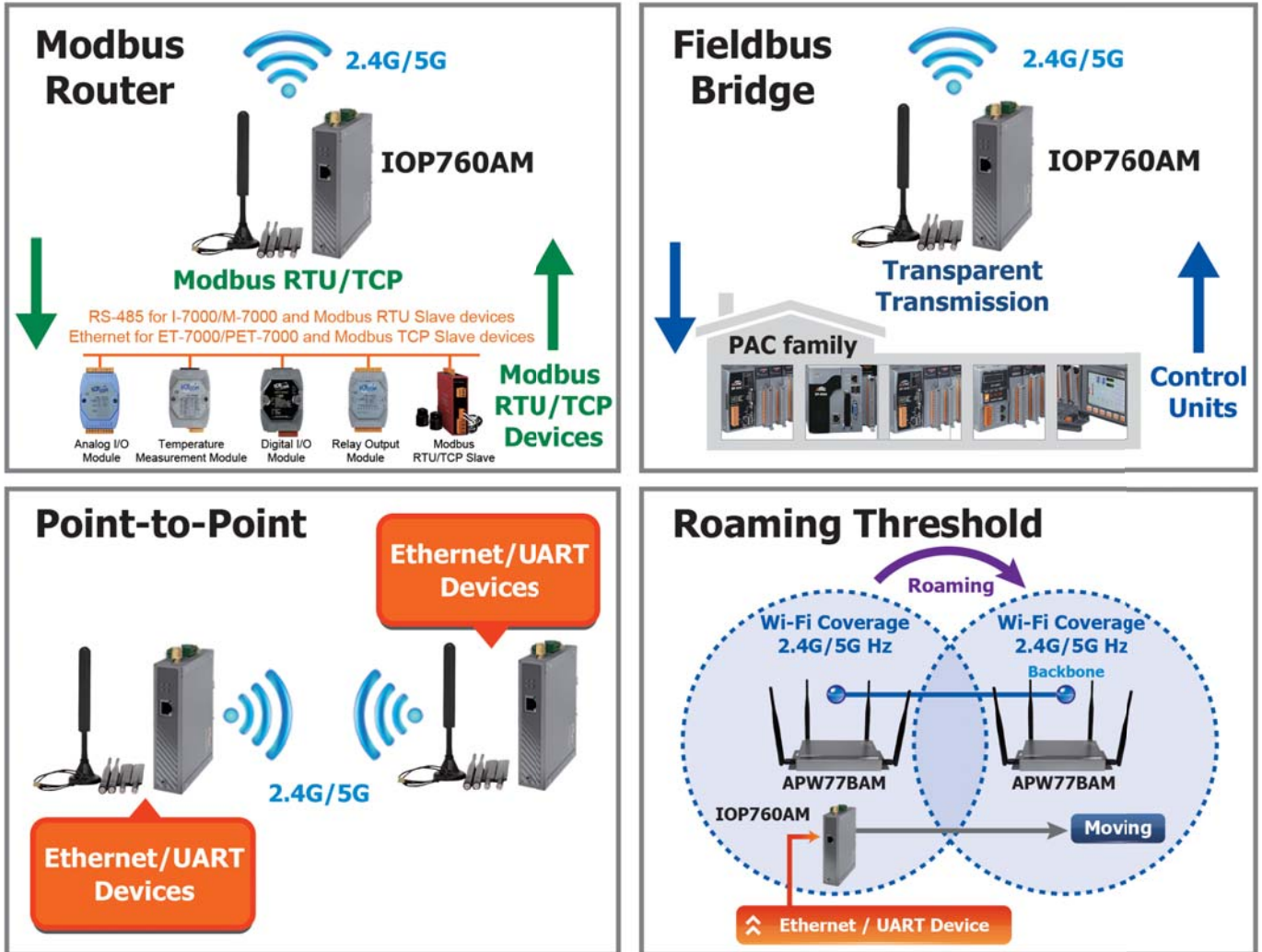
(1) Modbus Router
The IOP760AM is a Modbus master or slave. All the Modbus RTU and TCP/IP devices can publish their data to Wi-Fi via IOP760AM.

(2) Fieldbus Bridge
In the SCADA system, the vendor-defined command is common to control units. The transparent transmission is required when these control units make connection with Wi-Fi.

(3) Point-to-Point
In the out-door application, users are hard to construct the Ethernet environment. All the devices can establish the wireless connection via IOP760AM conveniently.

(4) Roaming Threshold
The vehicle solution is more and more popular. "How to build a stable wireless environment" is an important issue. ICPDAS provides a Wi-Fi solution for the roaming system: IOP760AM and APW77BAM. The APW77BAM is a Wi-Fi AP (access point) with built-in roaming function. Users can set the Wi-Fi signal strength threshold in the IOP760AM. If the Wi-Fi signal strength is lower than the threshold, the IOP760AM can connect to another APW77BAM automatically.

▼ Wi-Fi Converter Comparison

In the factory solution, WF-2571, IOP760AM and IOG761AM provide a complete solution for the wireless coverage.
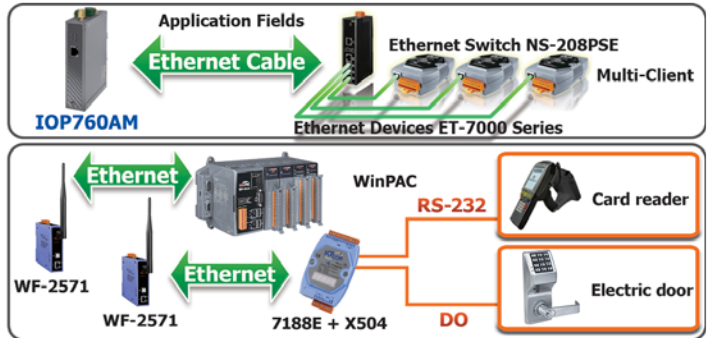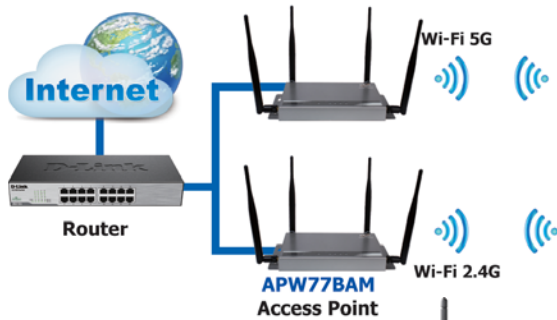
| Model Name	WF-2571	IOP760AM	IOG761AM	IOG851
Pictures				
Wireless Standards	IEEE 802.11 b/g	IEEE 802.11 b/g/n/ac	IEEE 802.11 b/g/n	IEEE 802.11 b/g/n/ac
			3/4G/LTE	
Bandwidth — Wi-Fi	2.4GHz	2.4G/5GHz	2.4G	2.4G/ 5G Hz
Bandwidth — Cellular	-	-	LTE: 800/900/1800/2100/2600 MHz, UMTS: 850/900/1900/2100 MHz, GPRS/EDGE: 850/900/1800/1900 MHz	
Antenna	1	2	4 (2 × Wi-Fi, 2 × 3G/LTE)	
Modbus Protocol	-	Yes		
Interface — Wi-Fi	Yes			
Interface — Ethernet	Yes			
Interface — UART	-	RS-232		
Interface — 3/4G LTE	-	-	Yes	
Bridge Mode — Wi-Fi/Ethernet	Yes			
Bridge Mode — Wi-Fi/UART	-	Yes		
Bridge Mode — Ethernet/UART	-	Yes		
Bridge Mode — LTE/Ethernet	-	Yes		
Bridge Mode — LTE/Wi-Fi	-	-	Yes	
Bridge Mode — LTE/UART	-	-	Yes	
Bridge Mode — Multi-Client	-	Yes		
Configuration Interface	Utility	Web Server		
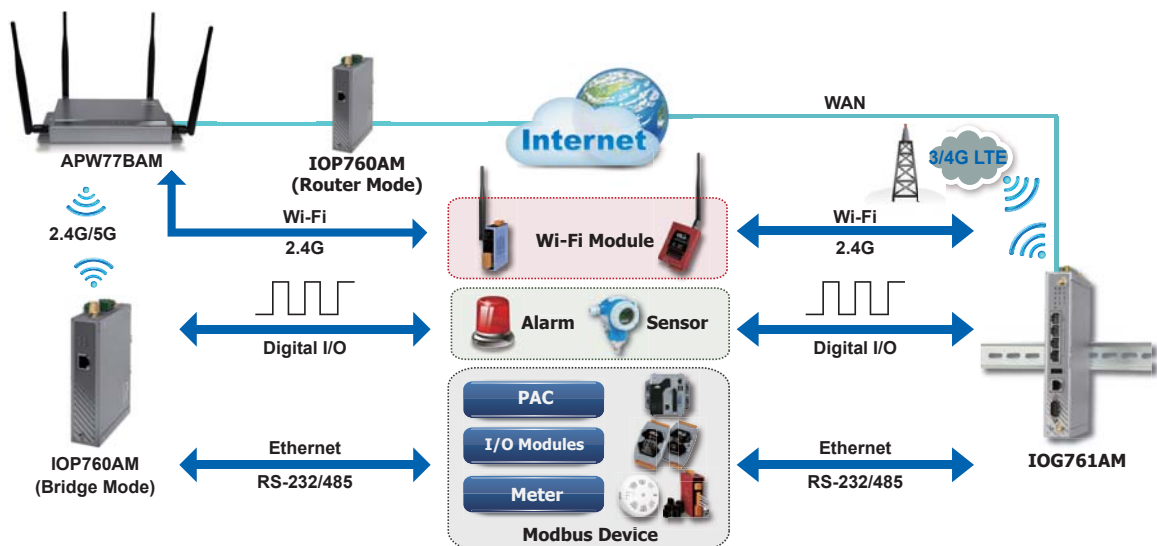
2. Radio Modem

ICP DAS provides RFU and SST series wireless modem which is designed for data acquisition and control applications between a host and remote sensors. It is also useful for those applications where the installation of cable wire is inconvenient.

The wireless modem series is a spread spectrum radio modem with an RS-232 or RS-485 interface port. The module can be used not only in peer to peer mode, but also in a multi point structure.

Model Name	Radio		COM port	
	Frequency	Transmission Distance (LoS)	Interface	Baud rate (bps)
RFU-400	429 MHz / 433 MHz	1000 m	RS-232/485	1200 ~ 115200
RFU-2400	2.4 GHz	700 m	RS-232/485	2400 ~ 115200
tRFU-2400	2.4 GHz	180 m	RS-232/422/485	2400 ~ 115200

Note: tRFU-2400 is PCB antenna.
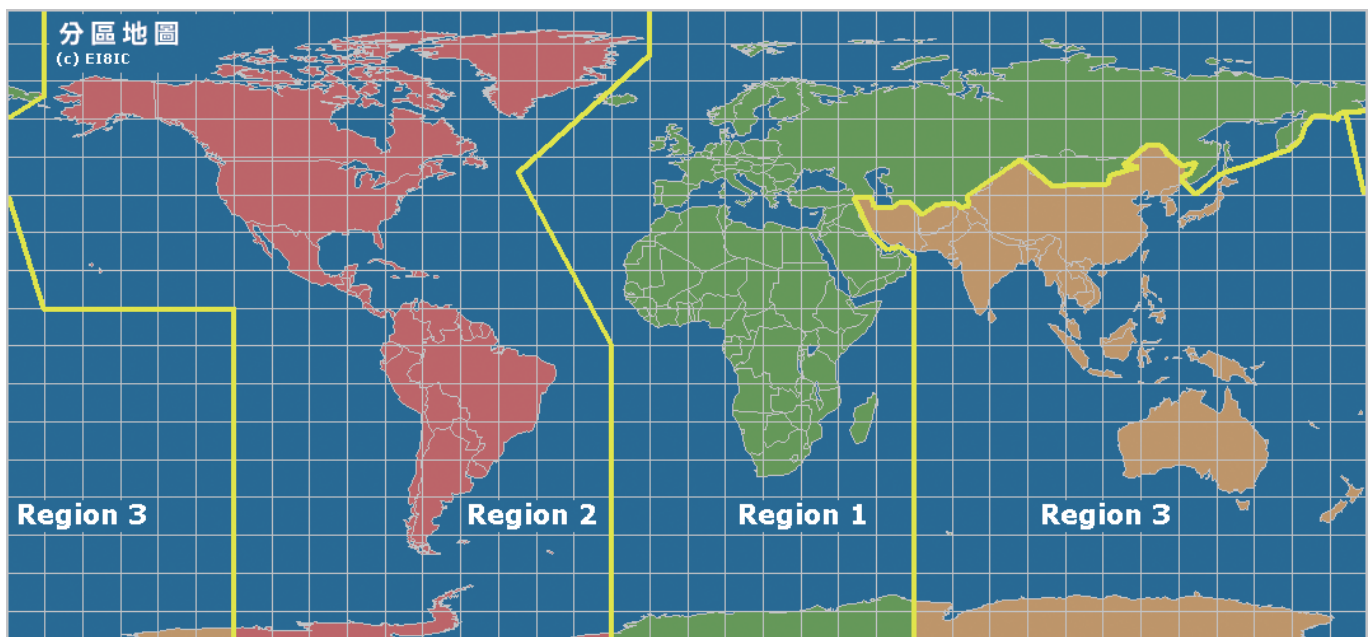
3. 3G/4G Products

3.1 SMS Remote Module

ICP DAS provides various intelligent 3G/4G modules and gateway, SMS-5xx Series. The Module is GSM remote control and alarm system allows users to use their mobile phone to monitor and control the business from any location. Its alarm facilities provide a flexible way to distribute critical alarm information to any number of mobile phone users. The Gateway allows user to access mobile phone by using standard protocol, such as Modbus.

Model Name	Interface	Frequency (MHz)	I/O	Alarm	Micro SD	Battery Backup	Transparent Communication	VxComm	3G Router
SMS-530	2 × RS-232	2G (GSM/GPRS): 850/900/1800/1900	2 × DO 10 × DI	Yes (SMS)	-	Yes	SMS	-	-
SMS-531	2 × RS-232 1 × RS-485		-	Yes (SMS, Voice)	Yes	-	Modbus RTU		
SMS-534	1 × RS-232 1 × RS-485	3G (UMTS/HSDPA/HSUPA): 850/900/1900/2100	2 × DO 6 × DI 1 × AI	Yes (SMS, Voice)	Yes	Yes	SMS		

SMS Database System:

- Quickly and easily build a SMS-53x management system
- Support MS SQL Server and MS Access 2003 Database
- Allow to view real-time or historical data of SMS messages sent by SMS-53x series
- Support Windows 2K/XP/7/8/10
- Support SMS-530, SMS-531, and SMS-534
- Support filter function that enables to receive SMS messages by specific phone numbers
- Provide backup mechanism in local sites: when experiencing unexpected disconnection and not able to transmit and store data in remote SQL Server database, the data will be safely kept in local sites

Introduction:

SMS Database System is a software allows to manage remote SMS-53x series more efficiently. SMS-53x series are intelligent GSM controllers great for use in industry applications; they feature easy-to-use interface, SMS tunnel function voice communication and can be powered with an external power supply or Li-Battery. They support UNICODE and 7 bit format that allows users to send SMS messages in various languages; the SMS messages can be sent at user-defined time or whenever a predefined DI/counter event is triggered. With SMS Database System, it enables remote monitoring and database system for SMS-53x, therefore, allows the 3rd party software tools being easily integrated with SMS-53x series as well as users' applications.

Applications (Remote Maintenance):

Version Comparison:

Version	Max. Phone Number Supported	Database	License
SMS Database System Lite v1.0	3	MS Access 2003	Free
SMS Database System Pro v1.0	Unlimited	MS SQL Server / MS Access 2003	Charge

3.2 3G/4G Modem

ICP DAS provides various industrial Quad-band 2G or Tri-band 3G or LTE 4G modem. The modems utilize the 2G/3G/4G network for convenient and inexpensive data transfer from remote instruments, meters, computers or control systems in either live data or packet data. The modems have the integrated TCP/IP stack so that even simple controllers with serial communications ports can be connected to the modem without the need for special driver implementation.

Model Name	Frequency (MHz)	Reset Input	MIC Input Audio Output	GPS	TCP/IP Stack	Baud Rate (bps)	Interface	Driver	Case
GTM-203M-3GWA	2G (GSM/GPRS): 850/900/1800/1900	Yes	Yes	-	Yes	9.6K ~ 115.2K	USB2.0 RS-232	Windows XP/7/8/10, Windows Server 2012	Metal
	3G (UMTS/HSDPA/HSUPA): 2100/1900/900/850								
GTM-204M-4GE	2G (GSM/GPRS): 850/900/1800/1900								
	3G (UMTS/DC-HSPA+): 850/900/2100								
	4G (FDD LTE): B1/B3/B5/B7/B8/B20								

Model Name	Frequency (MHz)	GPS Interface	Max. Download Speed	AT Command	TCP/IP Protocol
I-8212W-3GWA	2G (GSM/GPRS): 850/900/1800/1900 3G (UMTS/HSDPA/HSUPA): 2100/1900/850	-	115.2 Kbps	Yes	Yes
I-8213W-3GWA		Yes			
I-8213W-4GE	2G (GSM/GPRS): 850/900/1800/1900 3G (UMTS/DC-HSPA+): 850/900/2100 4G (FDD LTE): B1/B3/B5/B7/B8/B20		100 Mbps		

3.3 Mini PAC with 3G/4G Communication

The G-4500 series is M2M (machine to machine) mini programmable controller with a cellular transceiver can monitor industrial equipment that sends live data to the monitoring system, providing real-time status. With optional GPS model, the G-4500 can also be a GPS tracking system. It can be used in vehicle management system or maritime system.

Model Name	OS	Interface	I/O	Frequency (MHz)	LCM (Dot)	GPS	Power Saving	Solar Charging	Case
G-4513-3GWA	MiniOS7	1 × Ethernet 1 × RS-232 1 × RS-485	3 × DO 3 × DI 8 × AI 1 × Relay	2G (GSM/GPRS): 850/900/1800/1900 3G(WCDMA): 850/900/1900/2100	-	-	YES	for 12V Lead-Acid Battery	Metal
G-4513D-3GWA					128 × 64	-			
G-4513P-3GWA					-	YES			
G-4513PD-3GWA					128 × 64	YES			

Model Name	OS	Interface	I/O	Frequency (MHz)	LCM (Dot)	GPS	Power Saving	Solar Charging	Case
▶G-4514-4GAU	MiniOS7	1 × Ethernet 1 × RS-232 1 × RS-485	3 × DO 3 × DI 8 × AI 1 × Relay	2G (GSM/GPRS): 850/900/1800/1900 3G (UMTS/DC-HSPA+): 850/900/1900/2100 4G (FDD LTE): B1/B2/B3/B4/B5/B7/B8/B20 4G (TDD LTE):B40	-	-	YES	for 12V Lead-Acid Battery	Metal
▶G-4514D-4GAU					128 × 64	-			
▶G-4514P-4GAU					-	YES			
▶G-4514PD-4GAU					128 × 64	YES			

Note: ▶ Available soon

3.4 M2M RTU Module

Model Name	Interface	Frequency (MHz)	I/O	Alarm	Micro SD	Battery Backup	Transparent Communication	VxComm	3G Router
GT-540-3GWA	1 × RS-232 1 × RS-485	2G (GSM/GPRS): 850/900/1800/1900 3G (UMTS/HSDPA/HSUPA): 850/900/1900/2100	2 × DO 6 × DI 1 × AI	Yes (GPRS)	Yes	Yes	3G/GPRS	-	-
GT-540P-3GWA	1 × RS-232 1 × RS-485 GPS								

| Model Name	Interface	Frequency (MHz)	I/O	Alarm	Micro SD	Battery Backup	Transparent Com-munication	VxComm	3G Router
RMV-531	1 × RS-232 1 × RS-485	2G (GSM/GPRS): 850/900/1800/1900 3G (UMTS/HSDPA/HSUPA): 850/900/1900/2100	-	-	-	-	3G/GPRS	Yes	-
GRP-530M					Yes				
GRP-540M		2G (GSM/GPRS): 850/900/1800/1900 3G (UMTS/HSDPA/HSUPA): 2100/1900/850 4G FDD LTE: B1/B3/B5/B7/B8/B20			Yes		4G/3G/GPRS		

M2M RTU Center:

- Support up to 1024 M2M RTU devices (256 units for free)
- Support NAPOPC.M2M server, EzDatalog and M2M API tool of ICP DAS
- Support: GT-540(P), GT-540(P)-3GWA, G-4500 serial, GRP-520
- Allow any Modbus device connecting to GPRS/Ethernet via RTU devices.

- RTU series Management tool
- Support Windows 2K/XP/7/8/10
- Easy and quick to build a Remote monitor system

Introduction:

The M2M RTU Center is a management software that has a strong core technology for handling data and lets the user save the trouble of dealing with large IO data. The RTU Center supports the G-4500 series, GT-540 and other RTU products from ICP DAS and allows users to manage these RTU devices remotely. It is not only monitor the local IO and GPS data but also IO data of Modbus RTU devices. With M2M RTU Center, users can easily establish a remote system by using EZ Data Logger or OPC Client of user's SCADA to access data.
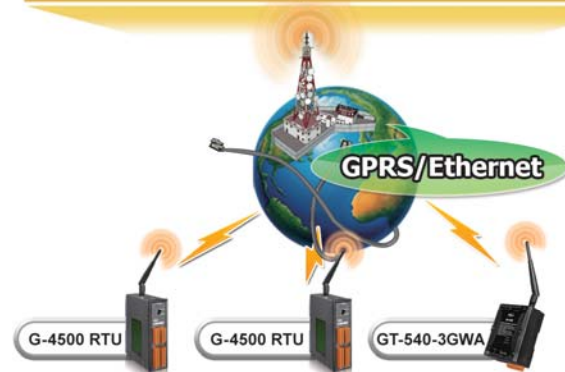
Software Architecture and Application:

When users want to use the following software or others to their system with RTU products of ICP DAS, M2M RTU Center must be executed at the same time.
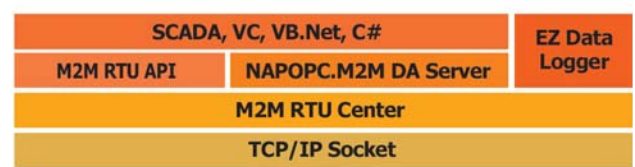
Product Support:

Model No.	Description
RTU firmware	Management Firmware that supports G-4500 Series
GT-540	Intelligent GPRS Remote Terminal Unit

4. GPS Products

GPS (Global Positioning System) is widely used for driving navigation, geographic monitoring, fleet management and cargo tracking, etc. We also can use GPS for industrial application according to its longitude and latitude value and UTC time. ICP DAS provides various modules for different applications. Some are pure GPS data receivers and some add DO channels. Some even can generate a UTC synchronized 1 PPS (Pulse Per Second).

Model Name	GPS Channels	SBAS	GPS Output Interface	3G/4G	Digital Output	Protocol/Interface	Description
I-87211W	32	WAAS, EGNOS, MSAS	RS-232	-	2	DCON/*Note1	GPS Receiver and 2 DO Module
I-8213W-3GWA			*Note2	Yes (TCP/IP protocol) *Note3	-	-	GPS Receiver and GPRS Controller Module
I-8213W-4G series			USB *Note4	Yes (TCP/IP protocol) *Note4	-	-	GPS Receiver and 3G/4G Controller Module
GPS-721			RS-232	-	1	DCON/RS-485	GPS Receiver and 1 DO Module
GPS-721-MRTU			RS-232	-	1	Modbus RTU/ RS-485	

[*Note1] The support list of MCU (Main Control Unit) and I/O expansion unit are: XPAC, WinPAC, LinPAC, iPAC, ViewPAC, U-87P1/2/4/8, USB-87P1/2/4/8, I-8000, I-8KE4/8, I-8KE4/8-MTCP, I-87K4/5/8/9

[*Note2] Gets GPS Information from Parallel bus (API). The support list of MCU: XPAC, WinPAC, LinPAC, iPAC, ViewPAC, etc.

[*Note3] Gets GSM/GPRS Information from Parallel bus (API). This GPRS/GSM module is integrated with the TCP/IP protocol, Extended TCP/IP AT commands. The support list of MCU : XPAC, WinPAC, LinPAC, iPAC, ViewPAC, etc.

[*Note4] Gets GPS or 3G/4G Information from USB (API). This 3G/4G module is integrated with the TCP/IP protocol Extended TCP/IP AT commands. The support list of MCU:XPAC, WinPAC, LinPAC, etc.

5. Bluetooth LE Converters

The ICP DAS provides two kinds of Bluetooth low energy (LE) converters. One is the RS-232/RS-422/RS-485 to Bluetooth LE converter. The other is the USB to Bluetooth LE converter. The ICP DAS Bluetooth LE converter can combine into some existing systems that use RS-232, RS-422 or RS-485 network, and it can use smartphone, tablet or notebook as receiver. It will greatly to improve ease of use.

✓ RS-232/RS-422/RS-485 to Bluetooth LE Converter

Model Name	Bluetooth LE Standard	Interface	Data Rate	Transmit Range
tBLE-720	Bluetooth 4.0	RS-232/RS-422/RS-485	85 kbps	20 m (LOS)

✓ USB to Bluetooth LE Converter

| Model Name	Bluetooth LE Standard	Interface	Data Rate	Transmit Range
BLE-USB	Bluetooth 4.0	USB	85 kbps	20 m (LOS)

6. ZigBee Products

Features:

- ISM 2.4 GHz Operating Frequency and Fully Compliant with 2.4 G IEEE 802.15.4 / ZigBee PRO (2007)
- Support 3 Topologies Defined in the ZigBee Standard: Mesh, Star and Cluster Tree
- Support the 128-bit AES (Advanced Encryption Standard) Encryption
- GUI Configuration Software (Windows Version)
- ZigBee Node Supports Active Routing
- Supports Topology Utility for Network Monitoring and Improvement
- Wireless Transmission Range up to 700 m (Default)
- Provide Signal Strength LED Indicator
- Wide Operating Temperature (-25 ~ 75°C)

ZigBee is a specification based on the IEEE 802.15.4 standard for wireless personal area networks (WPANs). ZigBee operates in the ISM radio bands, and it defines a general-purpose, inexpensive, self-organizing, mesh network for industrial control, medical data collection, smoke and intruder warning, building automation and home automation, etc.

ZigBee Converter:

Every network must have one host (coordinator) device for initializing, maintaining, and controlling the network; one or more slave devices (full function devices) are responsible for routing messages.
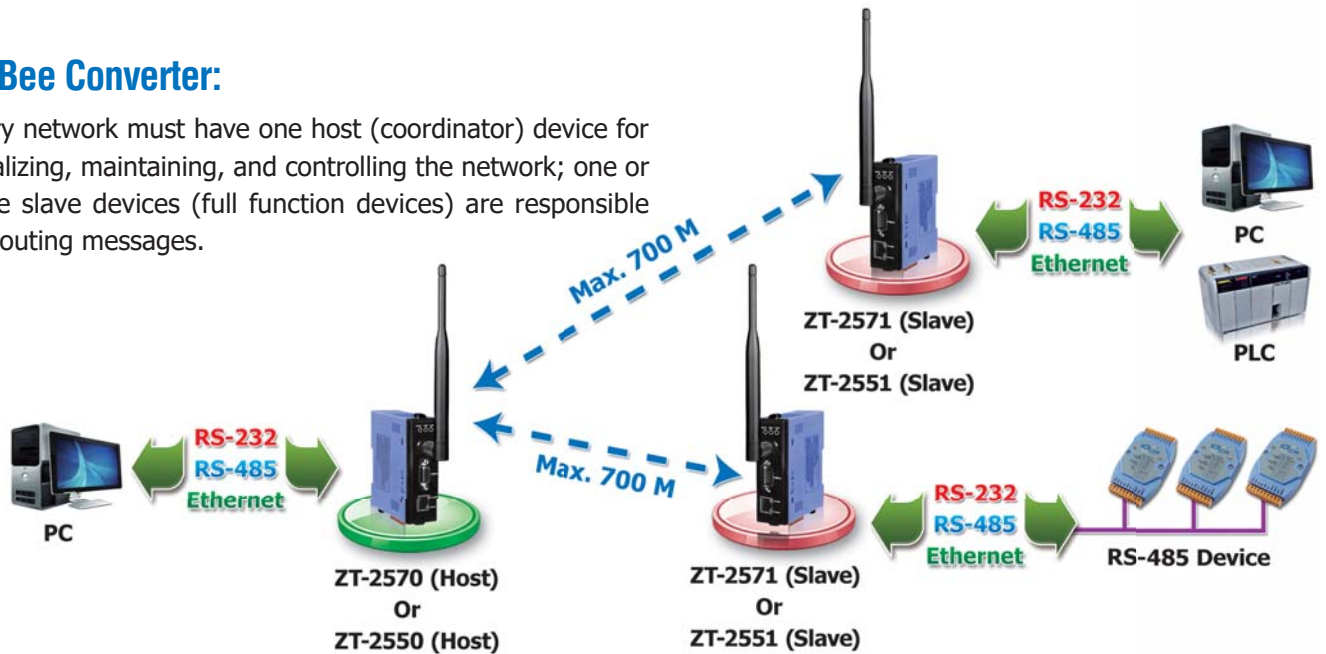
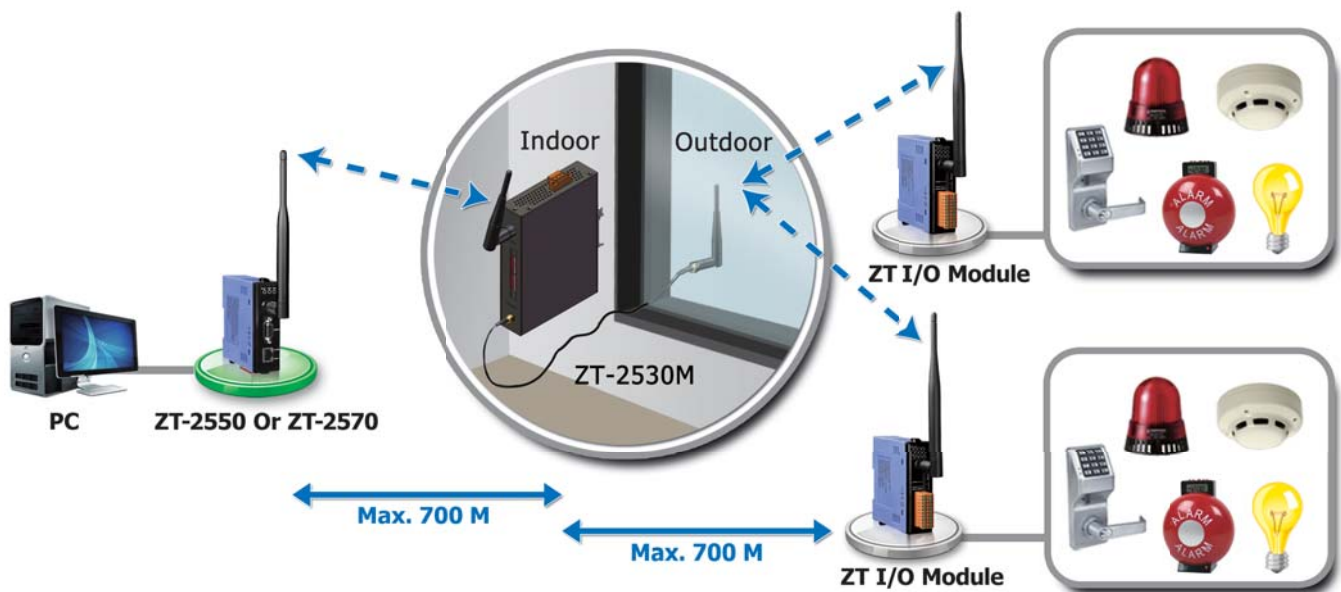| Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
ZT-2550	1 × RS-232、1 × RS-485	Host (Coordinator)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m
ZT-2551	1 × RS-232、1 × RS-485	Slave (Router)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m
ZT-2570	1 × RS-232、1 × RS-485 1 × Ethernet	Host (Coordinator)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m
ZT-2571	1 × RS-232、1 × RS-485 1 × Ethernet	Slave (Router)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m
ZT-USBC	1 × USB	Full Function (Coordinator/Router)	3 dBm	2.4 GHz, PCBantenna	60 m

ZigBee Repeater:

The ZT-2510 is a ZigBee repeater to extend the distance of ZigBee network or avoid an obstacle that may be located between two wireless devices.
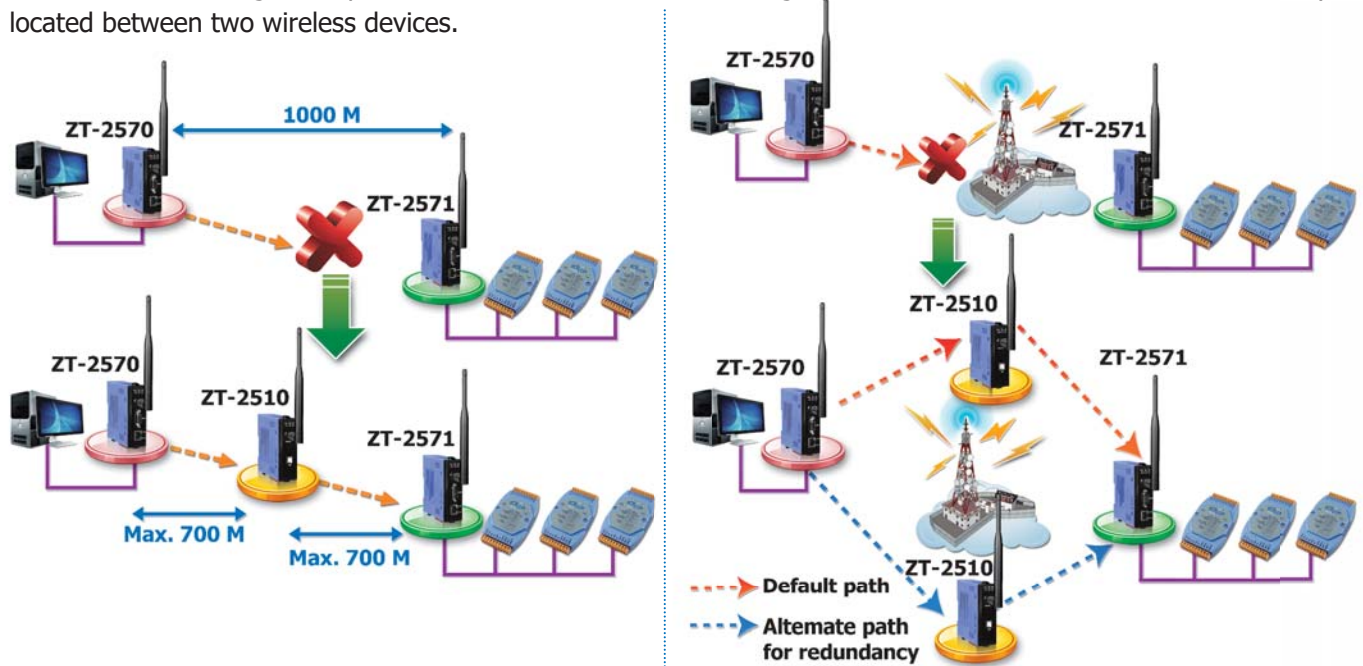
Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
ZT-2510	ZigBee	Slave (Router)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m

ZigBee Bridge:

The ZT-2530M is a ZigBee bridge operating as a bridge between two ZigBee networks. It is full hardware configuration, used to communicate indoor and outdoor units or divide complex network to enhance efficiency.


Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
ZT-2530M	ZigBee	Slave (Router) + Host (Coordinator)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m

ZigBee I/O Group Module (Full Function):

The ZT-20xx-IOG is a self-controller that no programming and no dealing with the wireless communication interference needs, but can quickly establish, monitor and manage the I/O pair-connection with the decentralized DIO channels. It suits the wireless I/O Pair-connection applications for the environment of needing many I/O points, large communication range and not easy wiring.

The ZT-20xx-IOG provides Ethernet, RS-232 or RS-485 communication interface. It is a data concentrator that no programming and no dealing with the wireless communication interference needs, but can quickly establish, monitor and manage the I/O pair-connection with the decentralized DIO channels. It suits the multi-host monitoring and I/O Pair-connection wireless applications for the environment of needing many I/O points, large communication range and not easy wiring.
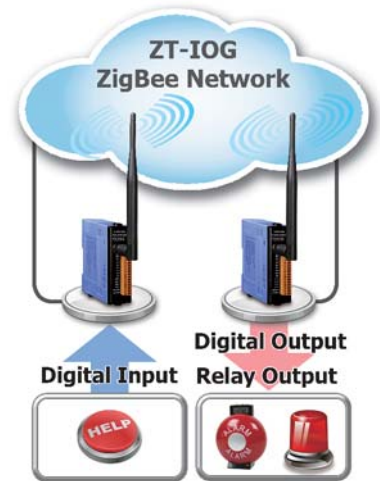
| Model Name	Channel	Type	Channel	Type
ZT-2043-IOG	DO: 14	Open Collector (700mA, Sink)		
ZT-2053-IOG	DI: 14	Dry/Wet (Sink/Source)		
ZT-2055-IOG	DI: 8	Dry/Wet (Sink/Source)	DO: 8	Open Collector(650 mA, Sink)
ZT-2060-IOG	DI: 6	Wet (Sink/Source)	DO: 4	Power Relay (5 A @ 250 VAC/30 VDC)

ZigBee I/O Module (Router):

| Model Name	Channel	Type	Channel	Type
ZT-2005-C8	AI: 8	10 K Thermistor (Measuring Temperature Range: -40˚C ~ 105˚C)		
ZT-2015	AI: 6	Pt100, Pt1000, Ni120, Cu100, Cu1000		
ZT-2017	AI: 8	±10 V, ±5 V, ±1V, ±500 mV, ±150 mV or -20 mA ~ +20 mA (Requires External 125 Ω Resistor)		
ZT-2017C	AI: 8	20 mA ~ +20 mA, 0 mA ~ +20 mA or +4 mA ~ +20 mA		
ZT-2018	AI: 8	±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1V, ±2.5V, ±20 mA, 0 ~ 20 mA or 4 ~ 20 mA Thermocouple (J, K, T, E. R. S, B, N, C, L, M, LDIN43710)(Requires Optional External 125 Ω Resistor for current input)		
ZT-2024	AO: 4	0 ~ +10 VDC, -10 VDC ~ +10 VDC, 0 ~ +5 VDC, -5 VDC ~ +5 VDC, 0 ~ +20 mA, +4 mA ~ +20 mA		
ZT-2026	AI: 4	±10 V, ±5 V, ±1 V, ±500 mV, ±150 mV or -20 mA ~ +20 mA	AO: 2	±10 VDC, ±5 VDC, 0 ~ 10 VDC or 0 ~ 5 VDC
	DI: 2	Wet (Sink)	DO: 2	Open Collector (700 mA, Sink)
ZT-2042	DO: 8	4*PhotoMOS Relay (1 A, Sink/Source) / 4*Open Collector (700 mA, Sink)		
ZT-2043	DO: 14	Open Collector (700mA, Sink)		
ZT-2052	DI: 8	Wet (Sink/Source)		
ZT-2053	DI: 14	Dry/Wet (Sink/Source)		
ZT-2055	DI: 8	Dry/Wet (Sink/Source)	DO: 8	Open Collector (650 mA, Sink)
ZT-2060	DI: 6	Wet (Sink/Source)	DO: 4	Power Relay (5 A @ 250 VAC/30 VDC)

ZigBee Accessories: External Antenna/Cable:

| Optional Accessories	Description and Website
External Antenna	2.4 GHz External Antenna, RP-SMA Male (Plug)
External Antenna: http://www.icpdas.com/root/product/solutions/industrial_wireless_communication/wlan_products/external_antenna.html	
External Cable	3S00×-1, RG58A/U ×-meter long RP-SMA male to RP-SMA Female
Extension Cable: http://www.icpdas.com/root/product/solutions/accessories/cable/cable_selection.html	

7. Infrared Wireless Modules
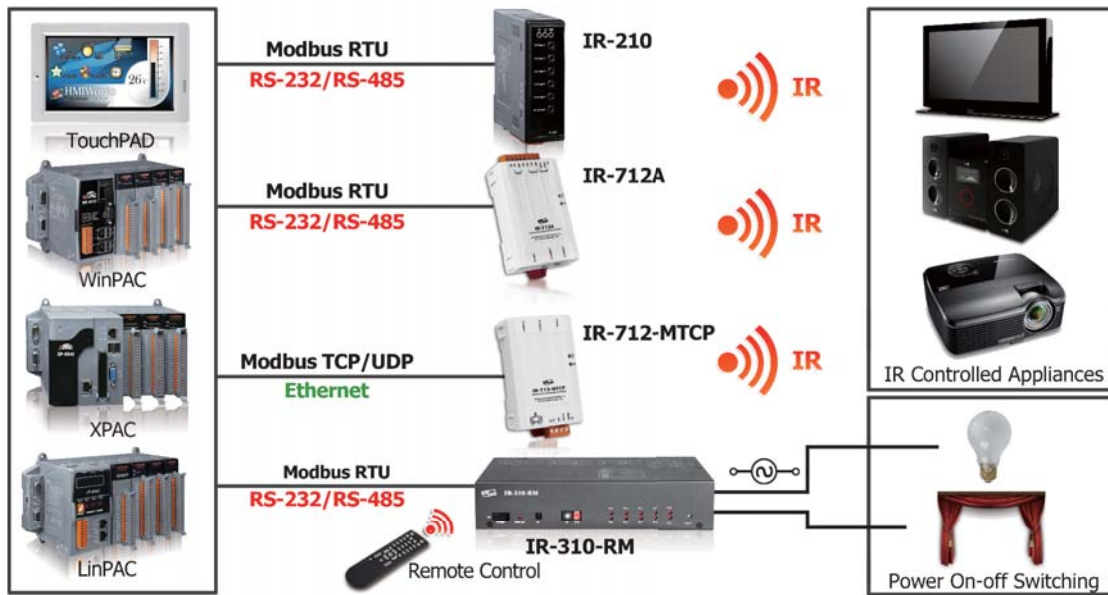
IR (infrared) technology is now used for controlling home devices including television, air conditioner and etc. ICP DAS has developed various IR products to apply in home automation. Theses IR products can help users to control and integrate these IR devices into a control system. Therefore, by integrating the PAC and others series of ICP DAS, users can easily to establish the home automation system. IR Series includes "IR learning remote modules" and "IR controlled power relay module". The former are used to collect and transmit a variety of devices infrared remote commands, while the latter is a strong relay module with the electric remote control function.

■ IR Smart Home Application
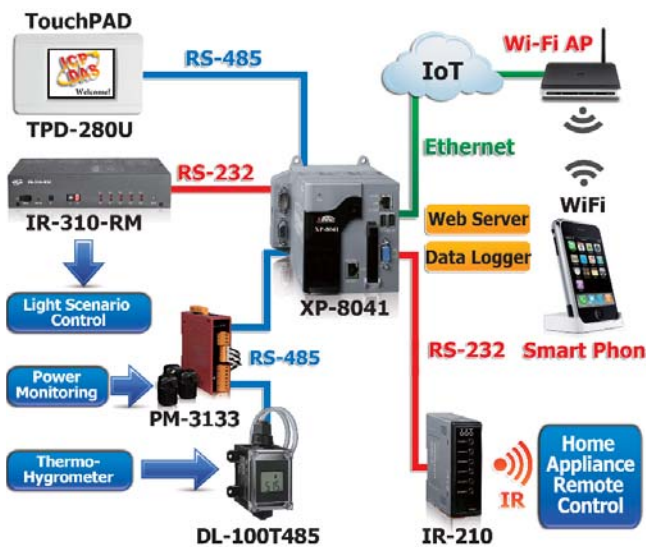
■ IR + Wi-Fi Wireless Control Application
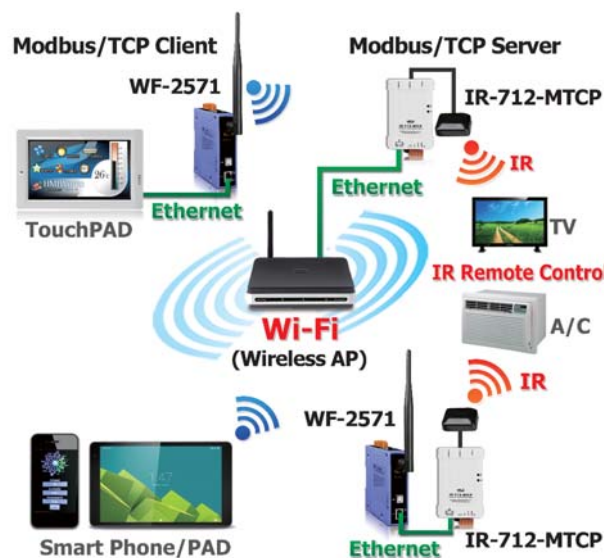
Selection Guide:

Type	IR Learning Remote Modules			IR Controlled Power Relay Module
Model Name	IR-210	IR-712A	IR-712-MTCP	IR-310-RM
Output	IR Output × 6	IR Output × 2	IR Output × 2 Modbus TCP	Relay Output × 10
Included Cable	Two CA-IR-SH2251 (-5 model with -5 model cable) and one CA-0910		Two CA-IR-SH2251 (-5 model with -5 model cable)	One CA-IR-SH2251-5, one CA-IR-001, one CA-0910 and one remote control L108E

Universal IR Learning Remote Module
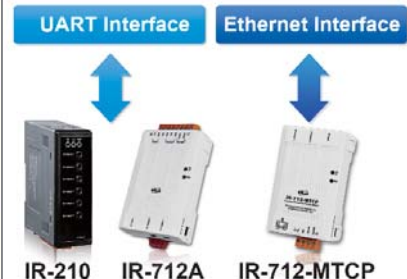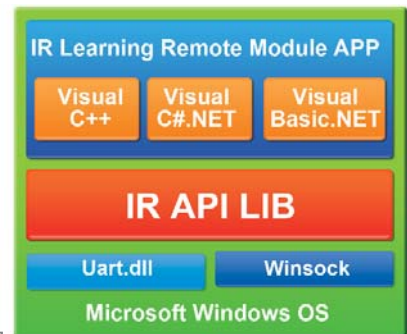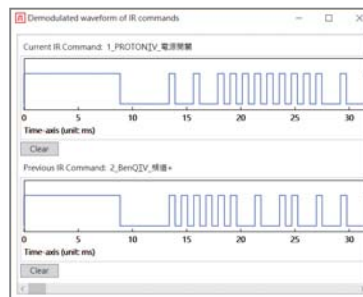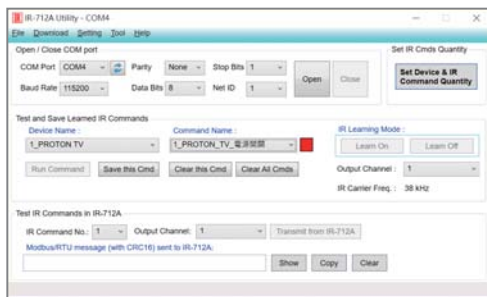

IR-210   IR-712A   IR-712-MTCP

Features:

- IR Output: channels for remote controlling multiple devices
- IR Input: can learn and store IR Commands
- Supports 6 learning IR carrier frequencies
- Built-in Watchdog
- Provide LEDs: Transmitting / Learning / Power
- RoHS Compliance

ICP DAS universal IR learning remote module can learn IR remote commands of diverse electronic devices, and store the commands in the module or saved to a file. The RS-232/485/Ethernet interfaces provide flexible expansion and control the module. The software utility provides users with easy configuration, learning, test and storage of IR commands. It is well-designed for smart home and building automation.

IR Utility: configuration, IR learning and waveform display
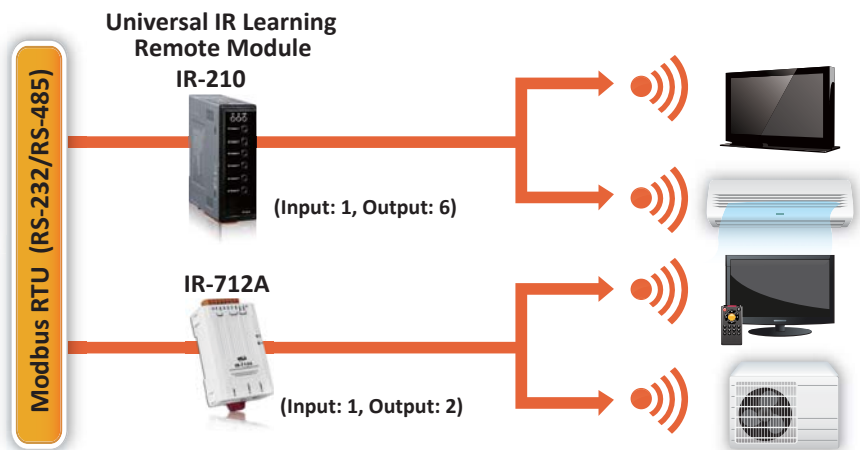
Model Name	IR-210	IR-712A	IR-712-MTCP
IR Output Channels	6	2	
IR Commands Storage	224	224	512
Support IR Carrier Freq.	33、36、37、38、40、56 kHz		
Serial Comm. Interface	RS-232 × 1 and RS-485 × 1		Ethernet × 1
Protocol	Modbus RTU (Slave)		Modbus TCP/UDP (Server)
Size (W × H × L) (mm)	33 × 107 × 78	52 × 93 × 27	52 × 85 × 27

IR Controlled Power Relay Module

IR-310-RM

Features:

- 10 channels high power relays
- Supports IR commands for relay control
- NO & NC terminals for each channel
- Protection circuit for each channel
- Sequential relay control
- Support max. 5 sets of interlocked relay pairs
- Power-on values and power failure memory

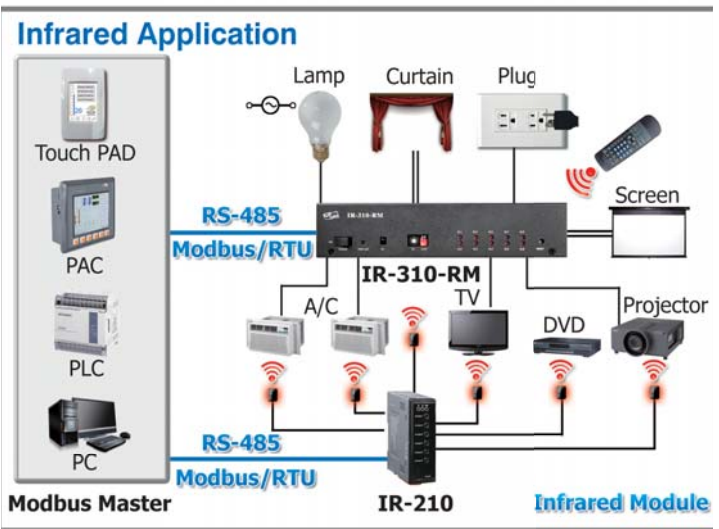IR-310-RM is a 10-channel high power relay module designed for the power control of various appliances. The application field can be manual/automatic power switch, light scenario control and energy saving etc.

Model Name	IR-310-RM
Relay Output	10 outputs (Form C)
Contact Rating	5 A @ 220 V$_{AC}$ × 6; 10 A @ 220 V$_{AC}$ × 4 (Operating temperature: 25°C)
Protocol Interface	Modbus RTU RS-232, RS-485
IR Commands	Self-defined: 64; built-in 32
IR Input	On-board IR receiver / Audio jack

IR Accessories & Usages:

IR series modules need to equip with an IR signal cable in order to transmit or receive infrared remote control signals. ICP DAS provides single-headed, dual-headed and semi-sphere-headed first-class IR cables to meet different wiring requirements. IR cable can be extended the distance according to the actual wiring situation.
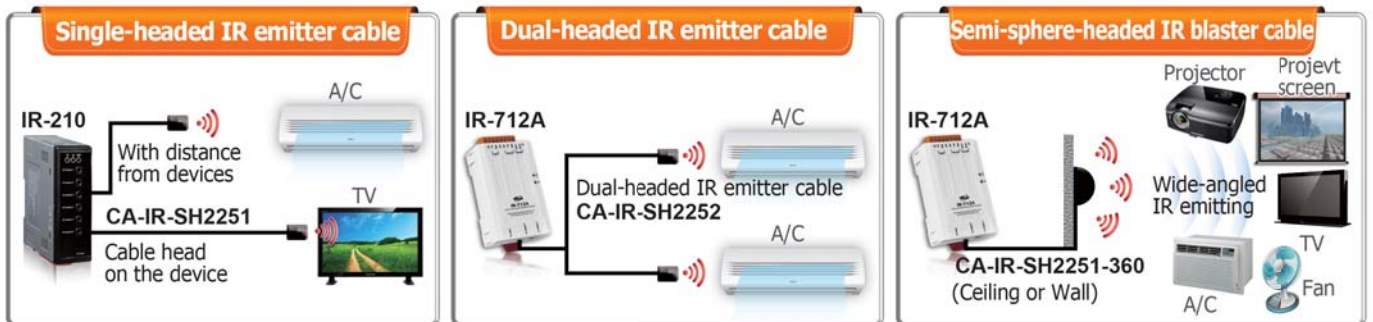
Model Name	Description
CA-IR-SH2251	Single-headed IR emitter cable (with adhesive pad, Ø 3 mm IRED, 2.5 m)
CA-IR-SH2252	Dual-headed IR emitter cable (with adhesive pad, Ø 3 mm IRED, 2.5 m)
CA-IR-SH2251-5	Single-headed IR emitter cable (with adhesive pad, Ø 5 mm IRED, 2.5 m)
CA-IR-SH2252-5	Dual-headed IR emitter cable (with adhesive pad, Ø 5 mm IRED, 2.5 m)

Model Name	Description
CA-IR-SH2251-360	Semi-sphere-headed IR blaster cable (with adhesive pad, 2.5 m)
CA-IR-SH1251-360	Semi-sphere-headed IR receiver cable (with adhesive pad, 2.5 m)
CA-IR-001	IR receiver cable, 3 m
L108E	IR learning remote control

<Note> The IR emitter cable can be extended up to 100 meters by Ethernet CAT 5 cable.

8. Wireless Modbus Data Concentrators

Wi-Fi Modbus Data Concentrator

Available soon

MDC-211-WF

Features:
- Compatible with IEEE 802.11b / g / n standards
- Support Infrastructure and Limit-AP mode
- Support WEP, WPA and WPA2 encryption mechanism
- Support data logger (MicroSD) function
- Support the Modbus TCP/RTU protocol
- Support the MQTT v3.1 Client protocol
- Support for up to 8 Modbus TCP masters
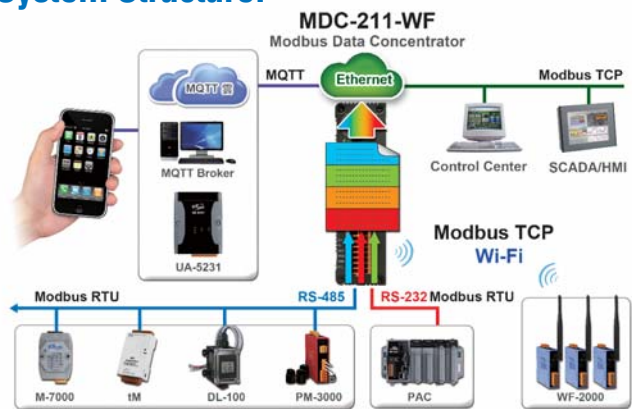- Support Ethernet, RS-232/485 and Wi-Fi interfaces

Introduction:
MDC-211-WF is a Modbus Data Concentrator used to access data from disparate Modbus slave devices with a contiguous Modbus address table ranged by the concentrator. Up to 240 Modbus commands can be performed to read data from Modbus slave devices via Wi-Fi/RS-232/485, and up to 6 Modbus/TCP masters are allowed to get the polled data via the Ethernet. The Modbus/TCP masters directly read/write the data in the MDC-211-WF instead of polling each Modbus slave device one by one. This way not only makes the data on the Wi-Fi/RS-232/485 sharable to multiple Modbus/TCP master but also shorten the time to read/write data from/to multiple Modbus/RTU slave devices.

System Structure:

ZigBee Modbus Data Concentrator

Available soon

MDC-211-ZT

Features:
- Fully Compliant with 2.4 G (IEEE802.15.4/ ZigBee Specifications)
- Upgrade ZigBee I/O modules with Ethernet communication ability
- Support the Modbus TCP/RTU protocol
- Support the MQTT v3.1 Client protocol
- Support I/O data logger (MicroSD) function
- Data pool for up to 9600 registers
- Modbus polling commands for up to 240 definitions
- Speed up the time for reading from ZT-2000 series modules
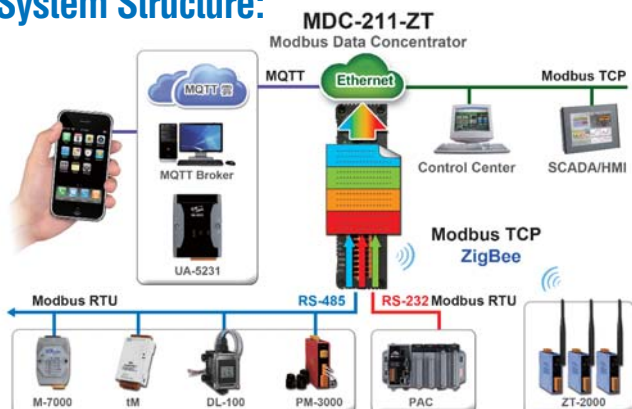- Support ZigBee, Ethernet and RS 232/485 interfaces

Introduction:
MDC-211-ZT is a Modbus Data Concentrator used to centrally manage decentralized I/O data via the ZigBee wireless mesh network. It access data from disparate Modbus slave devices with a contiguous Modbus address table ranged by the concentrator. Up to 240 Modbus commands can be performed to read data from Modbus slave devices via ZigBee/RS-232/RS-485, and up to 8 Modbus/TCP masters are allowed to get the polled data via the Ethernet. This way not only makes the data on the ZigBee/RS-232/RS-485 sharable to multiple Modbus/TCP master but also reduce the flow of ZigBee/Ethernet traffic load to improve the system performance. It is the best solution for users quickly establishing a remote monitoring system.

System Structure:

# 9. Bluetooth LE Gauge Master for Mitutoyo Gauges

GAM-100

Features:

- Frequency: ISM 2.4 GHz
- Standard: Bluetooth 4.0
- Wireless transmission range up to 20 meters (Line of Sigh)
- Fully compliant with the Mitutoyo ID-S1012MX/NTD-10-6" PMX
- LED indicators for Battery / RF link / Charge LEDs
- Support different transmission rate: 1/2/5/10 Hz
- Support Trigger button and 3.5 mm foot switch connector to log data
- Power by micro USB chargeable Li-ion battery
- Battery Usage Life: 100HR

Introduction:

The GAM-100 is a Bluetooth Low Energy (Bluetooth LE/Bluetooth 4.0) gauge master for Mitutoyo gauges, with SPC output. A smart phone or tablet can use Bluetooth to get Mitutoyo gauge date through the gauge master. With the built-in micro USB chargeable Li-ion battery, the gauge master can work for 100 hours. To get and log the data, an Android APP is designed for a mobile device. The data can be kept in the local memory storage or uploaded to the remote MySQL server.
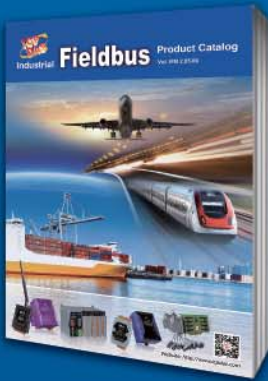
Android APP:

- Provide device search function
- Display meter data in real-time graphics
- Battery remaining capacity display
- Support trigger mode configuration
- Upload data to remote MySQL server
- Provide recording file (*.csv)
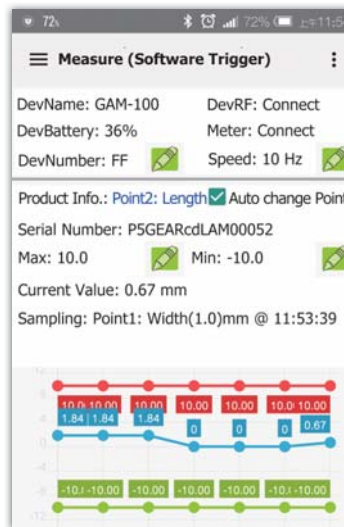
Applications:

ICP DAS Catalogs & Brochure

Industrial Fieldbus
- RS-485
- Industrial Ethernet
- Profinet
- CAN bus
- CANopen
- Devicenet
- J1939
- PROFIBUS
- HART
- Ethernet/IP
- BACnet

PC-based I/O Boards
- PCI Express Bus Data Acquisition Boards
- PCI Bus Data Acquisition Boards
- ISA Bus Data Acquisition Boards

Energy Management Solution
- InduSofftt SCADA Soffttwarre
- Smart Power Meter Concentrator
- Smart Power Meter
- True RMS Input Module
- TouchPAD Devices - VPD Series

IIoT Product
- IoTstar: cloud management software
- UA-5200: communication server
- WISE series: IIoT host
- iCAM series: IP camera
- MQ-7200M series: MQTT I/O module
- Sensors: temperature, humidity, CO2, PM2.5,...

Machine Automation
- Motionnet Solutions
- EtherCAT Motion Control Solutions
- Ethernet Motion Control Solutions
- Serial Communication Motion Control Solutions
- PC-based Motion Control Cards
- PAC Solutions - Motion Modules

Smart Building, Smart Home Automation
- Video Intercom & Access Control
- Touch HMI - TouchPAD Series
- Smart Lighting Control
- Energy Saving - PM/PMC Series
- Environmental - DL/CL Series
- Motion Detector - PIR/RPIR Series
- Wi-Fi Wireless - WF Series
- Infrared Wireless - IR Series
- ZigBee Wireless - ZT Series
- IIoT Server & Concentrato
- Data Server - iDaSer Series
- LED Display - iKAN Series

TouchPAD HMI Solutions
- Introduction
- TPD/VPD Products Series
- Video Intercom & Access Control Series
- TPD/VPD Application
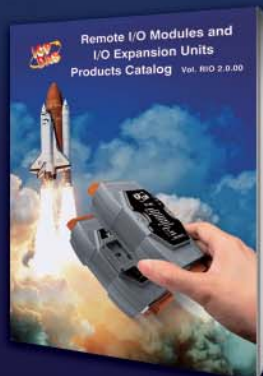
Remote I/O Modules and I/O Expansion Units Products Catalog
- RS-485 Products
- Ethernet Remote I/O Modules
- FRnet I/O Modules
- CAN Bus Products
- PROFIBUS Remote I/O Modules
- HART Products
- Smart Power Meter
- WISE I/O Module

ICP DAS CO., LTD.

Taiwan (Headquarters)
Website: http://www.icpdas.com
TEL: +886-3-597-3366
FAX: +886-3-597-3733
E-mail: info@icpdas.com
        sales@icpdas.com

Local Distributor