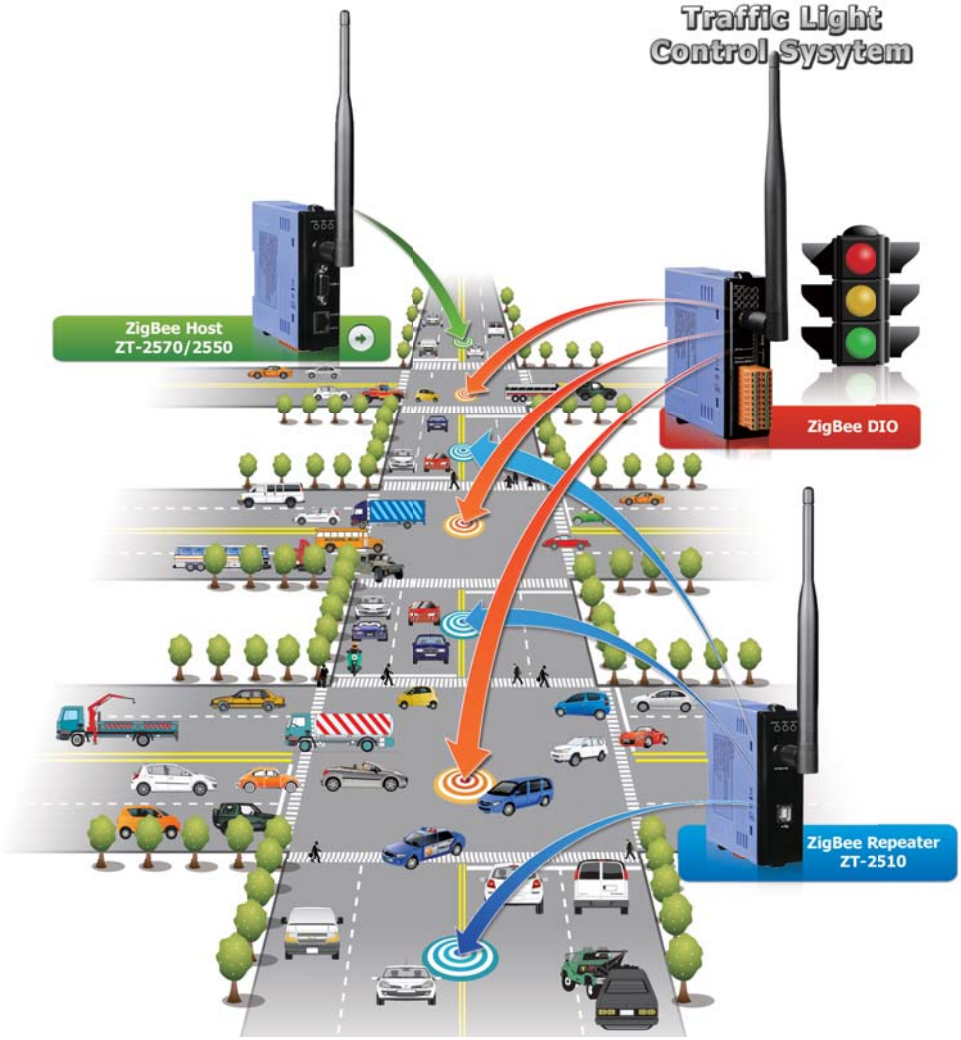
ZigBee Products Brochure



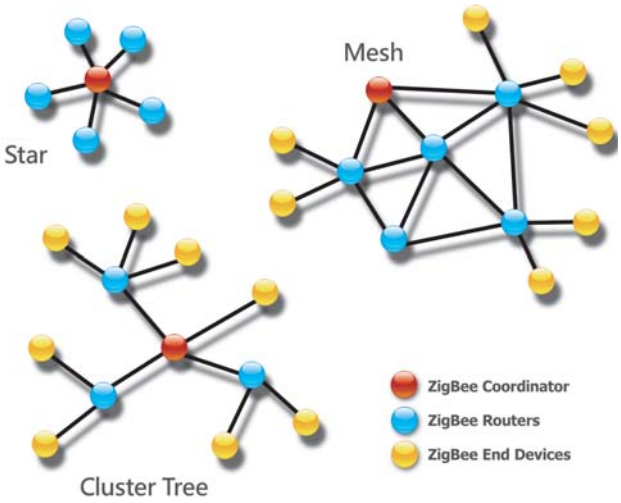
Based on the IEEE 802.15.4 standard for Wireless Personal Area Networks (WPANs), ZigBee operates in the ISM radio bands and works as a general purpose, inexpensive, self-organizing, mesh network that can be used for industrial control, embedded sensing, medical data collection, smoke and intruder warning, building automation, and home automation, etc.

There are three different types of ZigBee devices in a ZigBee network:

Full function device – ZigBee Coordinator (Master):
Only one coordinator exists in each ZigBee network. Its function is to store information about the network and to determine the optimum transmission path between any two nodes of the network.

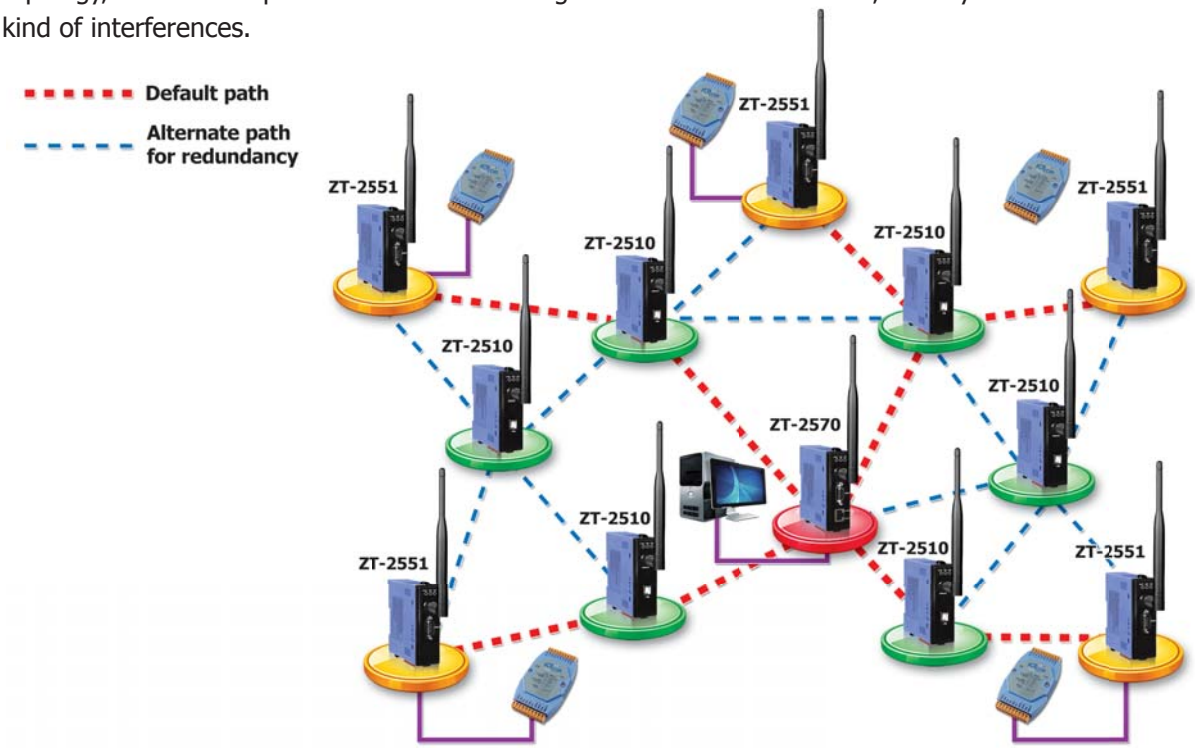
Full function device – ZigBee Router (Slave):
Router acts as an intermediate node that always in the active mode. Its main function is to transfer and pass the data among the devices.

Reduced Function Device – ZigBee End Device (Slave):
This device contains a minimal amount of functionality to enable it to talk to its parent node (either the coordinator or a router); it is normaly in sleep mode and cannot relay data directly from other devices.



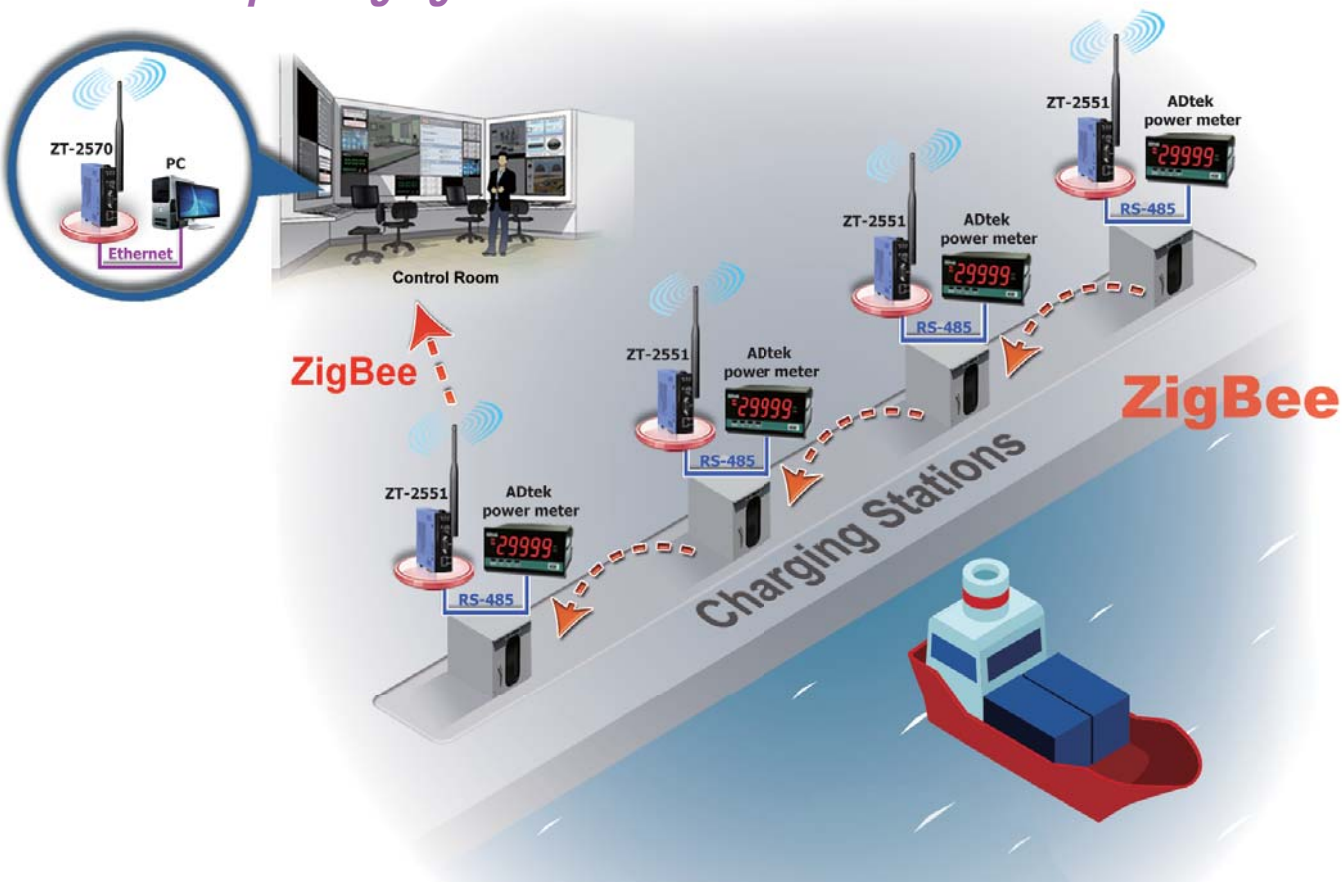
Mesh Network

Wireless transmission is greatly affected by humidity, temperature, weather, obstacles, electromagnetic interference, etc. It is very difficult to exclude, especially in industrial environments. However, the mesh topology, the most important feature of the ZigBee wireless transmission, exactly can overcome or avoid such kind of interferences.

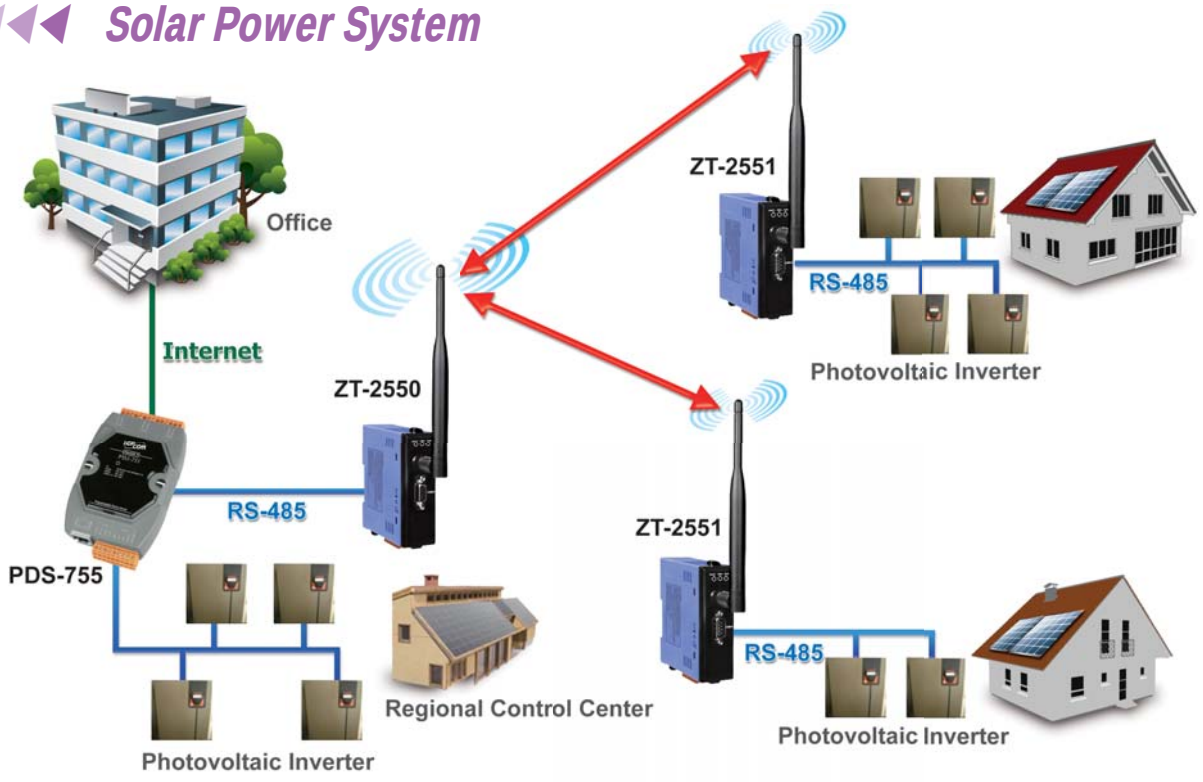


Wireless, Low Cost, High Reliability, Easy to Use

Ship Charging Station

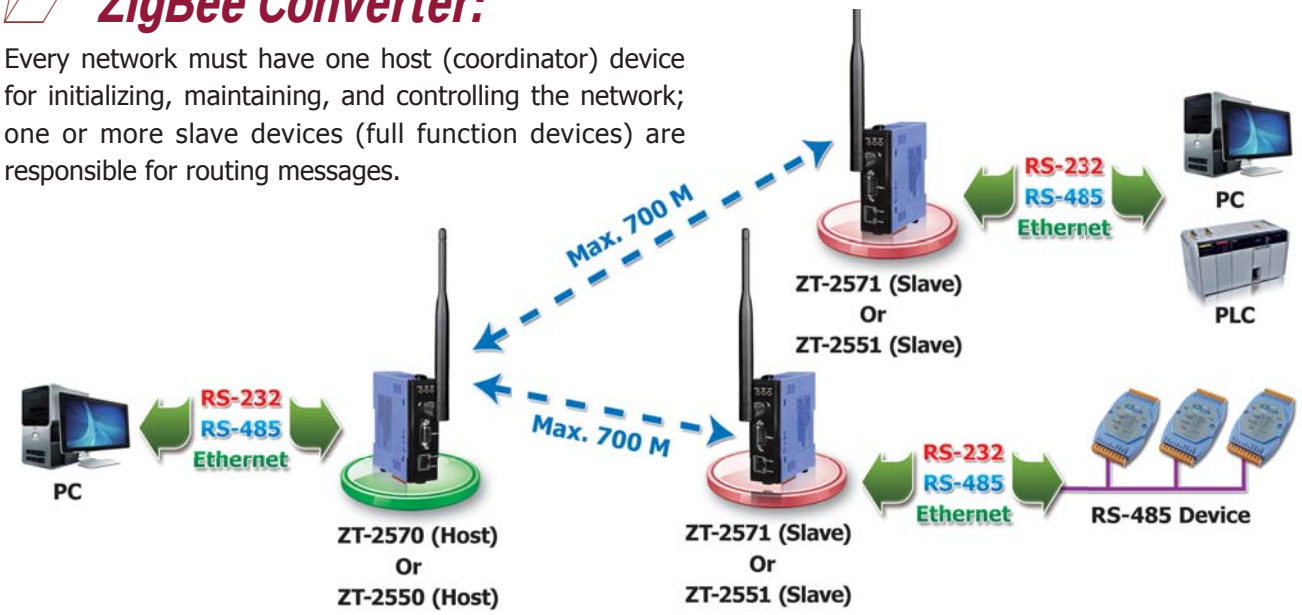


Solar Power System



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.

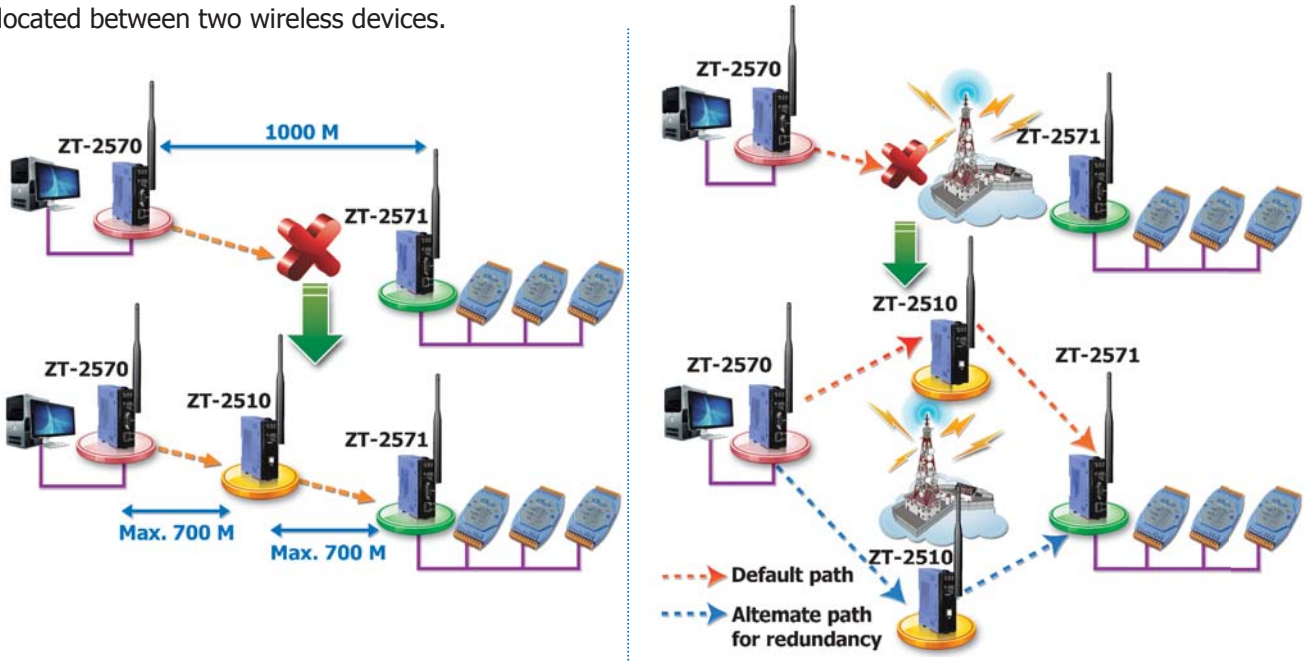


Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
ZT-2550	1 × RS-232, 1 × RS-485	Host (Coordinator)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m
ZT-2551	1 × RS-232, 1 × RS-485	Slave (Router)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m
ZT-2570	1 × RS-232, 1 × RS-485 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, PCB antenna	60 m

Note: The ZT-USBC doesn't have FCC ID, so ZT-USBC can be sold in Asia Only.

ZigBee Repeater:

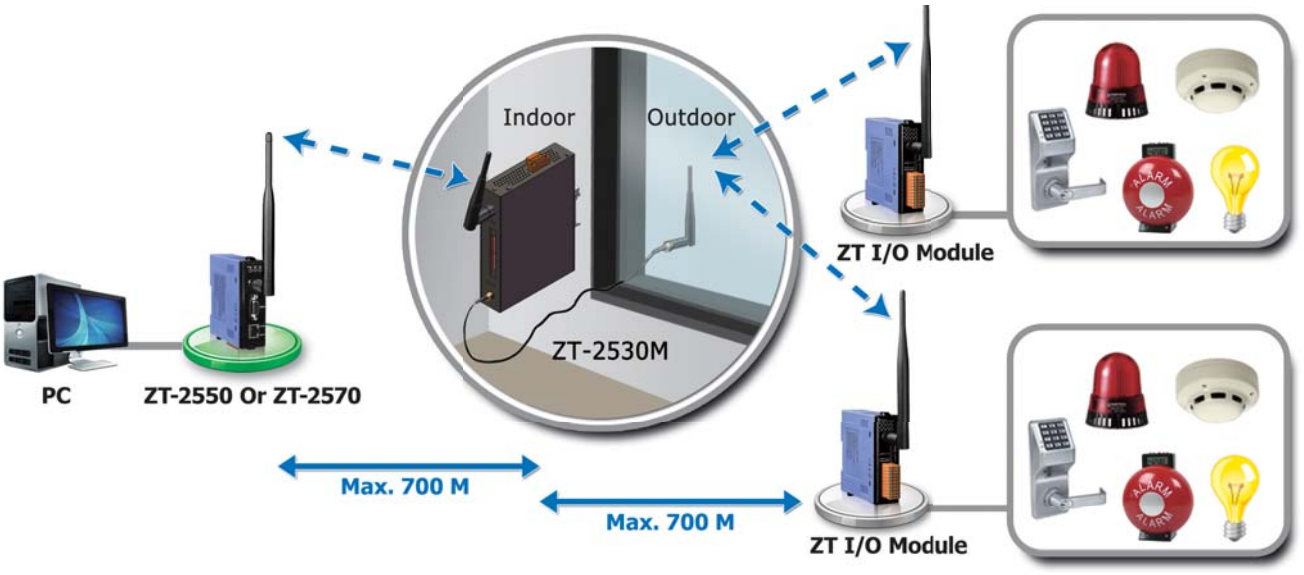
The ZT-2510 is a ZigBee repeater to extend the distance of ZigBee network or avoid an obstacle that may be located between two wireless devices.



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

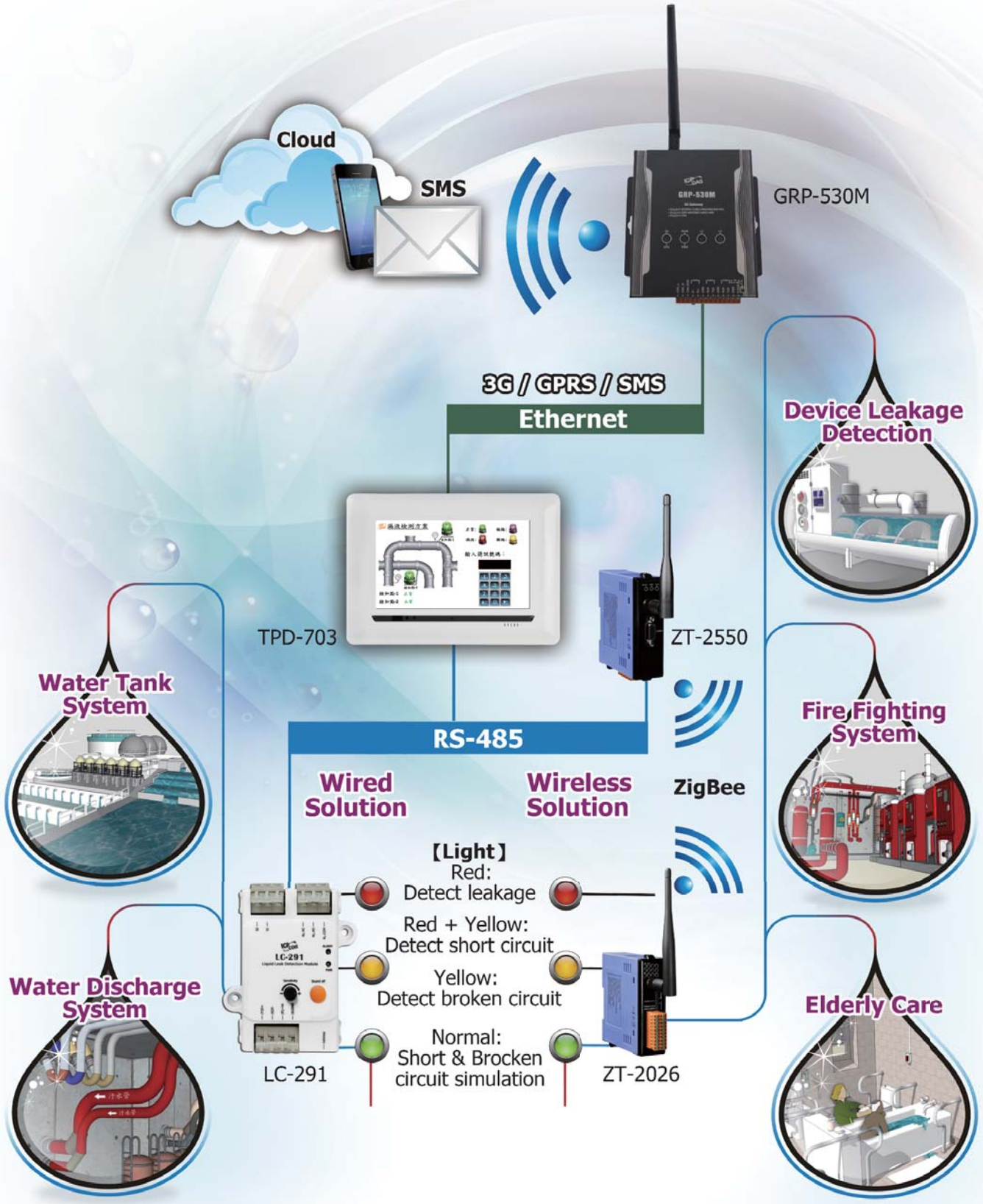
ZigBee Bridge:

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.

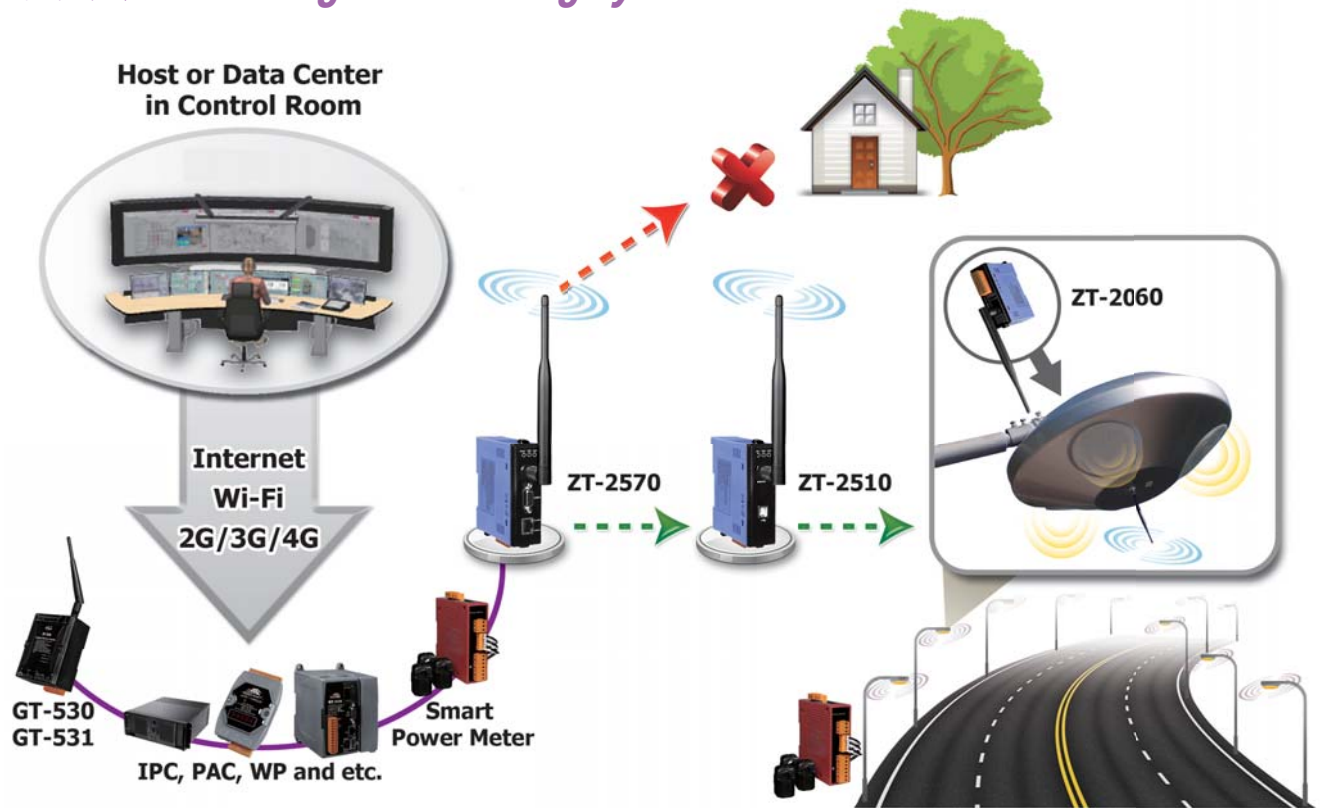


Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
ZT-2530M	ZigBee	Slave (Router) + Host (Coordinator)	11 dBm	2.4 GHz, 5 dBi Omni-Directional antenna	700 m

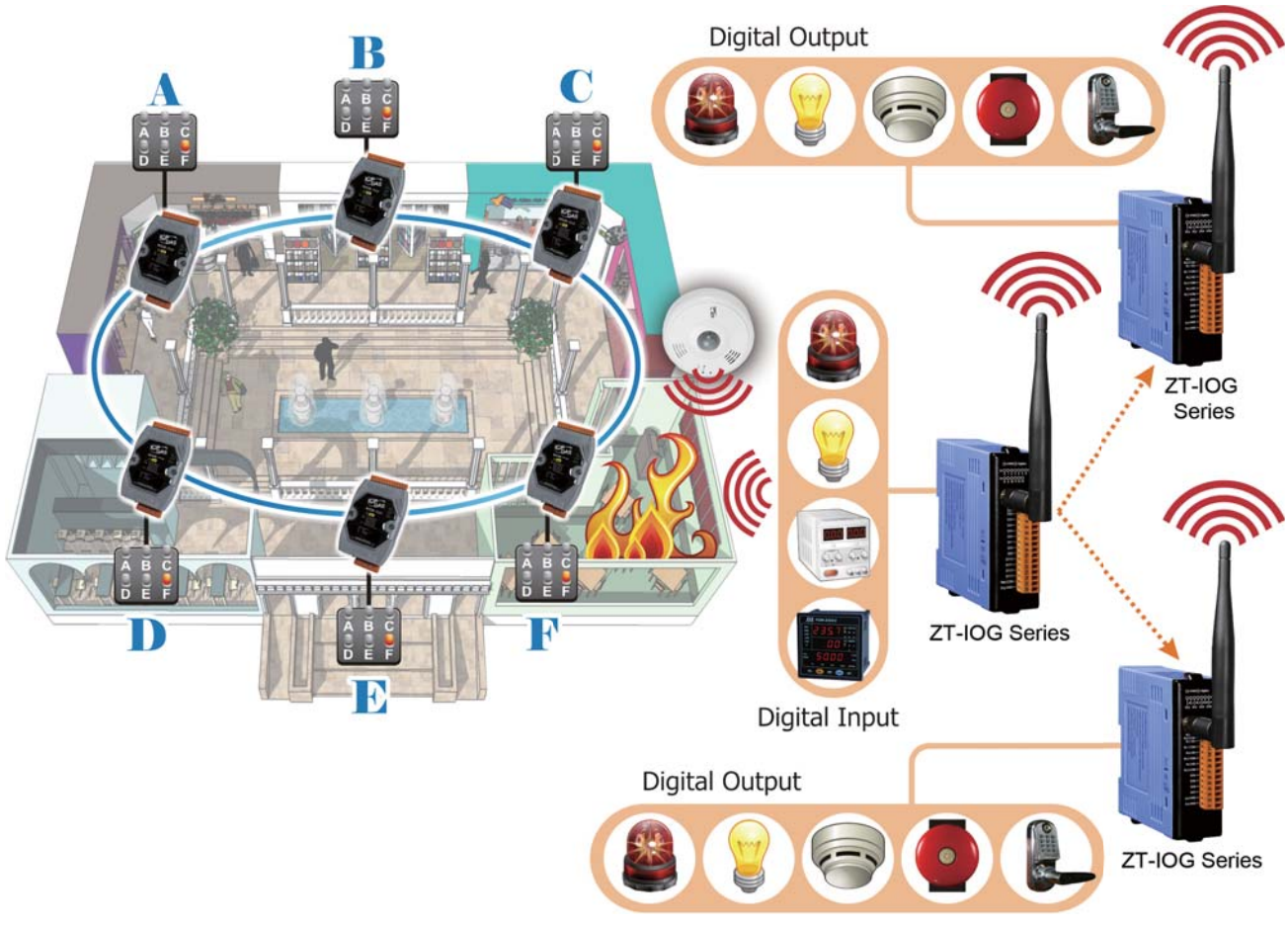
Leakage Monitoring System



Street Light Monitoring System



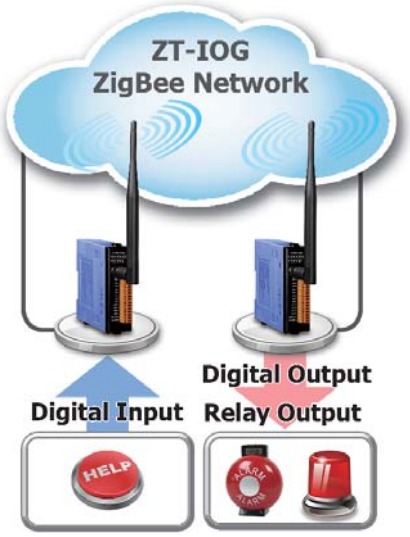
Environmental Monitoring System



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.



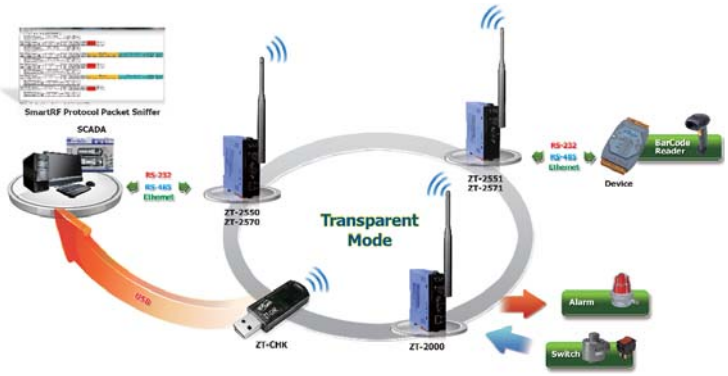
Model Name	Channel	Type	Channel	Type
ZT-2043-IOG	DO: 14	Open Collector (700mA, Sink)		
ZT-2053-IOG	DI: 14	Dry/Wet (Sink/Source)		
ZT-2055-IOG	DI: 8	Dry/Wet (Sink/Source)	DO: 8	Open Collector (650 mA, Sink)
ZT-2060-IOG	DI: 6	Wet (Sink/Source)	DO: 4	Power Relay (5 A @ 250 VAC/30 VDC)

ZigBee I/O Module (Router):

Model Name	Channel	Type	Channel	Type
ZT-2005-C8	AI: 8	10 K Thermistor (Measuring Temperature Range: -40℉ ~ 105℉)		
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)
tZT-P4C4	DI:4	Wet (Source)	DO: 4	Open Collector (700 mA, Sink)

ZigBee Sniffer Module:

The sniffer module can capture and analyze over-the-air data packets of IEEE 802.15.4 standard in real-time with TI SmartRF Protocol Packet Sniffer (SPPS) software. It is easy to install to PC by USB interface. With SPPS software, users can view or store the wireless data packets in PC and these data packets are like ZigBee 2007(ZigBee Pro). Moreover, that can be a good way for users to analyze the IEEE 802.15.4 data in their applications, and reduce the wireless communication test time efficiently.

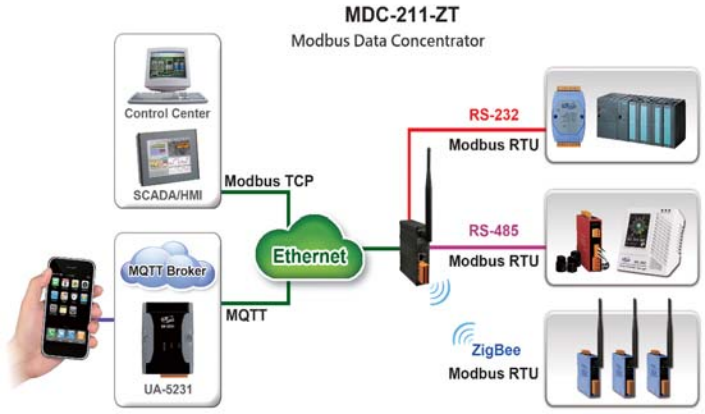


Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
ZT-CHK	1 × USB	SPPS	3 dBm	2.4 GHz, PCB Antenna	60 m

Note: The ZT-CHK doesn't have FCC ID, so ZT-CHK can be sold in Asia Only.

ZigBee Modbus Data Concentrator:

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.



Model Name	Interface	Module Type	Transmit Power	Antenna	Distance (LOS)
MDC-211-ZT	1 × RS-232 1 × RS-485 1 × Ethernet	Modbus/TCP Slave Modbus RTU M/S	11 dBm (FCC Certificated) (Max. 19 dBm)	5 dBi Omni-Directional antenna	700 m

Accessories:

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	