

Outdoor TRPTP Wireless over Ethernet AP



- Dedicated to Outdoor Wireless Surveillance Transmission Backhaul System
- Dedicated to Outdoor Wireless Backhaul of Surf Internet Service Signal Coverage
- Large Cities and Vast Range of Wireless Transmission Backhaul System
- Point to Point Wireless Trees Structures Multi Backhaul System

Model : IOP-TRPTP-202DB

- Point To Point Gigabit Ethernet Bridge
- Support Frequency 2.3~2.7GHz/4.9~6.1GHz
- 220 Mbps Real TCP Throughput (Uni-Directional)
- 150 +150 Mbps Real TCP Throughput (Bi-Directional)
- Real Low Latency in 10 hops Reply under 15ms

- Video streaming up to 230 Mbps bandwidth
- IPTV broadcasting up to 230 Mbps bandwidth
- Ethernet Jump Docking Extend Features for Deployment Wireless Trees Structure in 5 hops have over 160 Mbps TCP Throughput
- Deployment Wireless Trees over 10 hops still keep over 150 Mbps TCP Throughput

Product Highlights

➤ High Capacity / Low Latency

Simply design for purely PTP applications. Remove the useless features and protocol for PTMP applications and hotspot coverage to improve the throughput capacity and latency performance.

➤ Robust Design for Harsh Environment

For complete outdoor applications, radio can balance the internal pressure itself automatically, complies with IP-68 water resistant standard and IEC61000-4-5 surge protection standard.

➤ One Way TX & RX Transmit Mode Upgrade More Stable & More Throughput

General Wireless Transmit based on TX after change to RX, the CPU performance and data transport time will reduce, the IOP-TRPTP-202DB design One Way TX & RX transmit mode to upgrade more stable and more throughput.

➤ High Efficiency Multi-casting / Broadcasting

IOP-TRPTP-202DB can provides more valuable solutions for video streams applications due to the highly efficiency protocol design for multi-casting / broadcasting.

➤ Ethernet Jump Docking Extend Feature

Serial relay special features designed for Ethernet Jump Docking extension of the wireless transmission system expansion, it can still keep each little bandwidth reduce consumption and very low latency reply time.

➤ Deployment Extend Wireless Trees Structures

Based on point to point over Ethernet and Docking relay set up the special function, using multiple sets of design of multi-direction in parallel or series of tree-structure to form Wireless tree system should be used for a wide range or metropolitan wireless network backbone bandwidth design.

➤ Security

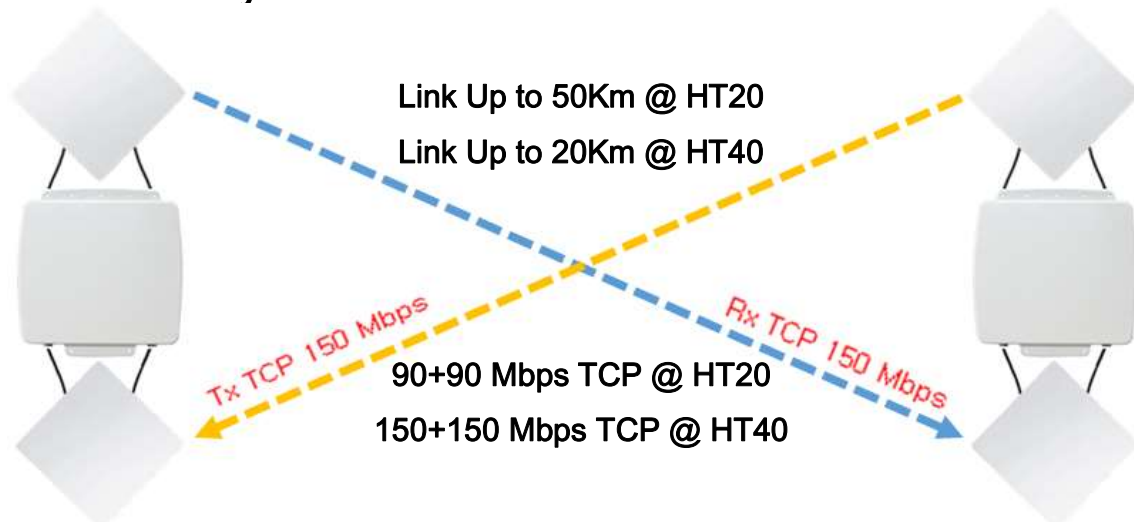
Proprietary FDD MIMO-OFDM protocol and AES (128bits) protocol supports great security mechanism to prevent the malicious attacking from the internet.

➤ Wireless Signal Interference Makes Resistance Ability Excellent

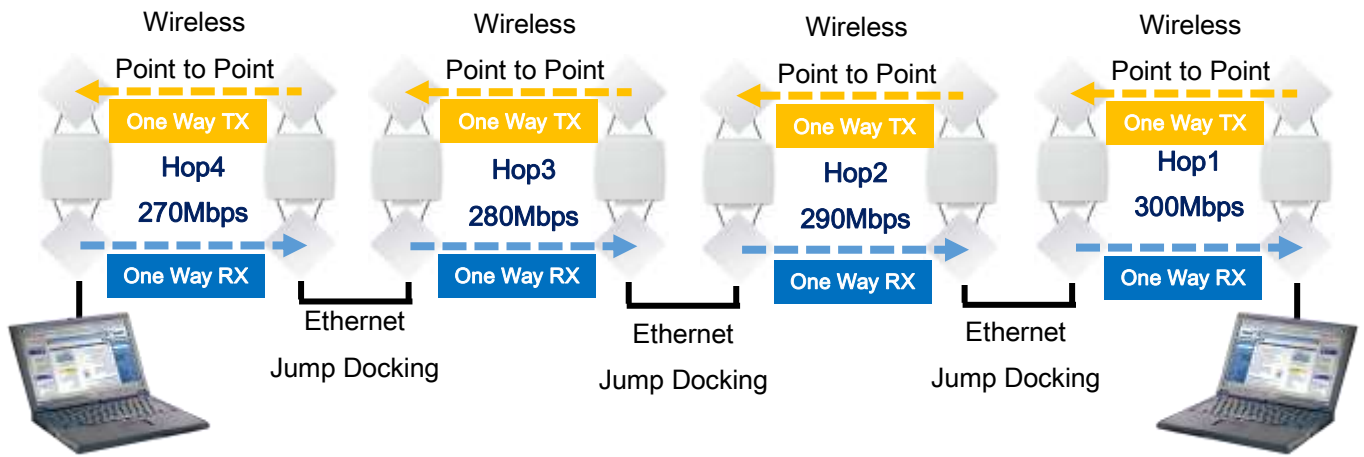
Support full RF module frequency band from 2.3~2.7GHz & 4.9~6.1GHz and special design by proprietary FDD MIMO-OFDM protocol and purely point to point signal transmit, will makes excellent wireless signal interference resistance ability.

Structures and Applications

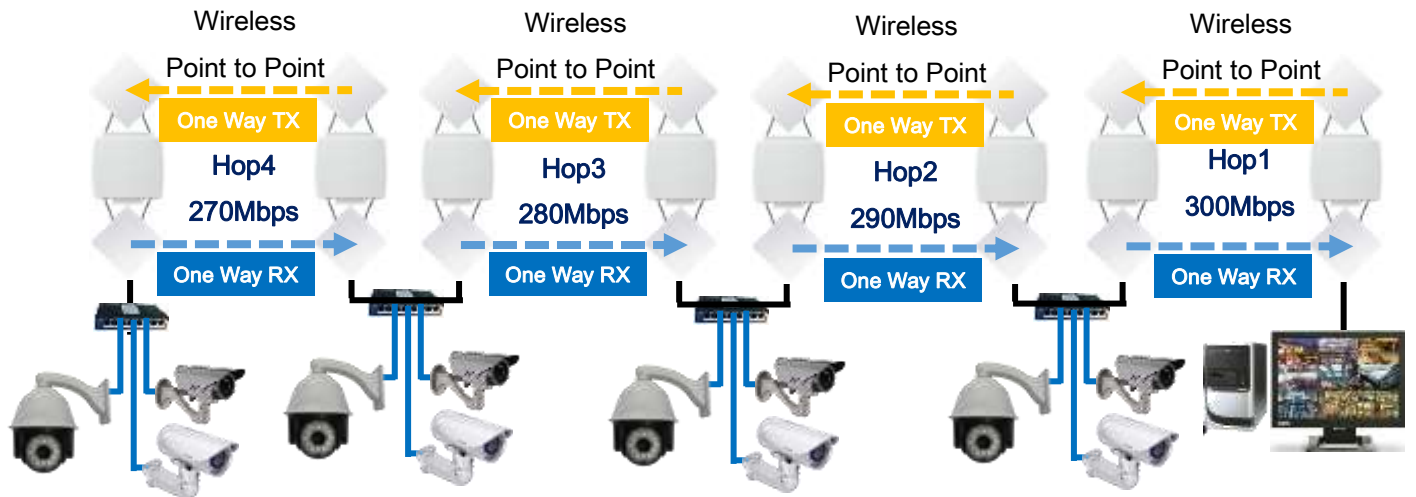
■ Outdoor One Way TX & RX Transmit Mode Structure



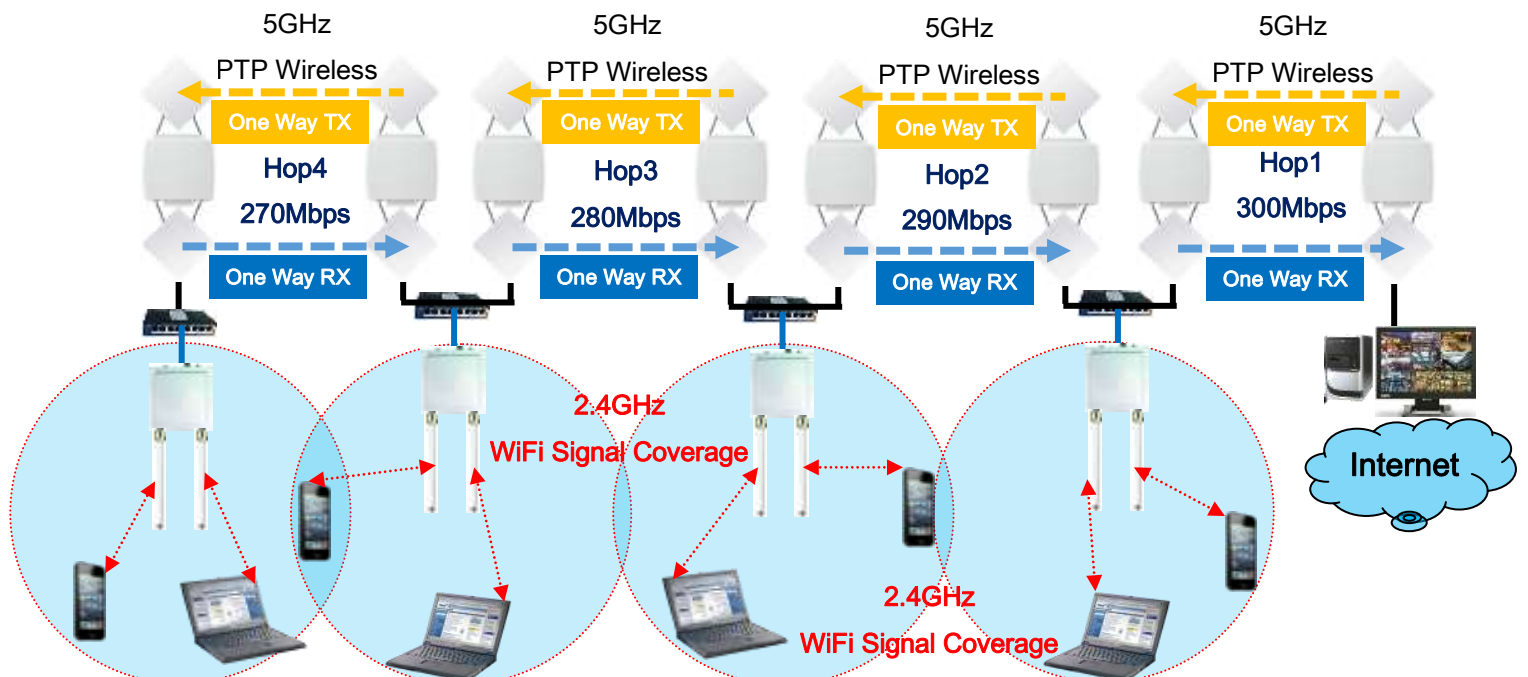
■ One Way TX & RX with Ethernet Jump Docking Features Structure



■ Wireless Backhaul with Ethernet Jump Docking for Surveillance System

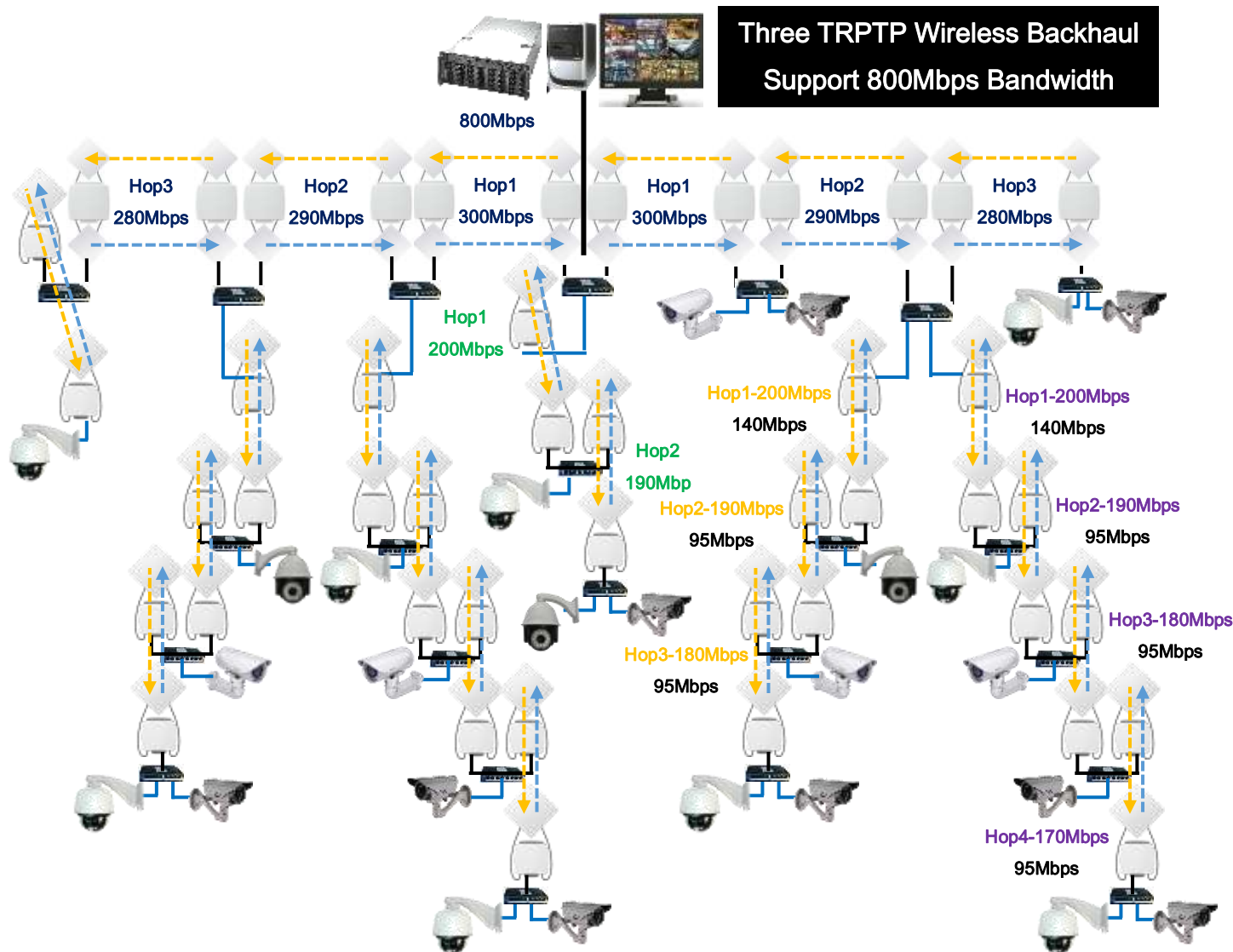


■ Wireless Backhaul with Ethernet Jump Docking for Surf Internet Service



■ Ethernet Jump Docking Features in Wireless Trees Structure Application

Wireless Trees Structure Application for Large City Wireless Surveillance System
 (Wireless Trees Structure Application for Large City Wireless Signal Coverage too.)



TRPTP Wireless Hops + Ethernet Jump Docking Hops

1. Each Hop will reduce 5 - 10Mbps bandwidth
2. Hops 5 times after will not reduce bandwidth again
3. Hops 6th times after will keep 160Mbps bandwidth
4. Each hop will add reply latency about 1ms
5. Even 10 hops after, the reply latency will under 15ms
6. TRPTP Wireless Hops work as Ethernet structure, so similar link by Ethernet



Product Specification

Key Components

Main Processor	Atheros AR7161 (680Mhz)
Wireless Chipset	Atheros AR9220 mini PCI, Support IEEE 802.11n a/g, 2T2R MIMO, 300Mbps
Switch Controller	Atheros AR8035
Flash Memory	16MBytes
SDRAM Memory	128MBytes

Interfaces Specifications

Wireless RF Module	EP09-HB91 mini PCI, 802.11a/n 2 x 2 MIMO 300Mbps, Output power 26dBm. DNMA-H92 mini PCI, 802.11a/g/n dual band 2 x 2 MIMO 300Mbps, Output power 23dBm. (Optional)
Frequency	4.9~6.1GHz / (2.3~2.7GHz) (Default 5GHz 11a/n 2x2 MIMO mini PCI)
Bandwidth	10MHz / 20MHz / 40 MHz
Wireless Interface	4 x N-type Female Connectors
Ethernet Interface	10/100/1000 Base-T RJ-45 port with M25 Calbe Gland

Index MCS	IEEE 802.11an /HT20				IEEE 802.11an /HT40			
	Data Rate (Mbps)		Output Power	Rx Sensitivity	Data Rate (Mbps)		Output Power	Rx Sensitivity
	GI=800ns	GI=400ns			GI=800ns	GI=400ns		
MCS8	13	14.4	24(±1.5)	-94 dBm	27	30	22(±1.5)	-90 dBm
MCS9	26	28.9	23(±1.5)	-92 dBm	54	60	22(±1.5)	-89 dBm
MCS10	39	43.3	22(±1.5)	-90 dBm	81	90	21(±1.5)	-87 dBm
MCS11	52	57.8	21(±1.5)	-87 dBm	108	120	20(±1.5)	-83 dBm
MCS12	78	86.7	20(±1.5)	-84 dBm	162	180	19(±1.5)	-80 dBm
MCS13	104	115.6	19(±1.5)	-80 dBm	216	240	18(±1.5)	-77 dBm
MCS14	117	130.3	18(±1.5)	-78 dBm	242	270	17(±1.5)	-75 dBm
MCS15	130	144.4	18(±1.5)	-76 dBm	270	300	17(±1.5)	-73 dBm



General Specs

One Way TX / One Way RX FDD – FDD (Frequency-Division Duplexing) (Dual RF Module)

Fast Transparent Forwarding

IGMP Snooping -- IGMP (Internet Group Management Protocol)

VLAN / QoS Mapping

Up / Down link flow control

Wireless Security : AES 128 bits

Note: when AES encryption is enabled, use 20MHz one-way bandwidth efficiency declined 3~5Mbps, bi-directional bandwidth efficiency decreased of about 6~10Mbps.

Note: when AES encryption is enabled, use 40MHz one-way bandwidth efficiency declined 7~10Mbps, bi-directional bandwidth efficiency decreased of about 14~20Mbps.

Hardware Watch dog

Antenna Alignment : WEB GUI Local / Remote Information

Firmware Upgrade : Dual Images

Power requirements: supports 802.3af/at 48VDC PoE Passive 1A, support 1Gbps Ethernet bandwidth

Size: 260mm * 250mm * 80mm

Weight: total weight 1.9Kg, product packaging (including accessories) 3.8Kg, shipping cartons 4 box total is 16Kg

Operation temperature : - 40°C ~ + 70°C

Humidity : 0% ~ 95% Non-condensing

Storage temperature range : - 40°C ~ + 85°C

Waterproof and dustproof : IP 68

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Package Contents

1. IO-Power Outdoor PTP Wireless over Ethernet AP (IOP-TRPTP-202DB)
2. PoE Power Injector
3. Power Adapter
4. AC Power Code
5. Mounting Kit & Screw

If any of the above items are missing, please contact your reseller.