

IPLink-SM

Split-Mount Indoor/Outdoor Digital Video/Data Microwave Systems

IPLink-SM is a “split-mount” bi-directional point-to-point IP microwave system consisting of a tower mounted RF unit (ODU) and an indoor rack-mounted baseband Ethernet modem (IDU). The ODU is powered via a low loss interconnecting IF coaxial cable for distances up to 1000 feet (300m). Mounting the RF ODU directly to, or in close proximity to the antenna maximizes system gain performance over that of an all-indoor system that incurs the transmission line loss associated with waveguide infrastructures.

The radio system is available for Ethernet only, Ethernet plus ASI or Ethernet plus EI/TI applications with half-duplex data rates (payload) up to 360 Mbps and in 1+0, 1+1 and 2+0 configurations.

The IPLink-SM supports a wide range of frequency bands between 3.5 and 38 GHz for ETSI and FCC operation and covers channel bandwidths from 3.5 to 56 MHz.



Key Features

- Split-mount, space efficient 1RU x 19” (48cm) rack-mount IDU and tower mounted ODU (IP65 rated)
- Standard & High RF linear broadband RF power outputs
- Automatic Transmitter Power Control
- Adaptive Code Modulation
- User selectable modulations from QPSK to 256 QAM
- High capacity Gigabit Ethernet IP data transport
- Optional high stability ASI or multiple EI/TI IDU versions
- Intuitive Web-based GUI for monitoring/control

Typical Applications

- Studio-to-Transmitter Links (STL)
- Transmitter-to-Studio Links (TSL)
- Inter-city Relay Backhauls (ICR)
- Multi-hop Microwave Relay Systems
- High-capacity IP Microwave Systems



Max Tx Power					
Modulation	Standard/High Tx Power ⁴ , dBm				
	4, U4 GHz	6, 7 GHz	10, 11, 13, 15 GHz	18, 23, 26 GHz	38 GHz
4QAM	+33	+19/+27	+19/+25	+19	+17
16QAM	+32	+18/+26	+18/+24	+18	+16
32QAM	+31	+17/+25	+17/+23	+17	+15
64QAM	+29	+15/+23	+15/+21	+15	+13
128QAM	+29	+15/+23	+15/+21	+15	+13
256QAM	+26	+12/+20	+12/+18	+12	+10

Band	Frequency range	Duplex offset
4 GHz	3.6 – 4.2 GHz	213 MHz, 320 MHz
U4 GHz	4.4 – 5.0 GHz	100 MHz, 300 MHz, 312 MHz
L6 GHz	5.925 – 6.425 GHz	252.04 MHz, 266 MHz
U6 GHz	6.425 – 7.125 GHz	160 MHz, 170 MHz, 200 MHz, 340 MHz
7 GHz	7.110 – 7.900 GHz	154 MHz, 161 MHz, 168 MHz, 196 MHz, 245 MHz
8 GHz	7.725 – 8.5 GHz	119 MHz, 126 MHz, 151.614 MHz, 154 MHz, 160 MHz, 208 MHz, 266 MHz, 300 MHz, 310 MHz, 311.32 MHz, 525 MHz, 550 MHz
10 GHz	10.15 – 10.68 GHz	65 MHz, 91 MHz, 300 MHz, 350 MHz
11 GHz	10.7 – 11.7 GHz	490 MHz, 500 MHz, 530 MHz
13 GHz	12.75 – 13.25 GHz	225 MHz, 266 MHz
15 GHz	14.4 – 15.35 GHz	315 MHz, 322 MHz, 420 MHz, 475 MHz, 490 MHz, 644 MHz, 728 MHz
18 GHz	17.7 – 19.7 GHz	1008 MHz, 1010 MHz, 1560 MHz
23 GHz	21.2 – 23.6 GHz	1008 MHz, 1036 MHz, 1200 MHz, 1232 MHz
26 GHz	24.25 – 27.5 GHz	800 MHz, 1008 MHz
38 GHz	38.6 – 40 GHz	700 MHz, 1260 MHz

CFIP ODU waveguide flange sizes						
4, U4, L6, U6 GHz	7, 8 GHz	10, 11 GHz	13, 15 GHz	18, 23 GHz	26 GHz	38 GHz
N-type	UBR84	UBR100	UBR140	UBR220	UBR260	UBR320

IDU Mechanical & Electrical

Operational use	Conforms to ETSI EN 300 019 Class 3.1E, IP20, NEMA 1
Temperature Range / Humidity	23°F to +131°F / 5% to 95%
Dimensions: H x W x D / weight	1U (1.77x16.92x9.44 in) / 6.83 lb.
Max. Power Consumption	20-30 W
IDU-ODU connection	Belden 9914/RG-8 cable (300 m), RG213 cable (200 m), Type-N
DC port	-40.5V to -57V DC (conforms to ETSI EN 300 132-2)
Built-in DC and IF port surge protection	Conforms to ETSI EN 301 489-1; EN 61000-4-5; IEC 61000-4-5

ODU Mechanical & Electrical

Operational use	Conforms to ETSI EN 300 019 Class 44.1, IP65, NEMA 4X
Temperature Range	-27°F to +131°F
Dimensions: H x W x D / weight	11.3x11.3x3.1 in / 7.7 lb.
IF port surge protection	Conforms to ETSI EN 301 489-1; EN 61000-4-5; IEC 61000-4-5
Input DC voltage	-40.5V to -57V DC (conforms to ETSI EN 300 132-2)
Max. Power consumption	SP: 13-27 W; HP: 21-39 W