PACTECH

# ICP DAS
# 2015 M2M
# WLAN Wireless Solutions

*Industrial Computer Product Data Acquisition System* PAC

# WLAN Wireless Solutions

# Wi-Fi Products

| WLAN Converter | |
|---|---|
| M2M-711D | Remote maintenance Wi-Fi Device Terminal Unit |
| I-7540D-WF | CAN to Wi-Fi Converter |
| WLAN I/O Module | |
| WF-2042 | Wi-Fi Data Acquisition I/O Module (16 DO) |
| WF-2051 | Wi-Fi Data Acquisition I/O Module (16 DI) |
| WF-2055 | Wi-Fi Data Acquisition I/O Module (8 DI / 8 DO) |
| WF-2060 | Wi-Fi Data Acquisition I/O Module (6 DI / 6 Relay) |
| WF-2017 | Wi-Fi Data Acquisition I/O Module (AI, 8 diff. or 16 SE) |
| WF-2019 | Wi-Fi Data Acquisition I/O Module (10 TC) |
| WF-2026 | Wi-Fi Data Acquisition I/O Module (5 AI / 2 AO / 2 DI / 3 DO) |
| WLAN Bridge | |
| WF-2571 | Ethernet to Wi-Fi Bridge |
| WLAN Gateway | |
| RMV-760D-MTCP | MB TCP/RTU Data-Exchange With Wi-Fi Interface Gateway |

# Wi-Fi Products

| WLAN I/O Module with Metal Case | |
|---|---|
| WFM-R14 | Wi-Fi I/O Module (2-channel Form A Power Relay Output and 12-channel Form C Power Relay Output) with Metal Case. |
| WFM-P32 | Wi-Fi I/O Module (32-channel Digital Input) with Metal Case. |
| WFM-C32 | Wi-Fi I/O Module (32-channel Digital Output) with Metal Case. |
| WFM-P16C16 | Wi-Fi I/O Module (16-channel Digital Input and 16-channel Digital Output) with Metal Case. |
| WFM-P16R10 | Wi-Fi I/O Module (16-channel Digital Input and 10-channel Relay Output) with Metal Case. |

# Wi-Fi Converter

# M2M-711D
# (Remote maintenance Wi-Fi Device Terminal Unit)

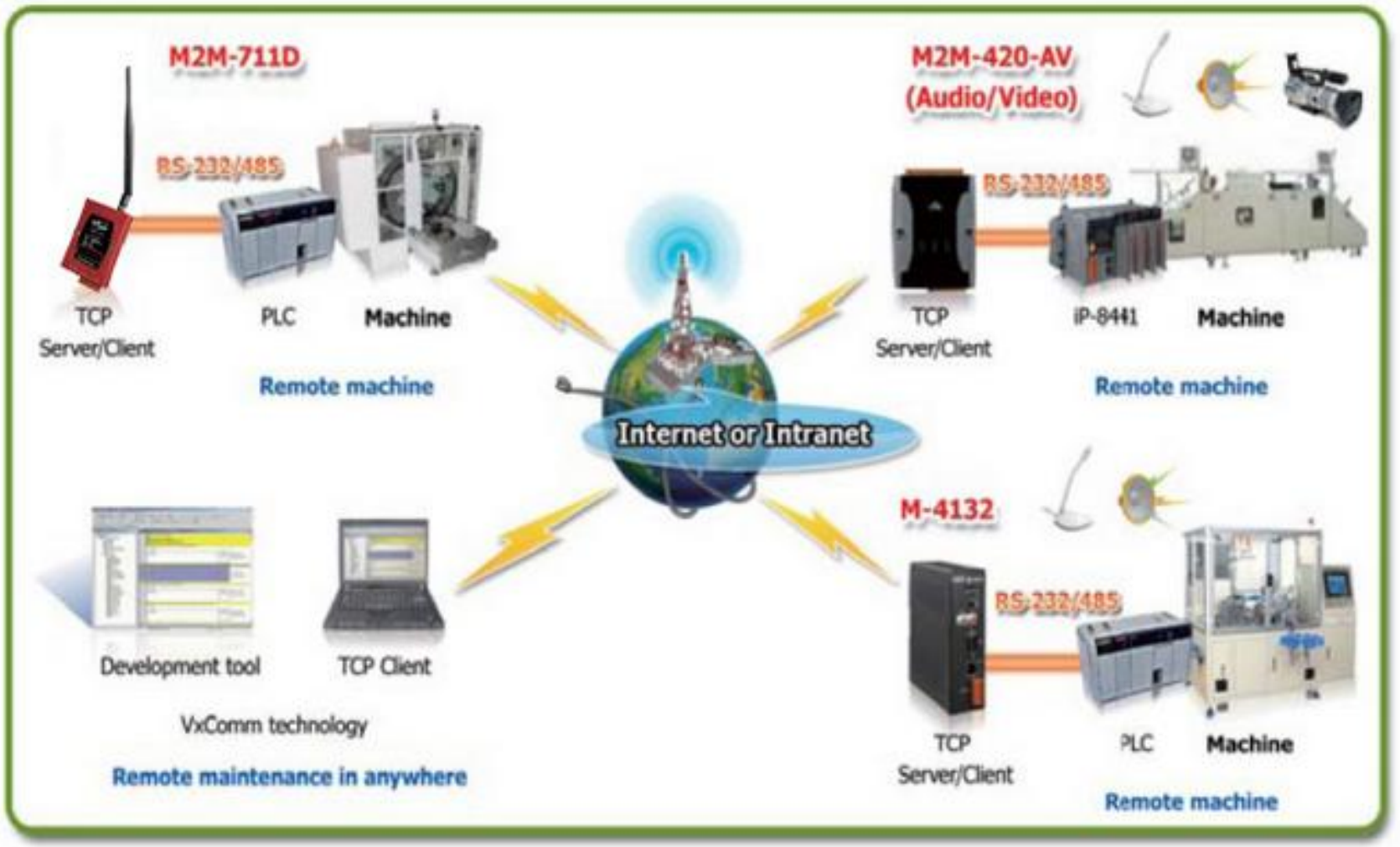
# M2M-711D Features

- Compatible with IEEE 802.11b/g standards
- Support VxServer software
- Provide pair connection (RS-232,RS-485) on network
- Support Server and Client communication mode
- Support RS-232 or RS-485 serial communication ports
- Web-based administration
- Ethernet Protocol: TCP, UDP, IP, ICMP, ARP, RARP
- Supports IEEE 802.11 b/g for Wi-Fi mode
- Supports WEP-64,WEP-128, WPA-TKIP and WPA2-AES encryption
- Provide dynamic DNS function
- Supply static IP/DHCP

# M2M-711D Specification

| | |
|---|---|
| **Communication Interface** | |
| COM 1 | RS-232(RxD, TxD, RTS, CTS, GND); None-isolation |
| COM2 | RS-485(DATA+, DATA-); None-isolation |
| Ethernet Port | 10/100 Base-TX |
| **COM Port Formats** | |
| Baud Rate (bps) | 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 |
| Data bit | 7, 8 |
| Stop bit | 2 (data bit must be 7 bit) or 1 |
| Parity | None, Even, Odd |
| **Ethernet Interface** | |
| Controller | 10/100Base-TX Ethernet Controller |
| Connector | RJ-45 with LED indicator |
| Services | TCP/IP, Web server |
| **Wireless Network Module(IEEE 802.11b/g)** | |
| RF channels | 1~13; AP mode supports auto control channel |
| Receive sensitivity | -87 dBm(IEEE 802.11b) / -72 dBm (IEEE 802.11g) |
| Data encryption | WPA-TKIP / WPA2-AES / WEP-64 /WEP-128<br>(It's not supported WPA-TKIP,WPA-AES encryption in Ad Hoc mode) |
| Transmit Power | 12 dBm(IEEE 802.11b) / 14 dBm(IEEE 802.11g) |
| Antenna | 2.4GHz - 5dBi Omni-Directional antenna |
| Transmission range (LOS) | 100M |

# M2M-711D Application




**Remote Maintenance**

# M2M-711D Application


**Pair-connection mode**

# I-7540D-WF
# (CAN to Wi-Fi Converter)

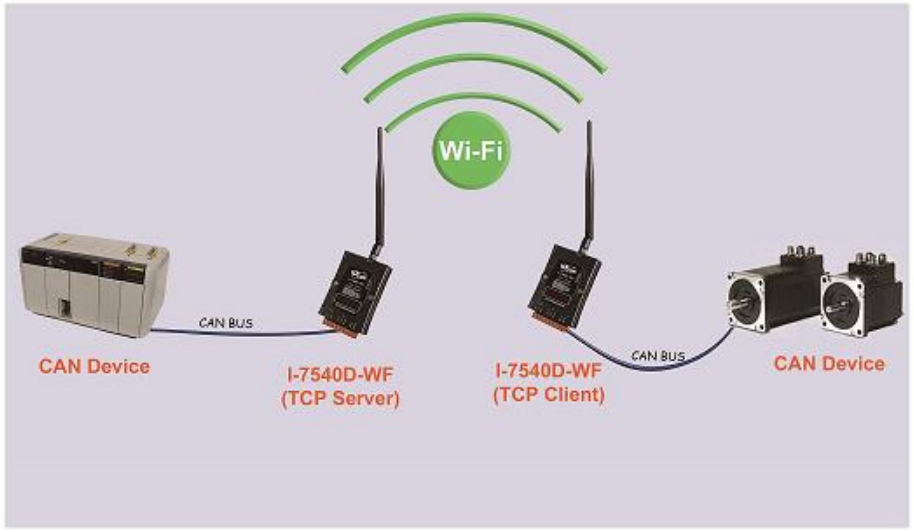
# I-7540D-WF Features

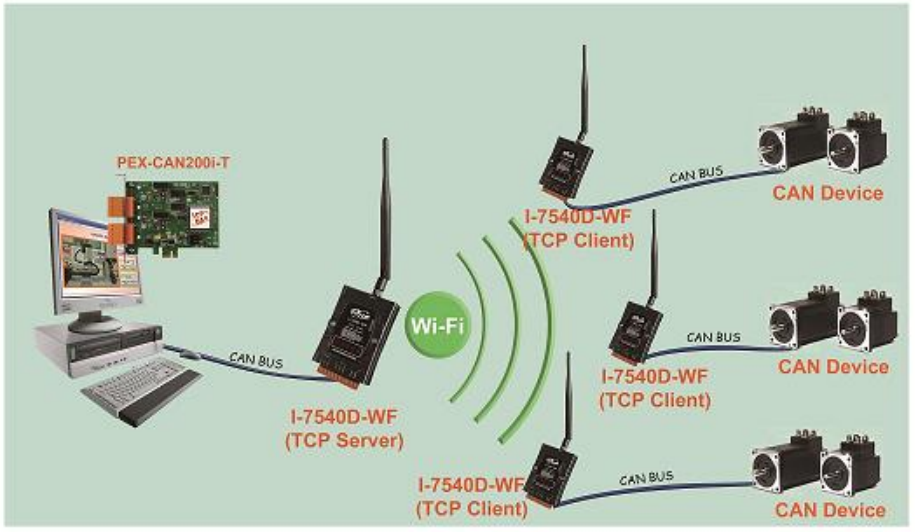
- IEEE 802.11b/g compliant
- Wireless data transmission via WLAN
- Two operation modes: infrastructure and ad-hoc
- Supports WEP, WPA and WPA2 encryption for wireless LAN
- CAN 2.0A/2.0B compliant
- Connect CAN networks via a WLAN bridge
- Communication efficiency: up to 700 fps
- Wireless transmission distance: up to 100 meters(LOS)

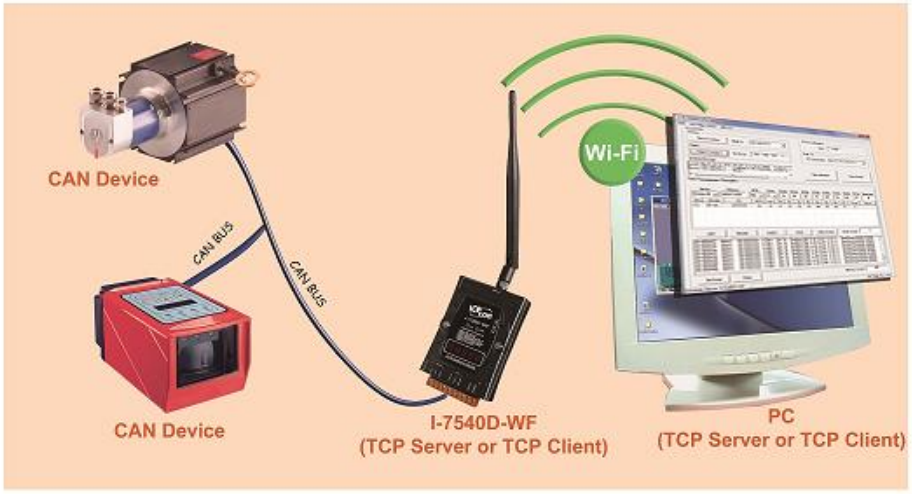
# I-7540D-WF Specification

| | |
|---|---|
| **CAN Interface** | |
| Controller | CAN Controller inside |
| Transceiver | NXP 82C250 |
| Channels | 1 |
| Connector | 10-pin screw terminal connecter |
| Baud Rate (bps) | 5K ~ 1Mbps |
| Isolation | 3000 VDC power protection on CAN side, 2500Vrms photo-couple isolation on CAN bus |
| Terminator Resistor | Selectable 120Ω terminator resistor by jumper |
| Specification | ISO-11898-2, CAN 2.0A and CAN 2.0B |
| Max Data Flow | 700 fps(peak value, one-way) |
| **UART Interface** | |
| Connector | 10-pin screw terminal connecter |
| COM1 | RS-232(TXD, RXD, GND) |
| Baud Rate (bps) | 115200 |
| **Wi-Fi Interface** | |
| Antenna | 5 dBi (Omni-Directional) |
| Standard Supported | IEEE 802.11b/g |
| Transmit Power | 14dBm @802.11b / 12dBm @802.11g |
| Receiver Sensitivity | -87dBm @802.11b / -72dBm @802.11g |
| Operation Mode | Infrastructure & Ad-hoc |
| Encryption | WEP, WPA and WPA2 |
| Frequency Ranges | 2.412GHz ~ 2.484GHz |
| Transmission distance | Up to 100 meters |

# I-7540D-WF Application



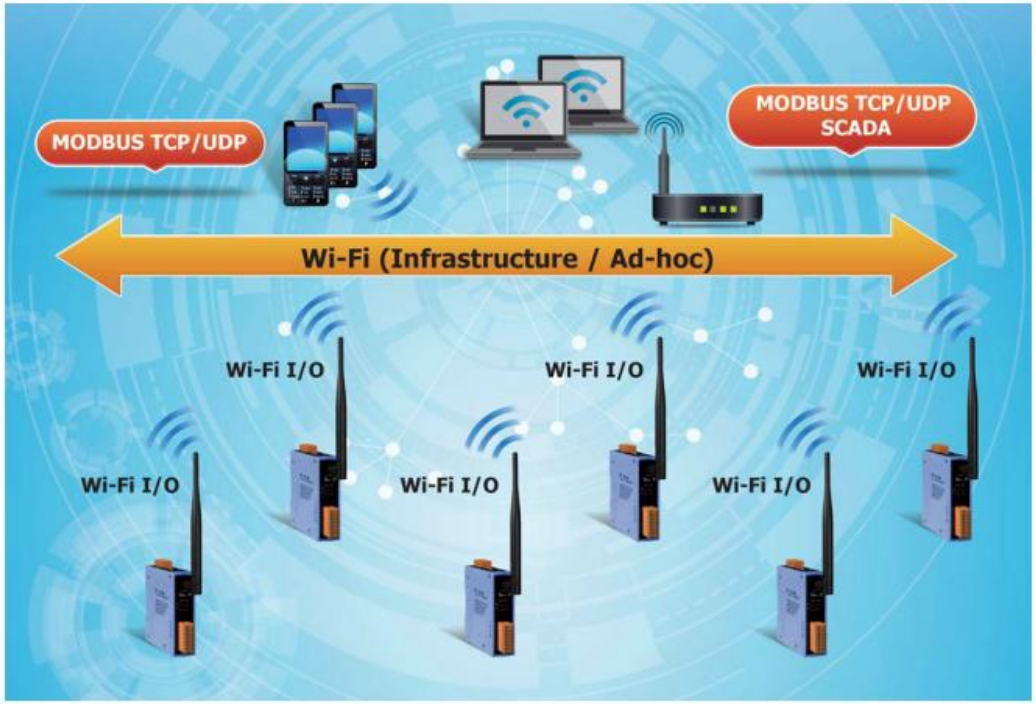



# Wi-Fi I/O Device

# Wi-Fi I/O - Features

- Compatible with IEEE 802.11b/g standards
- Support Infrastructure and Ad-hoc mode for wireless network
- Support WEP, WPA and WPA2 wireless encryption
- Support Modbus TCP/UDP protocol
- Support Pair Connection mode
- Support Power on value & Safe value mechanism
- Built-in Watchdog



# Wi-Fi DIO Modules Specifications

| Models | | | WF-2042 | WF-2051 | WF-2055 | WF-2060 |
|---|---|---|---|---|---|---|
| DO | Channels | | 16 | - | 8 | 6 |
| | Types | | Sink (NPN) | - | Sink (NPN) | Form A (SPST-NO) |
| | Output Voltage | | +3.5 ~ +50 $V_{DC}$ | - | +3.5 ~ +50 $V_{DC}$ | - |
| | Output Current | | 700 m A / ch. | - | 700 mA / ch. | - |
| | Contact Rating | | - | - | - | 5 A @ (250 $V_{AC}$/30 $V_{DC}$) |
| | Intra-module Isolation | | 3750 $V_{DC}$ | - | 3750 $V_{DC}$ | - |
| | Overvoltage Protection | | 60 $V_{DC}$ | - | 60 $V_{DC}$ | - |
| DI | Channels | | | 16 | 8 | 6 |
| | Input Type | | | Dry Contact: Source, Wet Contact: Sink / Source | | |
| | Dry Contact Level | | | Off Voltage Level: Open<br>On Voltage Level: Close to GND | | |
| | Wet Contact Level | | | Off Voltage Level: +4V max.<br>On Voltage Level: +10V ~ +50 V | | |
| | Counters | Channels | | 6 | 8 | 6 |
| | | Max Counts | | 32-bit (4294967295) | | |
| | | Input Freq. | | 10 kHz (Max.) | | |
| | Photo-Isolation | | | 3750 $V_{DC}$ | | |
| Wi-Fi Interface | Standard Supported | | IEEE 802.11b/g | | | |
| | Wireless Mode | | Infrastructure & Ad-hoc | | | |
| | Encryption | | WEP, WPA and WPA2 | | | |
| | Transmission Range | | 100 Meters (LOS) | | | |

# Wi-Fi AI Modules Specifications

| Models | | WF-2017 | WF-2019 |
|---|---|---|---|
| Channels | | 8 diff. or 16 SE | 10 diff. |
| Input Types | | Voltage:<br>±10 V, ±5 V, ±1V, ±500 mV, ±150 mV<br><br>Current:<br>0 ~ +20mA, +4 ~ +20mA, ±20 mA<br>(Requires Optional External 125 Ω Resistor) | Voltage:<br>±15 mV, ±50 mV, ±100 mV, ±150 mV,<br>±500 mV, ±1V, ±2.5V, ±5V, ±10V<br><br>Current:<br>±20 mA, 0 ~ 20 mA, 4 ~ 20 mA<br>(External resistor is required)<br><br>Thermocouple :<br>J, K, T, E, R, S, B, N, C, L, M and LDIN43710<br>(Requires Optional External 125 Ω Resistor) |
| Resolution | | Normal Mode: 16-bit, Fast Mode: 12-bit | 16-bit |
| Accuracy | | Normal Mode: ±0.1% FSR,<br>Fast Mode: ±0.5% FSR | ±0.1% FSR |
| Sampling Rate | | Normal Mode: 10 Hz (Total),<br>Fast Mode: 50 Hz (Total) | 10 Hz (Total) |
| Open Thermocouple Detection | | - | Yes |
| Individual Channel Configuration | | Yes | Yes |
| Overvoltage Protection | | 240 Vrms | 240 Vrms |
| Wi-Fi Interface | Standard Supported | IEEE 802.11b/g | |
| | Wireless Mode | Infrastructure & Ad-hoc | |
| | Encryption | WEP, WPA and WPA2 | |
| | Transmission Range | 100 Meters (LOS) | |

# WF-2026 Multifunction I/O Spec.

| Models | | WF-2026 |
|---|---|---|
| DI | Channels / Type | 3 / Dry Contact Source |
| | ON Level | Close to GND |
| | OFF Level | Open |
| | Counters | 32-bit (4,294,967,285), Max. Input Frequency: 100 Hz, Min. Pulse Width: 5 ms |
| DO | Channels | 3 |
| | Type | Open Collector |
| | Load Voltage | +3.5 $V_{DC}$ ~ +50 $V_{DC}$ |
| | Max. Load Current | 700 mA/Channel |
| AI | Channels / Wiring | 6 / Differential |
| | Range | ±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±20 mA , 0 ~ 20 mA, 4 ~ 20 mA (Jumper Selectable) |
| | Resolution | 16-bit |
| | Accuracy | Normal Mode: ±0.1% of FSR, Fast Mode: ±0.5% of FSR or better |
| | Sampling | Normal Mode: 10 Samples/Second (Total), Fast Mode: 60 Samples/Second (Total) |
| AO | Channels | 2 |
| | Range | +0 ~ +5 $V_{DC}$, +0 ~ +10 $V_{DC}$, ±5 $V_{DC}$, ±10 $V_{DC}$, +0 ~ +20 mA, +4 ~ +20 mA (Jumper Selectable) |
| | Resolution | 12-bit |
| | Accuracy | ±0.1% of FSR |
| | Voltage Capability | 10 V @ 20 mA |
| Wi-Fi Interface | Standard Supported | IEEE 802.11b/g |
| | Wireless Mode | Infrastructure & Ad-hoc |
| | Encryption | WEP, WPA and WPA2 |

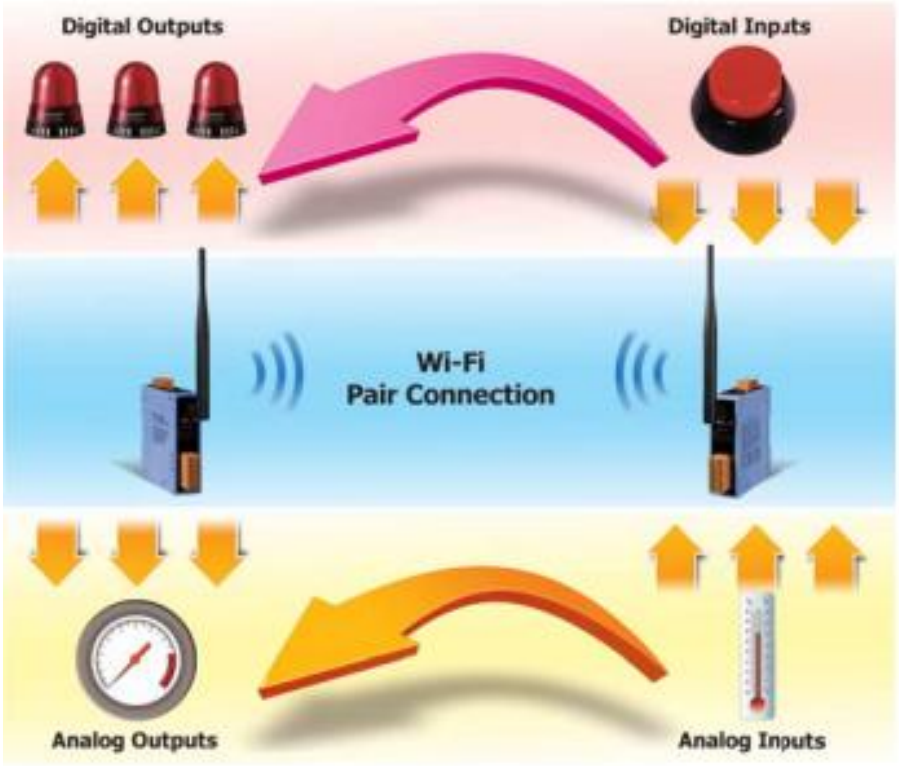
# WFM-R14 Features

- Support Form A and Form C Relay type digital outputs
- Configurable Power-on and Safe Value Settings
- Compatible with IEEE 802.11b/g standards
- Support WEP, WPA and WPA2 wireless encryption
- Support Modbus TCP protocols
- Support DHCP network configuration
- Support pair connection mode
- ±4 kV Contact ESD Protection
- Built-in Watchdog

# WFM-R14 Specification

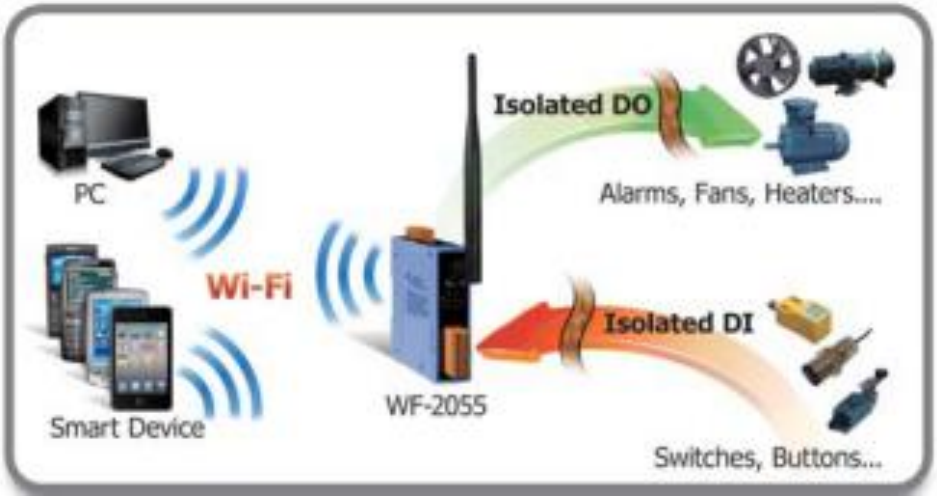
| | | | |
|---|---|---|---|
| **Digital Output** | | | |
| **Channels** | | 14 | |
| **Output Type** | | 2Form A Power Relays | |
| **Contact Rating (Resistive Load)** | | 5A 250 VAC/30VDC | |
| | | 6A 250 VAC/30VDC | |
| **Operate Time** | Release Time | 10ms max. | 5ms max. |
| | | 8ms max. | 4ms max. |
| **Insulation Resistance** | | 1000MΩs at 500VDC | |
| **Dielectric Strength** | | Between Coil and Contacts | 3000VAC (1 min.) |
| | | Between Open Contact | 1000VAC (1 min.) |
| | | Between Coil and Contacts | 4000VAC (1 min.) |
| | | Between Open Contact | 1000VAC (1 min.) |
| **Mechanical Endurance** | | 2x107 times | |
| | | 1x107 times | |
| **Electrical Endurance** | | 1x105 times 3A 250VAC/30VDC<br>5x104 times 5A 250VAC/30VDC | |
| | | 1A: 6x104 times<br>1C: (NO)3x104 times<br>1C: (NC)1x104 times | |
| **Power** | | | |
| **Input Voltage Range** | | 10V ~ 30V | |
| **Power Consumption** | | 2.2W | |
| **Mechanical** | | | |
| **Installation** | | DIN-Rail | |
| **Dimensions** | | 33mm x 95mm x 120mm (W x L x H) | |
| **Casing** | | Metal | |

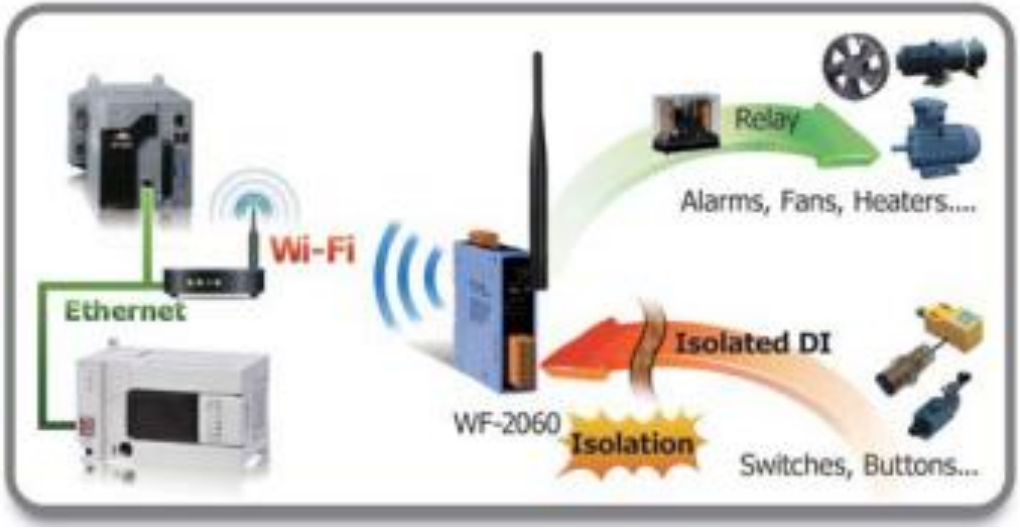
# Wi-Fi I/O Applications




Pair-Connection application

# Wi-Fi I/O Applications



# Wi-Fi Bridge

# WF-2571 Features

- Compatible with IEEE 802.11b/g standards
- Supports Infrastructure and Ad-hoc mode
- Enterprise Class wireless security (WEP, WPA and WPA2)
- Plug-and-Play Ethernet to Wi-Fi connectivity
- USB-based configuration
- No driver installation required
- Built-in Watchdog

# WF-2571 Specification

| | |
|---|---|
| **Wi-Fi Interface** | |
| Antenna | 5 dBi (Omni-Directional) |
| Standard Supported | IEEE 802.11b/g |
| Network Access Modes | Infrastructure & Ad-hoc |
| Encryption | WEP, WPA and WPA2 |
| Transmission Range | 100 meters (LOS) |
| **Ethernet Interface** | |
| Controller | 10/100Base-TX Ethernet Controller (Auto-negotiating, Auto_MDIX) |
| Connector | RJ-45 with LED indicator |
| **USB Interface** | |
| Type | USB 2.0 Full-Speed |
| Connector | USB type B |
| **LED Indicators** | |
| System status | 3 Indicator LEDs (PWR, LINK, COMM) |
| Signal strength | 3 Indicator LEDs (High, Mid, Low) |
| **Power** | |
| Input Voltage Range | 10V ~ 30V |
| Power Consumption | 1.6W |

# WF-2571 Application

Ad-Hoc connection

AP connection

# Wi-Fi Gateway

# RMV-760D-MTCP
# (Modbus TCP/RTU Data-Exchange With Wi-Fi interface Gateway)

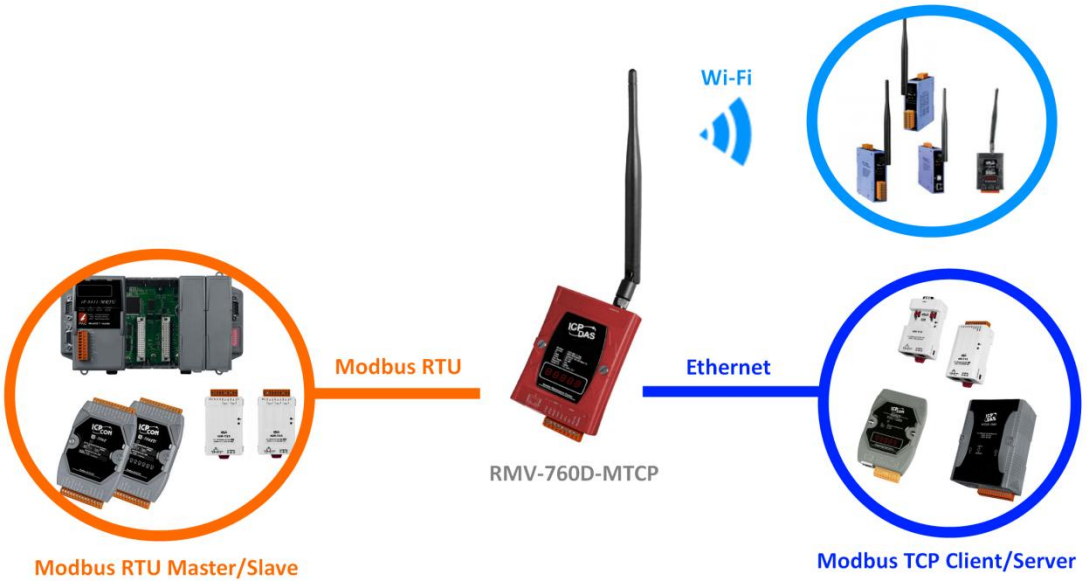
# RMV-760D-MTCP Features

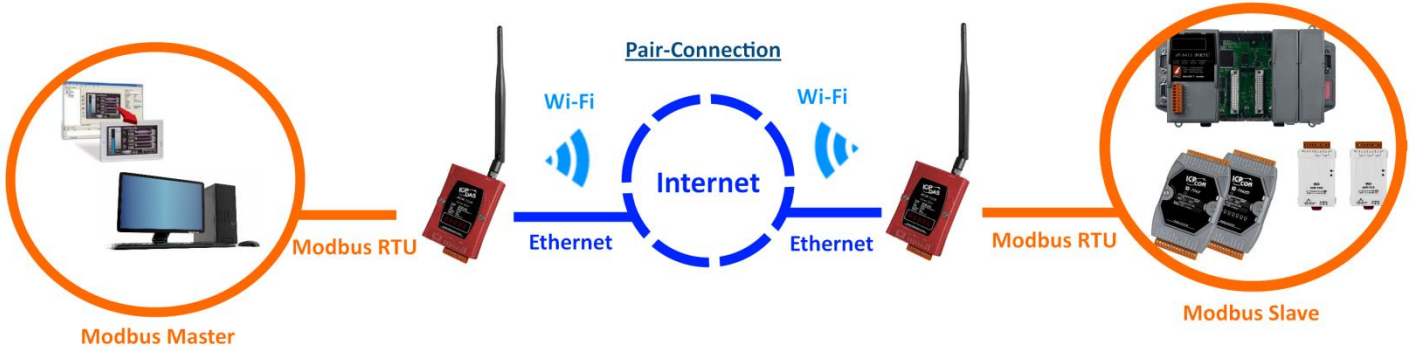
- Supports pair-connection applications
- Supports Virtual COM applications
- Application Modes: Virtual COM, MB TCP Server/Client, MB RTU Master/Slave
- Supports static IP/DHCP (Ad Hoc mode don't support DHCP)
- Ethernet Protocol: TCP, UDP, IP, ICMP, ARP,RARP
- Support IEEE 802.11 b/g for Wi-Fi mode 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
- Provides 1~13 RF channels

# RMV-760D-MTCP Specification

| RMV-760-MTCP | |
|---|---|
| **System** | |
| CPU | 32-bit MCU |
| Ethernet | 10/100 Base-TX, 8-pin RJ-45 x 1 |
| COM1 | 3-wire RS-232<br>2-wireRS-485<br>4-wire RS-422 |
| **Feature** | |
| VxComm Driver | Includes a VxComm Driver for 32/64-bit Windows XP/2003/Vista/7 |
| Pair-Connection | Supports pair-connection applications |
| Modbus Protocol | Supports Modbus RTU/TCP master and slave |
| **Wi-Fi Interface** | |
| Antenna | 5 dBi (Omni-Directional) |
| Output Power | 8 dBm @ 11Mbps |
| Receive Sensitivity | -83 dBm @ 11Mbps |
| Standard Supported | IEEE 802.11b/g |
| Wireless Mode | Infrastructure & Ad-hoc |
| Encryption | WEP, WPA and WPA2 |
| Transmission Range | 50 meters (LOS) |
| **COM Port Format** | |
| Baud Rate | 115200 bps Max. |
| Data Bit | 7, 8 |
| Parity | None, Odd, Even |
| Stop Bit | 1, 2 |
| **Power** | |
| Power Input | +10 ~ 30 VDC |
| Power Consumption | 0.05 A @ 24 VDC |
| **Mechanism** | |
| Mounting | DIN-Rail |
| Dimensions (W x L x H) | 76 mm x 38 mm x 118 mm |

# RMV-760D-MTCP Application



# ICP DAS

# Thank You

http://www.icpdas.com/

http://m2m.icpdas.com/