LP-ORIONTXX Outdoor TDD Backhaul Radio on the 2.3 ~2.7 GHz and 4.9 ~ 6.1 GHz bands, with 24 dBm@MCS8 Output Power and a Real TCP Throughputsof 100 Mbps (DL) / 100 Mbps (UL) @HT40 and 50(DL)/50(UL) Mbps @HT20

LPORIONTXX_PFD_ENB01W

Features

- 5 GHz PtP Ethernet bridge.
- 200 Mbps Real TCP Throughput (Uni-Directional).
- 100+100 Mbps Real TCP Throughput (Bi-Directional).
- IPTV broadcasting up to 230 Mbps.
- Low latency.
- Propietary PoE powered:
  X=1: 100 ~264 VAC 50-60 Hz, 48 VDC output Converter an 48 VDC PoE Injector
  X=2: Future option.
- Optional enclosure with high gain parabolic Integrated antenna of up to 35 dBi under special order only.

ORION Series

LP-ORIONTXX
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The Orion-TDD Backhaul solution Radio Series has been designed for pure PtP applications with higher throughput, lower latency, and great stability performance by proprietary TDD MIMO-OFDM protocol which can totally replace the PtP Ethernet bridge.

When working with Wi-Fi radios, the performance and stability of the real TCP throughput,multi-casting/broadcasting and latency is usually dragged down because of the extra loading on the DSP firmware architecture from its multi-functions for hotspot coverage and PtmP features.

A single two orthogonal elements antenna design not only reduces the shipping dimensions and cost, but also makes the installation an easier task that reduces risk and cost as well.

A Product Highlights

- **High Capacity/Low Latency**

A simplified design for purely PtP applications, it removes the useless features and protocol aspects for PtmPapplications and Hotspot coverage to improve the throughput capacity and latency performance.

- **Robust design for harsh environments**

For complete outdoor applications, this radio balances the internal air pressure automatically, complies with the IP-68 water resistance standard and the IEC61000-4-5 standard.

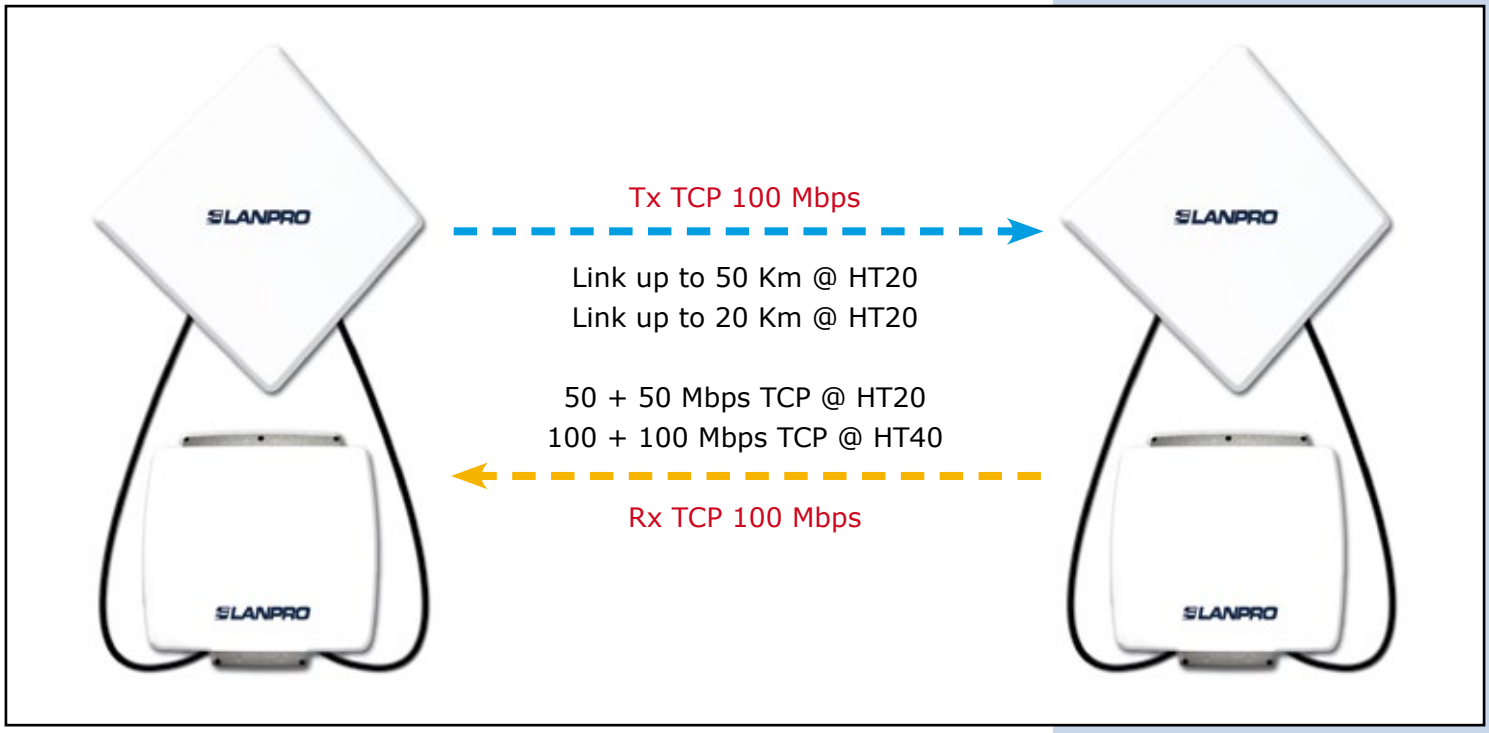
- **High efficiency Multicasting/Broadcasting**

Orion-TDD can provide more valuable solutions for video streams applications due to the highly efficient protocol design for multi-casting/broadcasting

- **Security**

Proprietary TDD MIMO-OFDM protocol and AES (128 bits) protocol supports a great security mechanism to prevent the malicious attacking from the Internet network.

B Specifications



B Specifications

Frequency	5350 ~5510 MHz (Low band) / 5565 ~ 5725 MHz (High Band) ; T/R spacing 215 MHz							
	IEEE 802.11an / HT20				IEEE 802.11an / HT40			
MCS Index	Data Rate (Mbps)		Output Power (dBm)	Rx Sensitivity (dBm)	Data Rate (Mbps)		Output Power (dBm)	Rx Sensitivity (dBm)
	GI= 800ns	GI= 400ns			GI=800 ns	GI=400 ns		
MCS 8	13	14.4	24 (±1.5)	-94	27	30	22 (±1.5)	-90
MCS 9	26	28.9	23 (±1.5)	-92	54	60	22 (±1.5)	-89
MCS 10	39	43.3	22 (±1.5)	-90	81	90	21 (±1.5)	-87
MCS 11	52	57.8	21 (±1.5)	-87	108	120	20 (±1.5)	-83
MCS 12	78	86.7	20 (±1.5)	-84	162	180	19 (±1.5)	-80
MCS 13	104	115.6	19 (±1.5)	-80	216	240	18 (±1.5)	-77
MCS 14	117	130.3	18 (±1.5)	-78	246	270	17 (±1.5)	-75
MCS 15	130	144.4	18 (±1.5)	-76	270	300	17 (±1.5)	-73

C General Specifications

- TX / RX TDD
- Fast Transparent Forwarding
- Against Co-Band Interference
- Up / Down linkFlow Control
- **Wireless Security:** AES 128 bits
- Watch Dog
- **Antenna Alignment:** WEB GUI Local / Remote Information
- **Firmware Upgrade:** Dual Images
- **Wireless Interface:** 2 x N- Type Female Connectors
- 10 / 100 / 1000 Base-T RJ-45 port with M25 Cable Gland
- **Power Output:** 24dBm (MCS8)
- **EIRP:** Depends on Antenna Gain(Special Order Only)
- **Power Consumption:**
  Option H=1: without Heater Max Power=12 Watt
  Option H=2: with Heater Max Power=24 Watt
  Heater power consumption= 12 Watt on, 0 Watt off (On-Off type temperature control)
- **Ambient Temperature range:**
  H=1: Without heater: 0~55ºC Standard Temperature Range
  H=2: With heater: -30~55ºC Extended Temperature Range
  Storage Temperature Range: -30~70ºC
- **Relative Humidity:** 95% non-condensing
- **Power Suply Options:** LP-ORIONTXX Radios are 48 VDC PoE power
  X=1: 100~264 VAC 50~60Hz, 48 VDC output Converter, 30 W max. and a 48 VDC PoE Injector for CAT 5e or higher Category FTP cable
  X=2: Future option.
- **Warranty:** One(1) Year against manufacture or parts defects.

How to Order

LP-ORIONTBCGGAAXH

LP-ORION	T: Tecnología	B	C
LanPro ORION Series	**T=** TDD **F=** FDD	**B**=2=2.3~2.7 GHz	**C**=4=4.9~6.1 GHz
GG	**AA**	**X**	**H**
Potencia (dBm)	**AA= a:** External antenna standard **AA= ai:** Integrated antenna (Under special order only)	**X=1:** With 120~240 VAC / 48 VDC and 48 VDC PoE Injector **X=2:** Future Option	**H=1** No Heater, Standard Temperature (0~55ºC) **H=2** With Heater, Extended Temperature range (-30~55ºC).

Typical examples:

LP-ORIONT2424a11	Outdoor TDD Backhaul Radio on the 2.3~2.7 GHz and 4.9~6.1 GHz bands, with 24 dBm@MCS8 Output Power and Real TCP Throughputs of 100 Mbps (DL) / 100 Mbps (UL)@HT40 and 50 (DL)/50 (UL) Mbps @HT20, for external antenna with a 100~240 VAC / 48 VDC Converter and a 48 VDC output PoE Injector. Standard temperature range from (0~55ºC).
LP-ORIONT2424a12	Outdoor TDD Backhaul Radio on the 2.3~2.7 GHz and 4.9~6.1 GHz bands, with 24 dBmMCS8 Output Power and Real TCP Throughputs of 100 Mbps (DL) / 100 Mbps (UL)@HT40 and 50(DL)/50(UL) Mbps @HT20, for external antenna with a 100~240 VAC / 48 VDC Converter and a 48 VDC output PoE Injector. Includes Heater for extended temperature range of (-30~55ºC).