АВТОМАТИЗАЦИЯ & СВЯЗЬ
AKOM
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KSH
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Network & Wireless Solution for Serial, USB, Analog & DigitalI/O Devices

RoHS

Network & Wireless Solution For
IoT, Serial, USB, Analog & Digital I/O Devices

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Applications

- Industry 4.0
- Facility Management
- Factory Automation
- SCADA System
- Environment Remote Monitor & Control
- Building Automation
- Smart City
- Smart Campus
- Access Control
- Parking System
- Smart Traffic Remote Control
- Intelligent Transportation System
- POS / Retail Automation
- Smart Green Energy
- Solar Power System Data Acquisition
- Headlth Care

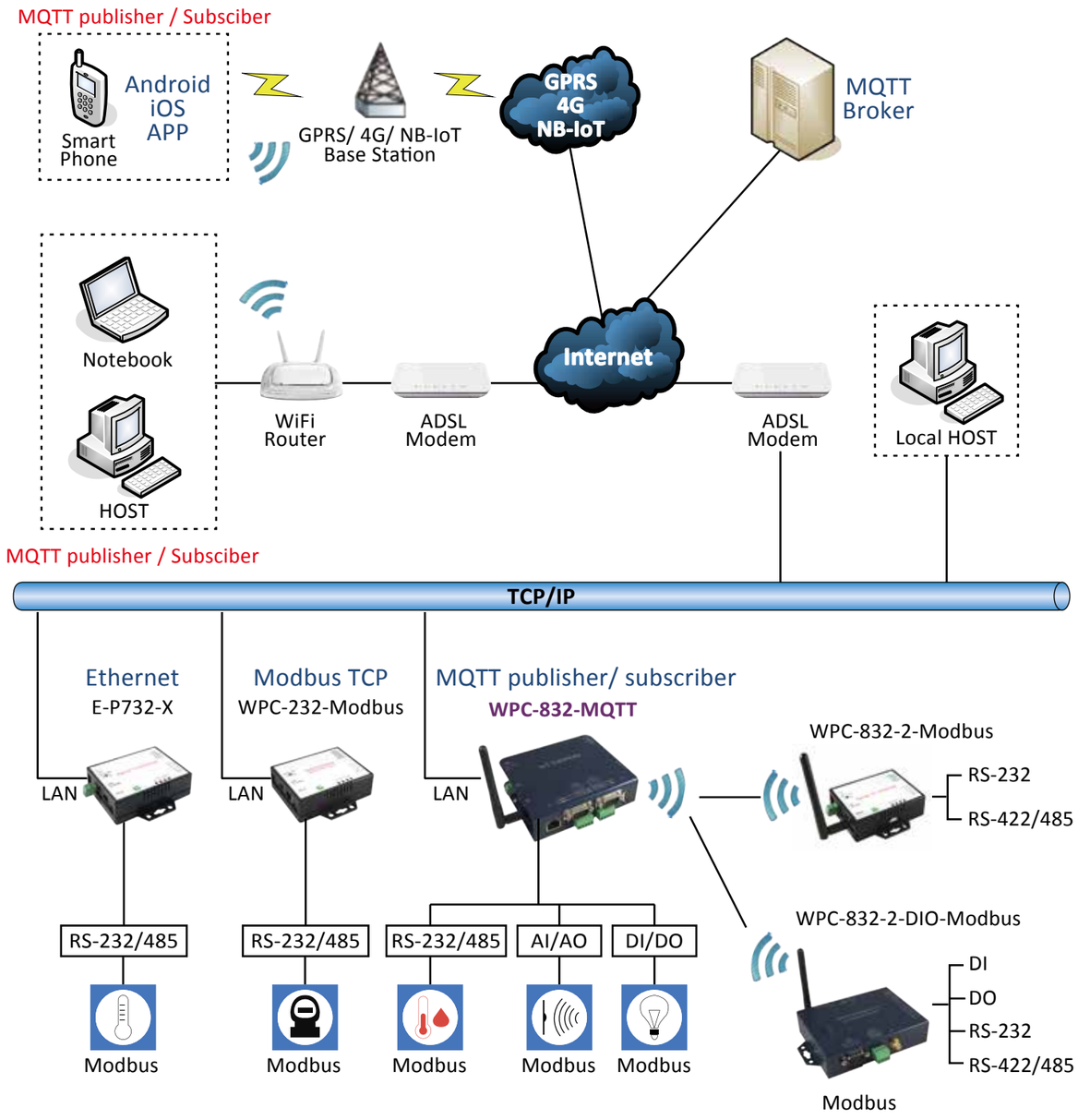
Products

IoT Gateway (Ethernet + WiFi)

Model	WPC-832-2	WPC-832-MQTT	WPC-832-LAN	WPC-832-4-I	WPC-832-2-DIO	WPC-632-CM3	UP-432
Photo							
Function	**S2E / Modbus**	**MQTT / Modbus**	**S2E / Modbus**	**S2E / Modbus**	**Modbus+DIO**	**Smart Controller**	**Smart Controller**
OS	Linux-OpenWrt	Linux-OpenWrt	Linux-OpenWrt	Linux-OpenWrt	Linux-OpenWrt	Linux-Raspbian	Windows 10
CPU	MIPS	MIPS	MIPS	MIPS	MIPS	ARM- A53 BCM-2837	Intel Atom X5-8350
CPU-Speed	580 MHz	580 MHz	580 MHz	580 MHz	580 MHz	1.2 GHz	1.44 GHz
DDR2 RAM	128 M	128 M	128 M	128 M	128 M	1 G	4 G
Flash ROM	32 M	32 M	32 M	32 M	32 M	4 / 8 / 16 / 32 G	32 G
Ethernet	1	1	4	1	1	1	1
WiFi - 802.11 b/g/n	1	1	1	1	1	USB / Mini-PCIe	USB Dongle
RS-232/422/485		2	2	4		2	
RS-232	1				1		1
RS-422/485	1				1		2
Baud Rate	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 230.4 K	300 ~ 230.4 K
USB		1	1			3	4
Micro SD		1	1			1	
Mini PCIe (USB)						1	
HDMI						1	1
GPIO	8	8	8		DI * 2 , DO * 2	16	12
RTC / BUZZER		●	●			●	●
Utility / Web Page Setup	●	●	●	●	●	●	●
Power Input	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V
Option		PoE				4G / Bluetooth	WiFi / LoRa
DIN-Rail Mounting	●	●	●	●	●	●	●
Operating Temperature	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-10°C ~ 70°C	0°C ~ 60°C
Packaging							
Net weight	112 gm	460 gm	470 gm	690 gm	355 gm	620 gm	670 gm
Dimension	110x90x26 mm	120x110x35 mm	132x110x55 mm	220x120x35 mm	133x105x26 mm	205x120x35 mm	200x120x35 mm

Remark : S2E : Serial to Ethernet
Modbus : Modbus TCP to Modbus RTU / ASCII

Application Infrastructure



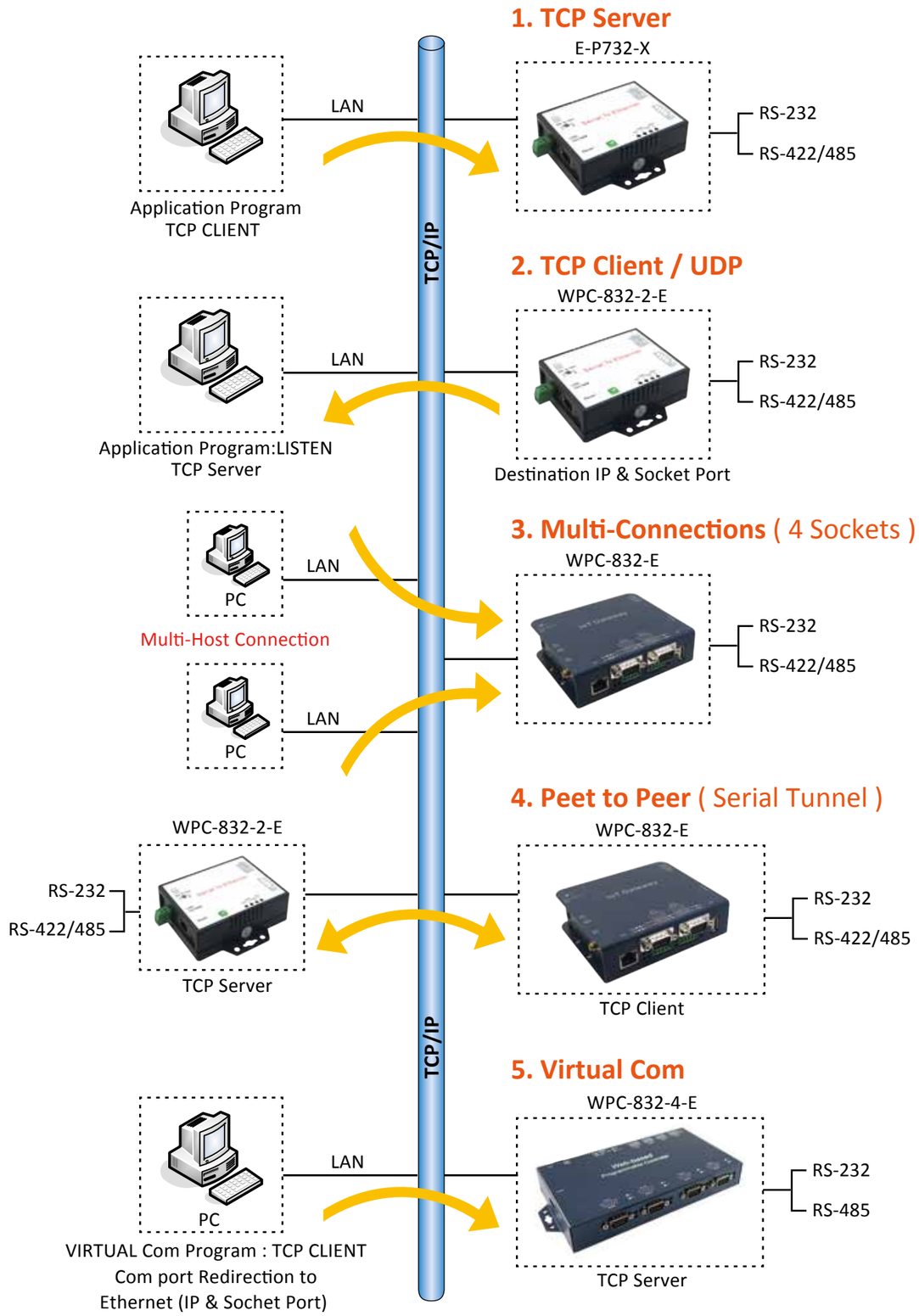
Products

Serial To Ethernet

Model	E-P732-X	E-P732-X-485	WPC-832-2-E	WPC-832-E	E-P432	WPC-832-4-I-E	WPC-732-3-8
Photo							
Function	**S2E / Modbus**	**S2E / Modbus**	**S2E / Modbus**	**S2E / Modbus**	**S2E**	**S2E / Modbus**	**S2E / Modbus**
Serial Port	2 ports	2 ports	2 ports	2 ports	4 ports	4 ports	8 ports
CPU	ARM Cortex M4	ARM Cortex M4	MIPS	MIPS	ARM 7	MIPS	ARM Cortex –A53
CPU-Speed	120 MHz	120 MHz	580 MHz	580 MHz	50 MHz	580 MHz	1.2 MHz
SDRAM	256 K	256 K	128 M	128 M	2 M	128 M	1 G
Flash ROM	1 M	1 M	32 M	32 M	128 K	32 M	8G - SD Card
Ethernet	1	1	1	1	1	1	1
Socket Connection	1	1	4	4	1	4	1
RS-232/422/485		1		2	2	4	8
RS-232	1		1		2		
RS-422/485	1	1	1				
Baud Rate	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 230.4 K	300 ~ 921.6 K	300 ~ 230.4 K
GPIO	16	16	8	8	8	--	--
3000V DC Isolation						●	●
Virtual Com	●	●	●	●	●	●	●
Utility / Web Page Setup	●	●	●	●	●	●	●
Power Input	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 24 V	DC 9 ~ 30 V	DC 9 ~ 30 V
Option			WiFi	WiFi / PoE		WiFi	WiFi
DIN-Rail Mounting	●	●	●	●	●	●	●
Operating Temperature	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	0°C ~ 60°C	-20°C ~ 75°C	-10°C ~ 70°C
Packaging							
Net weight	95 gm	100 gm	105 gm	450 gm	600 gm	680 gm	850 gm
Dimension	110x90x26 mm	110x90x26 mm	110x90x26 mm	120x110x35 mm	170x130x27 mm	220x120x35 mm	220x120x50 mm

Remark : S2E - Serial to Ethernet.
Modbus - Modbus TCP to Modbus RTU / ASCII

Application Infrastructure



Products

Serial To WiFi - IEEE 802.11 b/g/n

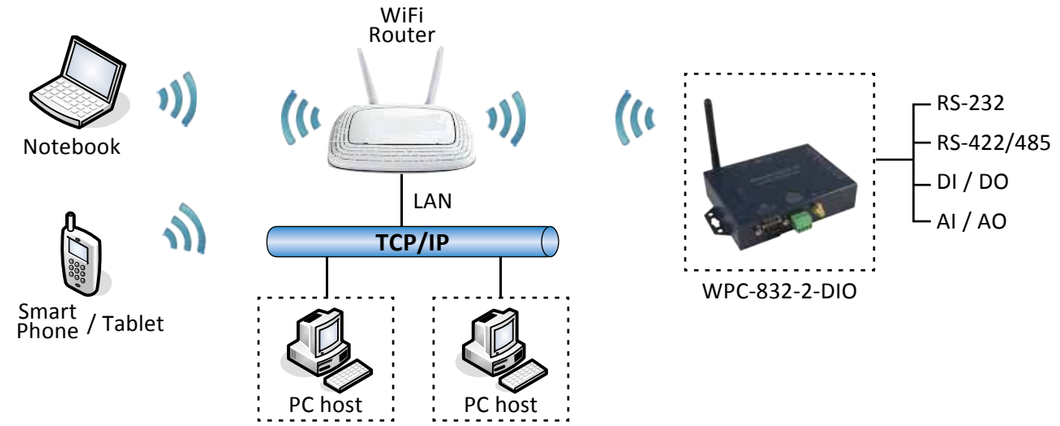
Model	E-P132-WB-T	E-P132-WB	E-P132-WB-DIO	WPC-832-2	WPC-832	WPC-832-4-I	WPC-732-3-8
Photo							
Function	**S2W / Modbus**	**S2W / Modbus**	**Modbus DI/O**	**S2W / Modbus**	**S2W / Modbus**	**S2W / Modbus**	**S2W / Modbus**
Serial Ports	TTL Module	1 port	DO*4, DI*2	2 ports	2 ports	4 ports	8 ports
CPU	ARM 9,Linux OS	ARM 9,Linux OS	ARM 9,Linux OS	MIPS,OpenWrt	MIPS,OpenWrt	MIPS,OpenWrt	ARM Cortex –A53
CPU-speed	200 MHz	200 MHz	200 MHz	580 MHz	580 MHz	580 MHz	1.2 GHz
SDRAM	32 M	32 M	32 M	128 M	128 M	128 M	1 G
Flash ROM	64 M	64 M	64 M	32 M	32 M	32 M	8G - SD Card
Wireless Lan 802.11	b/g/n	b/g/n	b/g/n	b/g/n	b/g/n	b/g/n	USB Dongle
Ethernet				1	1	1	1
Socket Connection	1	1	1	4	4	4	1
RS-232/422/485		1			2	4	8
RS-232	1 (UART)			1			
RS-422/485				1			
Baud Rate	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 230.4 K
Virtual Com	●	●	●	●	●	●	●
Utility / Web Page Setup	●	●	●	●	●	●	●
Power Input	DC 5 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V
Option					PoE		
DIN-Rail Mounting	●	●	●	●	●	●	●
Operating Temperature	-10°C ~ 65°C	-10°C ~ 65°C	-10°C ~ 65°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-10°C ~ 70°C
Packaging							
Net weight	13 gm	120 gm	130 gm	112 gm	460 gm	690 gm	860 gm
Dimension	50x45x12 mm	110x90x26 mm	110x90x26 mm	110x90x26 mm	120x110x35 mm	220x120x35 mm	220x120x50 mm

Remark : S2W - Serial to Wireless LAN 802.11 b/g/n
Modbus - Modbus TCP to Modbus RTU / ASCII

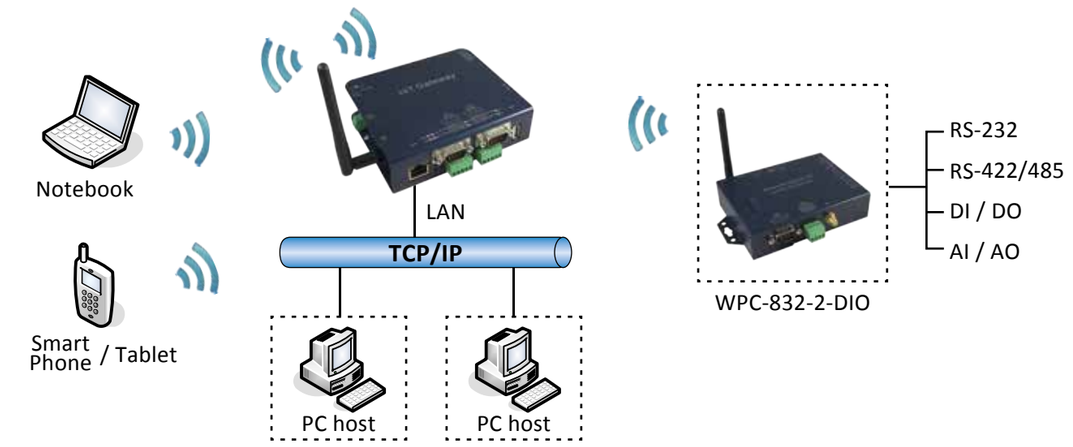
Serial To WiFi

Application Infrastructure

1. Infrastructure



2. AP mode



3. Peer to Peer

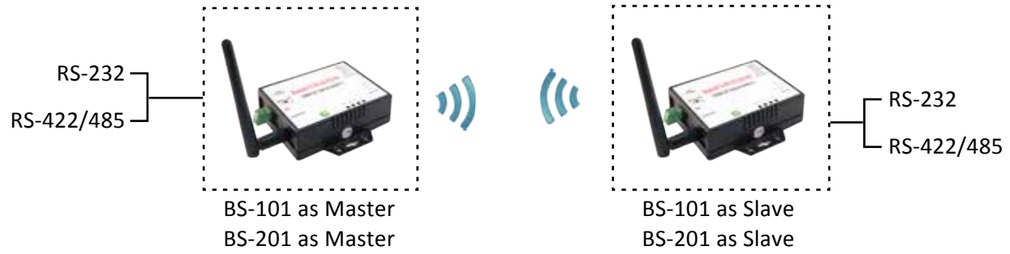
Products

Serial To Bluetooth

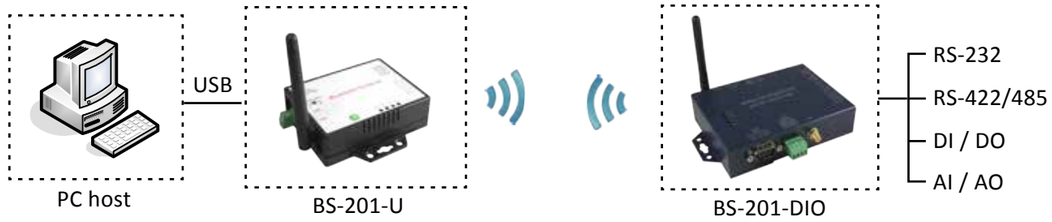
Model	E-P132-B1	BS-101	BS-201	BS-201-DIO	BS-201-U	BS-201-iBeacon
Photo						
Function	**RS-232 Bluetooth**	**Serial To Bluetooth**	**Serial To Bluetooth**	**Bluetooth DIO**	**USB To Bluetooth**	**iBeacon Reader**
Bluetooth	Bluetooth 2.0	Bluetooth 2.1	Bluetooth 5.0	Bluetooth 5.0	Bluetooth 5.0	Bluetooth 5.0
Bluetooth Chipset	CSR	CSR	Nordic 52840	Nordic 52840	Nordic 52840	Nordic 52840
Carrier Frequency	2400 ~2483.5 MHz	2400 ~2483.5 MHz	2400 ~2483.5 MHz	2400 ~2483.5 MHz	2400 ~2483.5 MHz	2400 ~2483.5 MHz
Class	Class 1	Class 1	Class 1	Class 1	Class 1	Class 1
Tx RF Output Power	13 dbm	13 dbm	8 dbm	8 dbm	8 dbm	8 dbm
Rx Sensitivity	-86 dBm (min)	-86 dBm (min)	-93 dBm	-93 dBm	-93 dBm	-93 dBm
Antenna	SMA plug 2 dbi	SMA plug 2 dbi	SMA plug 2 dbi	SMA plug 2 dbi	SMA plug 2 dbi	SMA plug 2 dbi
Distance	100 Meters	100 Meters	100 Meters	100 Meters	100 Meters	100 Meters
RS-232	1					
RS-232/422/485		1	1	1	1	1
Baud Rate	1200 ~ 115.2 K	1200 ~ 115.2 K	4800 ~ 115.2 K	4800 ~ 115.2 K	4800 ~ 115.2 K	4800 ~ 115.2 K
USB					1	
DIO				DI*2 , DO*4		
Security			AES 128 bits	AES 128 bits	AES 128 bits	AES 128 bits
Setup Utility	●	●	●	●	●	●
Power Input	DC 5 ~ 7 V	DC 9 ~ 24 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V
DIN-Rail Mounting		●	●	●	●	●
Operating Temperature	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C
Packaging						
Net weight	35 gm	95 gm	100 gm	355 gm	110 gm	100 gm
Dimension	70x30x12 mm	110x90x26 mm	110x90x26 mm	133x105x26 mm	100x90x26 mm	110x90x26 mm

Application Infrastructure

1. Peer to Peer (Serial Wireless Solution)



2. Serial + DIO



3. iBeacon Reader

4. Mobile Application

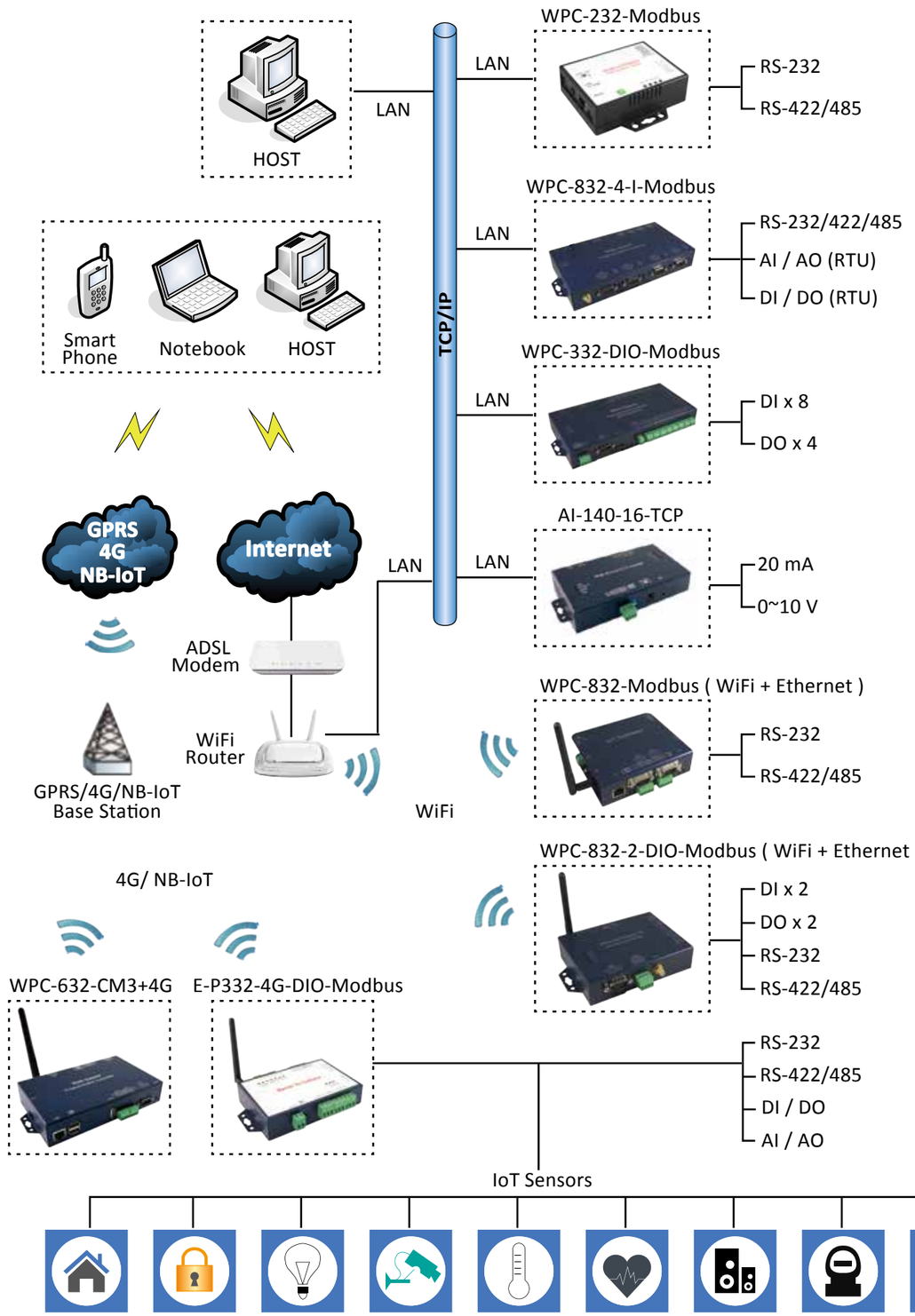
Products

Modbus Gateway (MQTT / Concentrator / DIO)

Model	E-P732-X -Modbus	WPC-232 -Modbus	WPC-832-2 -Modbus	WPC-832-MQTT	WPC-832-Con	WPC-832-4-I -Modbus	WPC-832-2 -DIO-Modbus
Photo							
Function	**Modbus**	**Modbus**	**Modbus**	**MQTT / Modbus**	**Concentrator**	**Modbus**	**Modbus+DIO**
Serial Port	2 ports	1 port	2 ports	2 ports	2 ports	4 ports	2 ports
CPU	ARM Cortex M4	ARM 7	MIPS	MIPS	MIPS	MIPS	MIPS
CPU-speed	120 MHz	80 MHz	580 MHz	580 MHz	580 MHz	580 MHz	580 MHz
SDRAM	256 K	8 M	128 M	128 M	128 M	128 M	128 M
Flash ROM	1 M	4 M	32 M	32 M	32 M	32 M	32 M
Ethernet	1	1	1	1	1	1	1
WiFi-802.11 b/g/n			1	1	1	1	1
Socket Connection	1	8	8	8	8	8	8
RS-232/422/485		1		2	2	4	
RS-232	1		1				
RS-422/485	1		1				1
Baud Rate	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K
Watchdog	●	●	●	●	●	●	●
Utility / Web Page Setup	●	●	●	●	●	●	●
Power Input	DC 9 ~ 30 V	DC 9 ~24 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V	DC 9 ~ 30 V
DIN-Rail Mounting	●	●	●	●	●	●	●
Operating Temperature	-20°C ~ 75°C	-10°C ~ 65°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C	-20°C ~ 75°C
Packaging							
Net weight	95 gm	100 gm	112 gm	460 gm	460 gm	690 gm	355 gm
Dimension	110x90x26 mm	110x90x26 mm	110x90x26 mm	120x110x35 mm	120x110x35 mm	220x120x35 mm	133x105x26 mm

Remark : Modbus - Modbus TCP to Modbus RTU / ASCII
MQTT - Message Queueing Telemetry Transport

Application Infrastructure



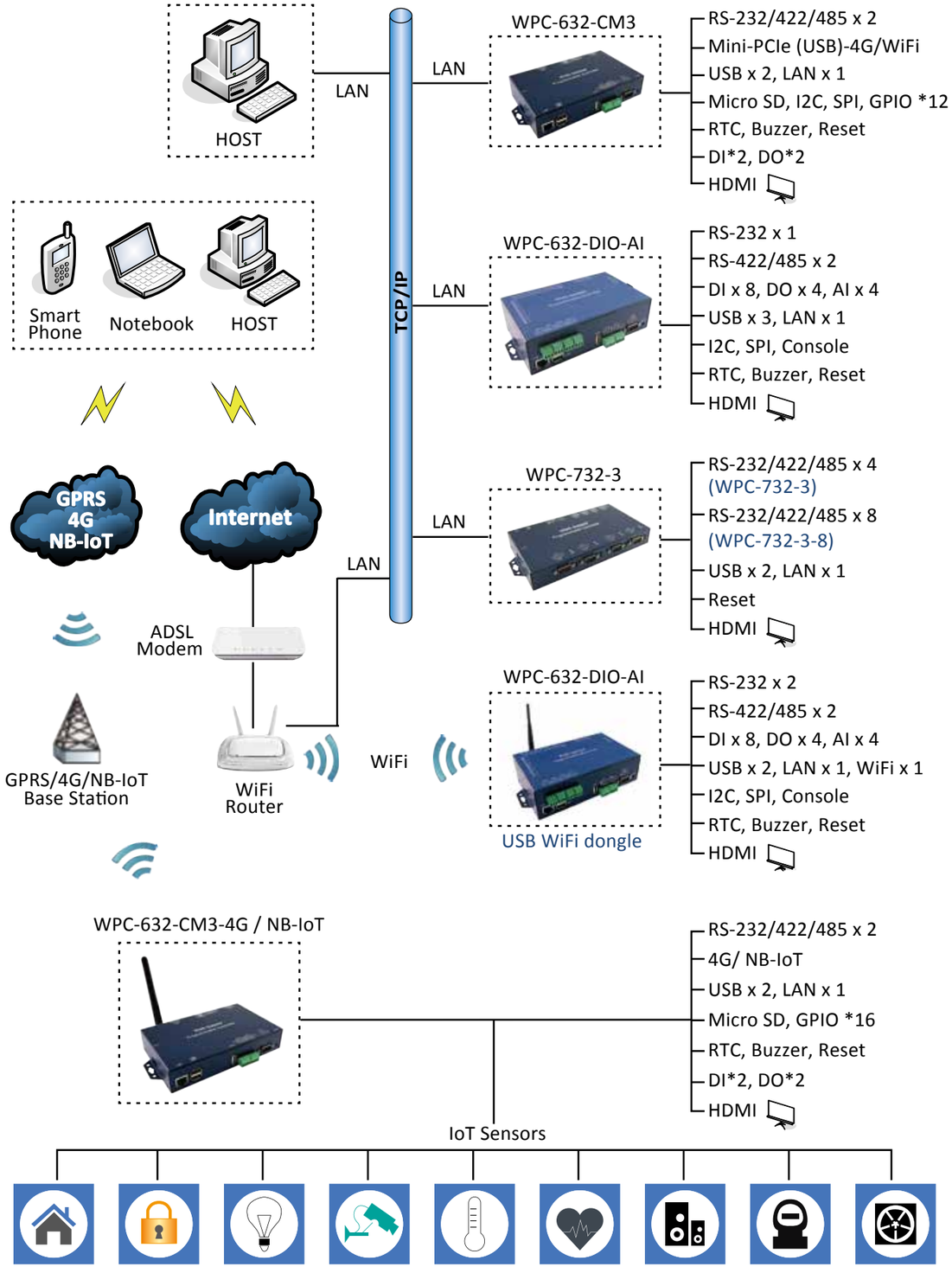
Products

Raspberry Pi Built-in Controllers

Model	WPC-632-CM3	WPC-632-3	WPC-632-3-DIO-84	WPC-732-3	WPC-732-3-8	WPC-632-EB	PI CM3 EB
Photo							
Support Pi Module	**Pi CM3 / CM3+**	**Pi 2 / Pi 3**	**Pi 2 / Pi 3**	**Pi 2 / Pi 3**	**Pi 2 / Pi 3**	**Pi 2 / Pi 3**	**Pi CM3 / CM3+**
CPU	ARM Cortex–A53	ARM Cortex–A53	ARM Cortex–A53	ARM Cortex–A53	ARM Cortex–A53		
CPU Speed	1.2 GHz	1.2 GHz	1.2 GHz	1.2 GHz	1.2 GHz		
SDRAM	1 G	1 G	1 G	1 G	1 G		
Flash ROM	4 / 8 / 16 / 32 G	8G - SD Card	8G - SD Card	8G - SD Card	8G - SD Card		
OS	Raspbian	Raspbian	Raspbian	Raspbian	Raspbian		
Ethernet	1	1	1	1	1		1
WiFi-802.11 b/g/n	Mini PCIe / USB	USB Dongle	USB Dongle	USB Dongle	USB Dongle		
Blutooth 4.0	Mini PCIe / USB	USB Dongle	USB Dongle	USB Dongle	USB Dongle		
RS-232/422/485	2			4	8		2
RS-232		2	2			2	
RS-422/485		2	2			2	
Baud Rate	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K
USB	2	3	3	2	2	1	2
SD	1	1	1	1	1		1
Mini-PCIe (USB)	1						1
RTC/ Buzzer	●	●	●	●	●	●	●
HDMI	●	●	●	●	●		●
SPI / I2C	●	●	●			●	
GPIO	16	12		12	12	12	16
Digital Input / Output			8 / 4				
Analog Input			4 (Optional)				
Power Input	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC
DIN-Rail Mounting	●	●	●	●	●		
Operating Temperature	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C
Packaging							
Net weight	620 gm	560 gm	800 gm	640 gm	850 gm	80 gm	120 gm
Dimension	205x120x35 mm	200x120x35 mm	200x120x50 mm	220x120x30 mm	220x120x50 mm	115x85x17 mm	170x110x17 mm

Raspberry Pi Controllers

Application Infrastructure



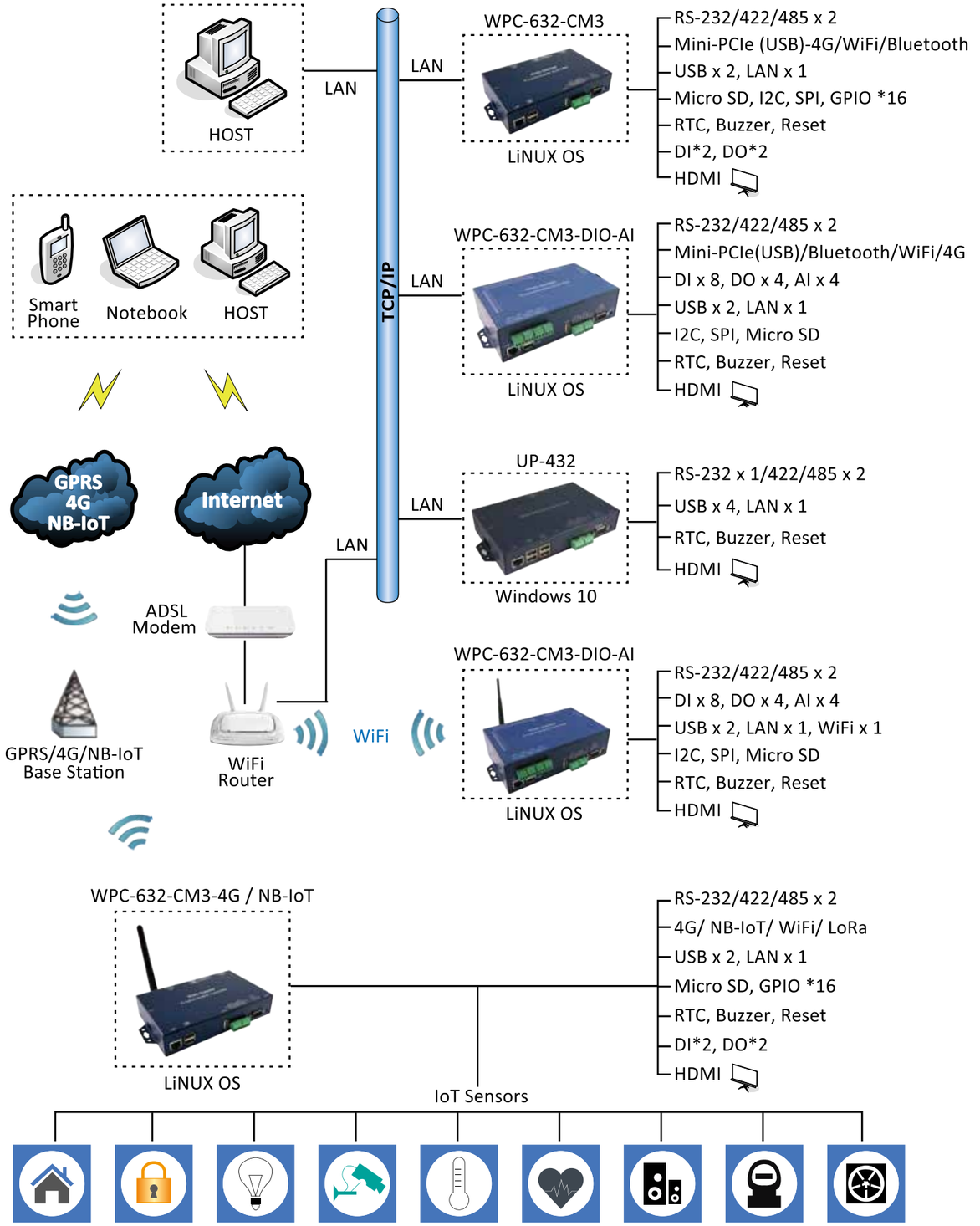
Products

Embedded Programmable Controller

Model	WPC-132-T	WPC-332	WPC-332-DIO84	WPC-832	WPC-832-4-I	UP-432	WPC-632-CM3+
Photo							
Function	**Embedded Module**	**Smart Controller**	**Smart Controller**	**IoT Controller**	**IoT Controller**	**IoT Controller**	**IoT Controller**
OS	uClinux	uClinux	uClinux	Linux-OpenWrt	Linux-OpenWrt	Windows 10	Linux-Rasbian
CPU	ARM 7	ARM 7	ARM 7	MIPS	MIPS	Intel Atom X5-8350	ARM Cortex–A53
Speed	80 MHz	80 MHz	80 MHz	580 MHz	580 MHz	1.44 GHz	1.2 GHz
SDRAM	16 M	16 M	16 M	128 M	128 M	4 G	1 G
Flash ROM	8 M	8 M	8 M	32 M	32 M	32 M	4 / 8 / 16 / 32 G
Ethernet	1	1	1	1	1	1	1
WiFi - 802.11 b/g/n				1	1	USB	Mini Pcie / USB
RS-232/422/485				2	4		2
RS-232	UART * 1	3	3			1	
RS-422/485		1	1			2	
Baud Rate	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 230.4 K	300 ~ 230.4 K
USB (Host)	1	1	1	2	2	4	2
Micro SD		1	1	1			1
Mini Pcie (USB)							1
RTC/ BUZZER	●	●	●	●	●	●	●
GPIO	5	16		8	8	12	16
Digital Input/Output			8 / 4				
Watchdog	●	●	●	●	●	●	●
Power Input	9 ~ 24 VDC	9 ~ 24 VDC	9 ~ 24 VDC	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC	9 ~ 30 VDC
DIN-Rail Mounting		●	●	●	●	●	●
Operating Temperature	-10°C ~ 65°C	-10°C ~ 65°C	-10°C ~ 65°C	-20°C ~ 75°C	-20°C ~ 75°C	0°C ~ 60°C	-10°C ~ 70°C
Packaging							
Net weight	20 gm	355 gm	750 gm	460 gm	690 gm	670 gm	620 gm
Dimension	55x50x15 mm	125x115x30 mm	222x120x30 mm	120x110x35 mm	220x120x35 mm	200x120x35 mm	205x120x35 mm

Embedded Programmable Controller

Application Infrastructure



Products Ethernet & WiFi Digital I/O

Model	E-P732-X-DIO	WPC-132-DIO-22	WPC-332-DIO-84	WPC-632-3-DIO-AI	WPC-832-2-DIO	E-P132-WB-DIO	DIO-501
Photo							
Function	**Ethernet I/O**	**DI Triger DO via Ethernet**	**Programmable I/O**	**Programmable I/O**	**WiFi I/O**	**WiFi I/O**	**RTU DI / DO**
CPU	ARM Cortex M4	ARM 7	ARM 7	ARM Cortex –A53	MIPS	ARM 9,Linux OS	R8C
CPU-speed	120 MHz	80 MHz	80 MHz	1.2 GHz	580 MHz	200 MHz	20 MHz
SDRAM	256 K	16 M	16 M	1 G	128 M	32 M	64 K
Flash ROM	1 M	8 M	8 M	8G - SD Card	32 M	64 M	64 K
Ethernet	1	1	1	1	1		
WiFi-802.11 b/g/n					1	1	
RS-232/422/485		1			2	1	
RS-232	1		3	2	1		
RS-422/485	1		1	2	1		1
Baud Rate	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 230.4 K	300 ~ 230.4 K	110~ 115.2 K	1200 ~ 115.2 K
Digital Input (Photo) (30tov DL Protect)	8	2	8	8	2	2	16
Digital Output (Power Relay)	3	2	4	4	2	4	16 (NPN)
Control Method	TCP Socket	TCP Socket	API / Web	Modbus / http	Modbus / http	Modbus / http	Modbus RTU
Analog Input				4			
Utility/ Web Page Setup	●	●	●	●	●	●	●
Data Storage		USB	Micro SD / USB	Micro SD / USB			
Watchdog	●	●	●	●	●	●	●
Power Input	DC 9~30 V	DC 9 ~24 V	DC 9 ~24 V	DC 9~30 V	DC 9~30 V	DC 9~30 V	DC 10~60 V
DIN-Rail Mounting	●	●	●	●	●	●	●
Operating Temperature	-20°C ~ 75°C	-10°C ~ 65°C	-10°C ~ 65°C	-10°C ~ 70°C	-20°C ~ 75°C	-10°C ~ 65°C	-25°C ~ 70°C
Packaging							
Net weight	425 gm	450 gm	750 gm	800 gm	355 gm	130 gm	350 gm
Dimension	170x105x25 mm	138x110x30 mm	222x120x30 mm	200x120x50 mm	133x105x26 mm	110x90x26 mm	135x120x45 mm

Products Analog Input / Output

Model	AI-140-16	AI-140-16-TCP	AI-103 / 104	AI-107 / 108	AI - 113	AO - 201	AI- 101
Photo							
Function	**Voltage+ Current**	**Voltage+ Current**	**Universal (V+A+T)**	**Thermocouple**	**RTD**	**Analog Output**	**Universal (V+A+T)**
Modbus	RTU	TCP	RTU	RTU	RTU	RTU	RTU
Channel	4	4	8 / 16	8 / 16	6	8	2
CPU	8 bits CPU	ARM-7	R8C	R8C	R8C	R8C	R8C
SDRAM	64 K	8 M	64 K	64 K	64 K	64 K	64 K
Flash ROM	256 K	4 M	64 K	64 K	64 K	64 K	64 K
Ethernet		1					
RS-485	1	1	1	1	1	1	1
Resolution	16 bits	16 bits	16 bits	16 bits	16 bits	16 bits	16 bits
Current	4 ~ 20 mA	4 ~ 20 mA	±20mA, 4~20mA, 0~20mA (Slide Switch Select)			4~20 mA, 0~20 mA	4~20 mA, 0~20 mA
Voltage	0 ~ 10 V	0 ~ 10 V	±100mV, ±500mV, ±1V, ±5V, ±10V, 0~100mV, 0~500mV, 0~1V, 0~5V, 0~10V			±5 V, ±10 V, 0~5 V, 0~10 V	±5 V, ±10 V, 0~5 V, 0~10 V
Thermocouple			J, K, T, E, R, S, B, N	J, K, T, E, R, S, B, N			J, K, T, E, R, S, B, N
RTD							
Input Impedence							
3000V DC Isolation			●	●	●	●	●
Utility	●	●	●	●	●	●	●
Power Input	DC 9 ~24 V	DC 9 ~24 V	DC 10 ~60 V	DC 10 ~60 V	DC 10 ~60 V	DC 10 ~60 V	DC 10 ~60 V
DIN-Rail Mounting	●	●	●	●	●	●	●
Operating Temperature	-10°C ~ 65°C	-10°C ~ 65°C	-25°C ~ 70°C	-25°C ~ 70°C	-25°C ~ 70°C	-25°C ~ 70°C	-25°C ~ 70°C
Packaging							
Net weight	95 gm	390 gm	350 gm	350 gm	350 gm	350 gm	350 gm
Dimension	110x90x26 mm	165x105x30 mm	135x120x45 mm	135x120x45 mm	135x120x45 mm	135x120x45 mm	135x120x45 mm

Products USB To Serial

Model	US-101-232	US-101-485	US-101-I	US-201-I	US-401-I	US-201-232
Photo						
Function	**USB to RS-232**	**USB to RS-422/485**	**USB to RS-232/422/485**	**USB to RS-232/422/485**	**USB to RS-232/422/485**	**USB to RS-232**
Serial Port	1 port	1 port	1 port	1 port	4 ports	1 port
Chipset	Silicon Lab	Silicon Lab	Silicon Lab	FTDI	FTDI	FTDI
USB version	1.0 / 1.1 / 2.0	1.0 / 1.1 / 2.0	1.0 / 1.1 / 2.0	1.0 / 1.1 / 2.0	1.0 / 1.1 / 2.0	1.0 / 1.1 / 2.0
RS-232	1					1
RS-422/485		1				
RS-232/422/485			1	1	4	
Baud Rate	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 921.6 K	300 ~ 230.4 K
3000VDC Isolation			●	●	●	
Driver Support	●	●	●	●	●	●
Power Input	USB port power	USB port power	USB port power	USB port power	External DC 9 ~ 24V	USB port power
DIN-Rail Mounting			●	●	●	
Operating Temperature	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C
Packaging						
Net weight	35 gm	35 gm	90 gm	90 gm	620 gm	30 gm
Dimension	55x40x25 mm	55x40x25 mm	100x90x26 mm	100x90x26 mm	220x120x30 mm	100x35x15 mm

Products 4G / NB-IoT

Model	E-P332-4G-DIO	E-P332-4G-DIO	WPC-632-CM3+4G	WPC-632-CM3+NB-IoT
Photo				
Function	**Serial To 4G**	**DI / DO SMS**	**Serial To 4G**	**Serial To NB-IoT**
4G / NB-IoT	4G	4G	4G	NB-IoT
RS-232/422/485	1	1	2	2
Baud Rate	300 ~ 115.2 K	300 ~ 115.2 K	300 ~ 230.4 K	300 ~ 230.4 K
DI / DO	DI*3 / DO*3	DI*3 / DO*3	DI*2 / DO*2	DI*2 / DO*2
Setup Utility	●	●	●	●
Power Input	DC 9~30 V	DC 9~30 V	DC 9~30 V	DC 9~30 V
DIN-Rail Mounting	●	●	●	●
Operating Temperature	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C
Packaging				
Net weight	350 gm	350 gm	620 gm	620 gm
Dimension	150x100x30 mm	150x100x30 mm	205x120x35 mm	205x120x35 mm

Products Serial Converters / Fiber To Serial

Model	SC-101	SC-101-I	Model	FS-120-SM	FS-120-MM
Photo			Photo		
Function	**RS-232 To RS-422/485**	**RS-232 To RS-422/485**	**Function**	**Fiber to Serial**	**Fiber to Serial**
RS-232	1	1	RS-232/422/485	1	1
RS-422/485	1	1	Optical type	Single Mode	Multi Mode
RS-232 Cable	●	●	Connector	SC / ST / FC	SC / FC / ST
Baud Rate	300 ~ 230.4 K	300 ~ 230.4 K	Baud Rate	1200 ~ 115.2 K	1200 ~ 115.2 K
3000VDC Isolation	--	●	Fiber (option)	Single/ Duplex	Single/ Duplex
Power Input	DC 5~7 V	DC 9 ~ 24 V	Power Input	12 V	12 V
DIN-Rail Mounting		●		●	●
Operating Temperature	-10°C ~ 65°C	-10°C ~ 70°C	Operating Temperature	-10°C ~ 70°C	-10°C ~ 70°C
Packaging			**Packaging**		
Net weight	40 gm	80 gm	Net weight	80 gm	80 gm
Dimension	70x40x25 mm	110x90x26 mm	Dimension	86x86x26 mm	86x86x26 mm

Products Ethernet Switch Hub / Ethernet To Fiber

Model	IES-501-I	IGES-501		FE-100-C	FGE-100-C
Photo			Photo		
Function	**Ethernet Switch**	**G-Ethernet Switch**		**Fiber to Ethernet**	**Fiber to G-Ethernet**
Number of Ports	5	5	Number of Ports	1	1
Speed	10 / 100 M	10 / 100 / 1000 M	Speed	10 / 100 M	10 / 100 / 1000 M
Full or Half-duplex	Auto Detect	Auto Detect	Optical type(option)	Multi Mode or Single Mode	Multi Mode or Single Mode
MDI-MDIX	Auto	Auto	Connector	LC / ST / FC / SC	LC / ST / FC / SC
Power	DC 5~30 V	DC 5~30 V	Power	DC 12 V	DC 12 V
DIN-Rail Mounting	●	●	DIN-Rail Mounting	●	●
Operating Temperature	-20°C ~ 70°C	-10°C ~ 70°C	Operating Temperature	-10°C ~ 75°C	-10°C ~ 75°C
Packaging			**Packaging**		
Net weight	215 gm	240 gm	Net weight	100 gm	100 gm
Dimension	90x90x25 mm	110x95x22 mm	Dimension	86x86x26 mm	86x86x26 mm

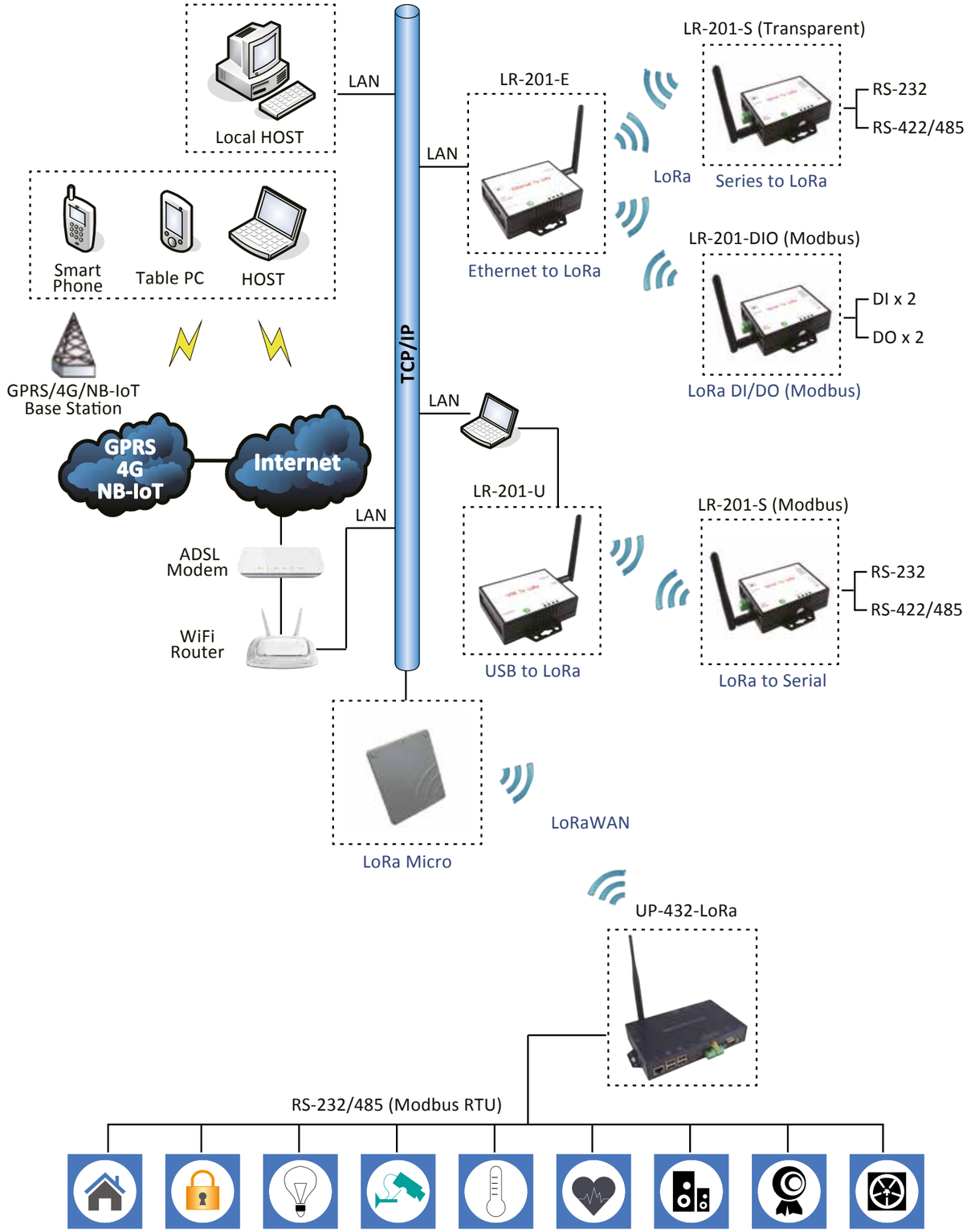
Products

LoRa Series

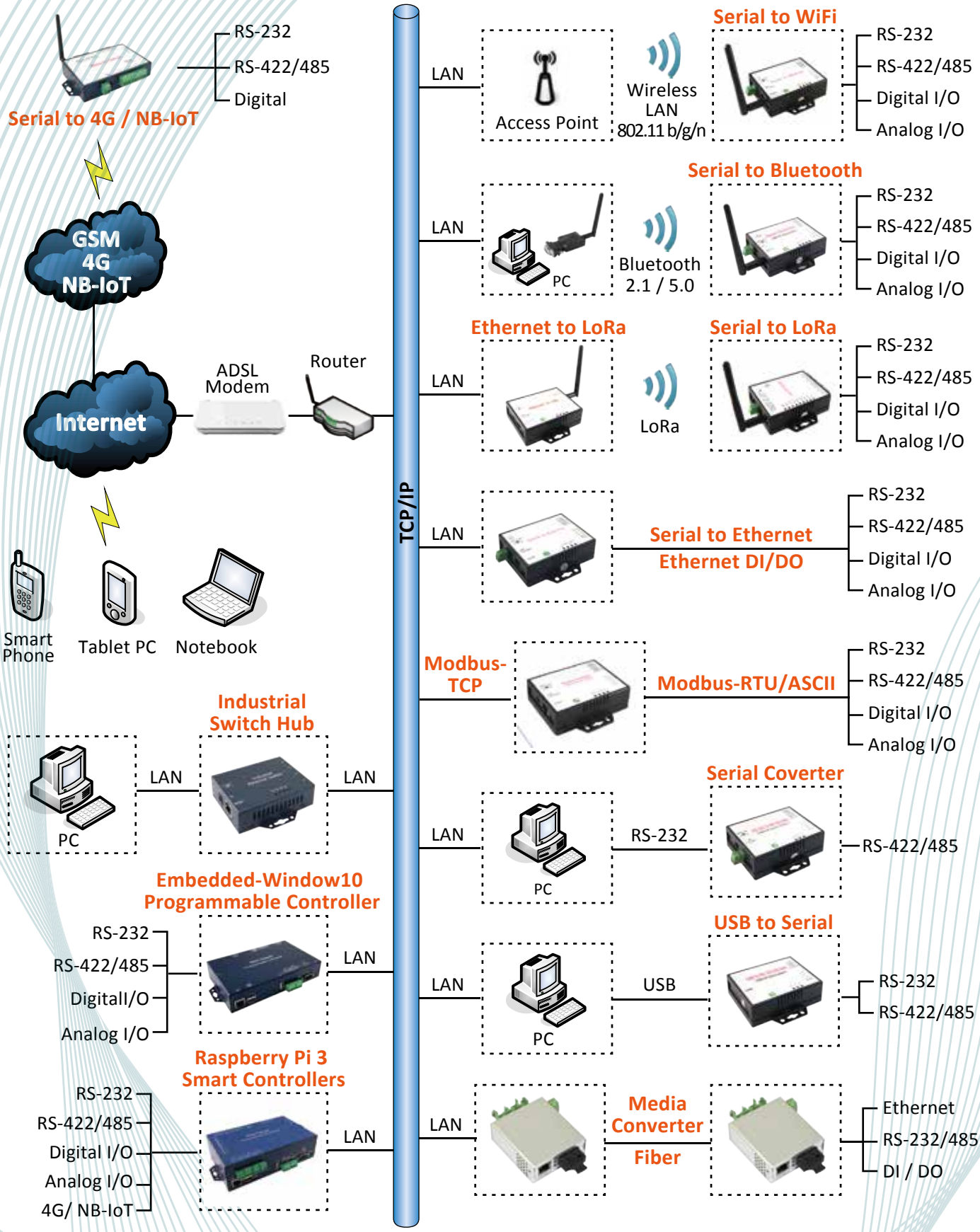
Model	LR-201-S	LR-201-E	LR-201-U	LR-201-DIO	UP-432-LoRa	LoRa Micro
Photo						
Function	**Serial To LoRa**	**Ethernet To LoRa**	**USB To LoRa**	**LoRa DIO**	**LoRaWAN Controller**	**LoRaWAN Station**
LoRa Chipset	Semtech SX1272	Semtech SX1272	Semtech SX1272	Semtech SX1272	Semtech SX1276	Semtech SX1257
Carrier Frequency	862 ~ 936 MHz	862 ~ 936 MHz	862 ~ 936 MHz	862 ~ 936 MHz	862 ~ 936 MHz	470 ~ 928 MHz
Tx RF Output Power	20 dbm	20 dbm	20 dbm	20 dbm	19 dbm	27 dbm
Receiver Sensitivity	-137 dBm	-137 dBm	-137 dBm	-137 dBm	-148 dBm	-142 dBm
Antenna	SMA plug 3 dbi	SMA plug 3 dbi	SMA plug 3 dbi	SMA plug 3 dbi	SMA plug 3 dbi	Ethernet N type
Distance	5 KM	5 KM	5 KM	5 KM	5 KM	15 KM
RS-232/422/485	1				2	
Baud Rate	9600 ~ 115.2 K		9600 ~ 115.2 K		9600 ~ 115.2 K	
Ethernet		1			1	1
USB			1		4	
DIO				DI*2 , DO*4		
Protocol	Modbus Transparent	Modbus Transparent	Modbus Transparent	Modbus	LoRaWAN	LoRaWAN
Security	AES 128/192/256	AES 128/192/256	AES 128/192/256	AES 128/192/256	AES 128	AES 128
Setup Utility	●	●	●	●	●	●
Power Input	DC 9~24 V	DC 9 ~ 24 V	USB power	DC 9 ~ 24 V	DC 9 ~ 30 V	DC 55 V
DIN-Rail Mounting	●	●	●	●	●	●
Operating Temperature	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	-10°C ~ 70°C	0°C ~ 60°C	-20°C ~ 70°C
Packaging						
Net weight	115 gm	120 gm	100 gm	120 gm	680 gm	2050 gm
Dimension	110x90x26 mm	110x90x26 mm	110x90x26 mm	110x90x26 mm	200x125x35 mm	230x200x68 mm

Feature : For Long Range Serial Data Transmitter
Support Modbus / Transparent / LoRaWAN

Application Infrastructure



Network & Wireless Solution for Serial, USB, Analog & Digital I/O Devices



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