ULTRA HIGH CAPACITY IPLINK MODEL SALINAS IPLINK-1200

- **Up to 1200 Mbps Capacity full duplex in a single 80 MHz channel**
- **Cross Polarization Interference Cancellation (XPIC)**
- **Configurable as 1+1 Protection or 2+0 Aggregation**
- **Hitless and Errorless Adaptive Coding and Modulation (ACM)**
- **AES 128-256 Encryption**
- **Header Compression**
- **Remotely Configurable**
- **Support RADIUS Server authentication**
- **Split Mount (IDU/ODU)**

PRODUCT APPLICATION:

The Salinas IPLink 1200 is a full duplex point-to-point radio link designed for very high capacity IP applications.

The system supports all standard licensed microwave bands from 4.5 to 42 GHz, with up to 1200 Mbps capacity in a single 80 MHz channel using XPIC with a 2+0 configuration.

The radios can also be mounted in a standard 1+1 Protection configuration with hitless protection established by one of the two IDUs.

The radios feature QPSK through 1024 QAM modulation and Adaptive Coding & Modulation (ACM).

The system supports both fiber and copper Gigabit Ethernet interfaces with in-band and out-of-band management, and can be powered directly or over Ethernet using a PoE injector.

Each transceiver terminal consists of an Indoor Unit connected by cable to an Outdoor Unit, which is mechanically integrated with a high-directivity antenna.

Installation is easy thanks to a built-in-LED alignment tool and easy to install mounting brackets designed to facilitate antenna pointing and alignment.

Product Specification[1]

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SALINAS IPLINK - 1200 SPECIFICATIONS

General Parameters

Model Number	IPLINK -1200
Frequency bands	4.5 - 42 GHz, Frequency Division Duplex (FDD)

Item	Parameter	Value
Modulation	Modulation of schemes	QPSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM, 512QAM, and 1024QAM
	ACM	Hitless Adaptive Modulation
	Co-channel transmission	XPIC supported for dual-polarization transmission
	Forward error correction	Reed Solomon with Weak/Medium/Strong modes
Data Transmission	Capacity allocation	Priority Based Packet System (PBPS) gen.3
	Path configuration	2+0 FD/XPIC aggregation 1+1 FD/HSB/SD/XPIC protection Split 1+1 FD/HSB/SD protection
	Compression function	Online Ethernet L1 header compression
	Max. Real Data Throughput	Up to 630 Mbps in 1+0 and 1+1 modes at 80MHz channel Up to 1.26 Gbps in 2+0 mode at 80MHz channel
	Data Security	AES-128/256 Encryption

Ports

Item	Parameter	Value
Wired Ethernet	Number of Ports	3x 10/100/1000ETH (RJ-45)
	Basic function	Ethernet Traffic Interface / Management Access
Optical Interface	Number of Ports	4x 1000BASE-X (SFP)
	Basic function	Ethernet Traffics Interface / Management Access EMM card connection IDU interconnection in Split 1+1/2+2 mode
Interface Extension	Number of Ports	Up to 4 EMM cards over one SFP port Up to 64 E1/T1 ports Up to 16 ASI ports
	Basic function	EMM - 16E1T1 - up to 16E1 or 16T1 ports EMM - ASI - up to 4 ASI (DVB-T) ports in Tx or Rx mode

Ethernet Switch

Item	Parameter	Value
Interfaces	Number of Ports	3x 10/100/1000ETH (RJ-45) 2x WAN OverAir Interface 1x SFP Interface (shared with one WAN Interface) 1x MNG CPU
Function	Purpose	Traffic / Management switching
	Maximum Frame Size	Up to 2048 / 10240 bytes
	MAC table	Up to 8192 addresses
	VLAN	Up to 4096 VLANs, IEEE 802.1 q
	QoS	Source Port, IEEE 802.1p, IPv4 TOS/DSCP, IPv6 TC, VLAN VID, SA/DA
	SyncE	Not supported (can be implemented on request)
	PTP 1588	Fixed latency PTP 1588 (LPDV)

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Network Management System

Item	Parameter	Value
Ports	Default NMS ports	ETH port LAN 3
	Additional NMS ports	USB-B in IP mode
NMS form	Protocols - Network	HTTPS, HTTP, SNMP v.1 / v.2 / v.3, TELNET, SSH
	Protocols - Local	Serial console over USB-B
	In-band management	Via VLAN
	Out-of-band management	115 kbps
IP addresses	Addresses type	Primary IP / Secondary IP / RFI / USB
	Additional function	Static Routes, NAT, Ping, Telnet
GUI	Type	WEB based
CLI	Type	anthOS

Antenna

Supported types	High performance dish antenna - 2, 3, 4 & 6 foot options
Interface	Direct slip-fit mount or remote mount using standard waveguide

Power

Power Input	-45 to -72 VD C direct or using PoE (each radio)
Power consumption	48 to 72 Watts each radio dependent on sub-band
Power Protection	Reverse polarity and transient clamping to 100 volts

Mechanical and Environmental

IDU	
Dimensions	W220 x H44 x L240 mm
Weight	2,2 kg
Temperature	-5 °C to +45 °C / +23°F to +113°F
Humidity	0 to 95%, non-condensing
Altitude	4,500 meters
ODU	
Dimensions	W277 x 239 x L92 mm (each)
Weight	9.5kg (each)
Temperature	-33 to +55ºC (ETS 300 019-2-4 Class 4M5)

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Product Specification

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ONE-WAY FULL DUPLEX CAPACITY TABLES IN MBPS

Capacity Range 1518-64 Byte Packets (Mbps)

	1518	64	1518	64	1518	64	1518	64	1518	64	1518	64	1518	64	1518	64
Channel Bandwidth (MHz)	QPSK		16 QAM		32 QAM		64 QAM		128 QAM		256 QAM		512 QAM		1024 QAM	
7	23.0	28.8	46.0	57.5	57.4	71.8	69.0	86.3	80.4	100.5						
10	33.0	41.3	66.2	82.8	82.6	103.3	99.2	124.0	115.8	144.8						
14	46.0	57.5	92.0	115.0	115.0	143.8	138.0	172.5	161.0	201.3	184	230.0				
20	66.2	82.8	132.2	165.3	165.4	206.8	198.4	248.0	231.4	289.3	264.6	330.8	297.6	372.0	330.6	413.3
25	80.6	100.8	161.0	201.3	201.2	251.5	241.6	302.0	281.8	352.3	322.0	402.5	362.2	452.8	402.6	503.3
28	93.4	116.8	186.8	233.5	233.6	292.0	280.4	350.5	327.0	408.8	373.8	467.3	420.4	525.5	467.2	584.0
30	99.2	124.0	198.4	248.0	248.0	310.0	297.6	372.0	347.2	434.0	396.8	496.0	446.4	558.0	496.0	620.0
40	132.2	165.3	264.6	330.8	330.6	413.3	396.8	496.0	462.8	578.5	529.0	661.3	595.2	744.0	661.2	826.5
50	163.8	204.8	327.8	409.8	409.6	512.0	491.6	614.5	573.6	717.0	655.6	819.5	737.4	921.8	819.4	1024.3
56	188.4	235.5	376.6	470.8	470.8	588.5	565.0	706.3	659.2	824.0	753.2	941.5	847.4	1059.3	941.6	1177.0
60	195.6	244.5	391.0	488.8	488.8	611.0	586.6	733.3	684.2	855.3	782.0	977.5	879.8	1099.8	977.6	1222.0
80	240.0	300.0	480.2	600.3	600.2	750.3	720.2	900.3	840.2	1050.3	960.2	1200.3	1080.4	1350.5	1200.4	1500.5

TRANSMITTER POWER FOR DIFFERENT FREQUENCY BANDS

Frequency Band	U4	L/U6	7	8	10	10.5	11	13	15	18	23	26	28	32	38	42
Frequency Range (GHz)	4.4 to 5	5.85 to 7.125	6.875 to 7.897	7.731 to 8.496	10.15 to 10.65	10.5 to 10.68	10.7 to 11.745	12.7 to 13.248	14.4 to 15.358	17.7 to 19.7	21.2 to 23.618	24.549 to 26.453	27.52 to 29.481	31.815 to 33.383	37.044 to 39.452	40.522 to 43.464
T/R SPACING (MHz)	300	160 170 252.04 300 340 350	150 154 160 161 168 196 245	119 126 266 311.32	350	91	490 500 530	225 266	315 322 420 490 644 728	1092.5 1010 1008	1008 1200 1232	1008	1008	812	1260	1500
Transmitter Power (dBm)																
QPSK	30	30	30	30	26.5	24	28	26	26	25.5	25	25	25	23	23	21
32QAM	28	28	28	28	22.5	20.5	25	24	24	23	23	22	22	21	20	19.5
64QAM	25	25	25	25	20.5	18	22	20	20	19	19	19	19	18	17	15.5
128QAM	25	25	25	25	20.5	18	22	20	20	19	19	19	19	18	17	15.5
256QAM	23	23	23	23	18.5	16	20	18	18	17	17	17	17	16	15	14.5
512QAM	21	21	21	21	16.5	14	18	16	16	15	15	15	15	14	13	12.5
1024QAM	20	20	20	20	15.5	13	17	15	15	14	14	14	14	13	12	11.5

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RECEIVER SENSITIVITY (DBM) FOR FREQUENCIES UP TO 28 GHZ									RECEIVER SENSITIVITY (DBM) FOR FREQUENCIES ABOVE 28 GHZ							
Channel Width (Mhz)	QPSK	16 QAM	32 QAM	64 QAM	128 QAM	256 QAM	512 QAM	1024 QAM	QPSK	16 QAM	32 QAM	64 QAM	128 QAM	256 QAM	512 QAM	1024 QAM
7	-90.9	-84.7	-80.7	-78.3	-75.2	-72.2	-68.4	-64.9	-90.9	-84.7	80.7	-78.3	-75.2	-72.2	-68.4	-64.9
10	-89.2	-83	-79	-76.6	-73.5	-70.5	-67.1	-63.6	-89.2	83.0	-79.0	-76.6	-73.5	-70.5	-.67.1	-63.6
14	-87.5	-81.3	-77.3	-74.9	-71.8	-68.8	-65.4	-61.9	-87.5	-81.3	-77.3	-74.9	-71.8	-68.8	-65.4	-61.9
20	-86	-79.8	-75.8	-73.4	-70.3	-67.3	-63.9	-60.4	-86.0	-79.8	-75.8	-73.4	-70.3	-67.3	-63.9	-60.4
25	-85.1	-79	-75	-72.4	-69.3	-66.3	-62.9	-59.4	-85.1	-79.0	-75.0	-72.4	-69.3	-66.3	-62.9	-59.4
28	-84.4	-78.1	-74.1	-71.7	-68.6	-65.6	-62.2	-58.7	-84.4	-78.1	-74.1	-71.7	-68.6	-65.6	-62.2	-58.7
30	-84.2	-77.9	-73.9	-71.5	-68.4	-65.4	-62	-58.5	-84.4	-78.1	-74.1	-71.7	-68.6	-65.6	-62.2	-58.7
40	-83	-76.8	-72.8	-70.4	-67.3	-64.3	-60.9	-57.4	-83.0	-76.8	-72.8	-70.4	-67.3	-64.3	-60.9	-57.4
50	-82.1	-75.9	-71.9	-69.5	-66.4	-63.4	-60	-56.5	-82.1	-75.9	-71.9	-69.5	-66.4	-63.4	-60.0	-56.5
56	-81.6	-75.4	-71.4	-69	-65.9	-62.9	-59.5	-56	-81.5	-75.3	-71.3	-68.9	-65.8	-62.8	-59.4	-55.9
60	-81.3	-75.1	-71.1	-68.7	-65.6	-62.6	-59.2	-55.7	-81.2	-75.0	-71.0	-68.6	-65.5	-62.5	-59.1	-55.6
80	-80.1	-73.9	-69.9	-67.5	-64.4	-61.4	-58	-54.5	-80.0	-73.8	-69.8	-67.4	-64.3	-61.3	-57.9	-54.4

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