

# IPLink

## Next Generation Digital Video/Data Microwave Systems

IPLink combines the features of a broadcast digital microwave point-to-point radio system with the modern efficiencies of a high-capacity long-distance bi-directional IP microwave radio design. It allows the broadcaster to smoothly migrate from the traditional ASI transport platform to a future IP-centric system architecture.

The system delivers ultra-high linear RF output performance coupled with the reliability that LDPC forward error correction (FEC) affords in controlling errors in data transmissions over long or unreliable microwave paths.

A key advantage of the IPLink is that it allows BAS 7 & 13 GHz simplex links to be transformed into affordable duplex IP Ethernet microwave systems within a T/R channel spacing as close as 75 MHz; a Vislink first.

Systems are available in Simplex, Duplex, Hot-Standby and \*Spatial Diversity Receive configurations.

\*Seamless switching available for non-protected duplex space diversity receive system configurations only.



## Key Features

- All-indoor, space-efficient 2RU x 19" (48cm) rack mount
- Ultra-high linear broadband RF power amplifiers
- Exceptional System Gain Performance
- High capacity ASI & Gigabit Ethernet IP data transport
- Automatic Transmitter Power Control
- Adaptive Code Modulation
- User selectable modulations from QPSK to 256 QAM
- ANSI and ETSI channel bandwidths
- 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

## RF Parameters

### RF Output Level (prior to filter branching)

- +34dBm to +27dBm\*  
@ 6 GHz BAS
- +33dBm to +26dBm @ 7 GHz
- +32dBm to +25dBm @ 8 GHz
- +29dBm to +22dBm  
@ 13 GHz BAS

\*modulation dependent.

### RF Band Support\*

- 6.425 – 7.125 GHz  
(FCC TV-BAS, ETSI)
- 7.100 – 7.900 GHz (ETSI)
- 7.725 – 8.500 GHz (ETSI)
- 12.700 – 13.250 GHz  
(FCC TV-BAS, ETSI)

\*please ask for additional RF band support.

### Channel Filter Branching Network Assemblies\*

- 50 MHz typ. T/T & R/R  
@ 7 & 13 GHz FCC-BAS
- 75 MHz typ. T/R  
@ 7 & 13 GHz FCC-BAS
- Waveguide Interface: WR137  
@ 7 GHz, WR75 @ 13 GHz

\*please ask for additional WG interface availability.

## Data Transport Parameters

### Modulations

- QPSK, 8PSK, 16 QAM, 32 QAM, 64 QAM, 128 QAM, 256 QAM

### Encryption

- AES 256

### Data Throughput Capacity (one-way)

- 10 Mbps to 360 Mbps
- Automatic Transmitter Power Control (ATPC)
- Adaptive Code Modulation (hitless Oms)

## Prime Power (Mains) Parameters

### 100W (power consumption) Switching

- AC (90-132V & 180-264V @ 47 – 63 Hz)

## User Interface Parameters

### Ethernet (payload)

- 2 x 100/1000 Base-T, RJ-45
- Gigabit Ethernet line rates scalable up to 360 Mbps
- IPv4 and IPv6
- VLAN 802.1Q
- 64 level DiffServ (DSCP) QoS or 8 level 802.1p in 4 prioritization queues with VLAN support

### ASI (payload)

- 4 x ASI simplex transmit (BNC-F)
- 4 x ASI simplex receive (BNC-F)
- 4 x ASI individually configured per direction for duplex (BNC-F)

### Hot-Standby ASI Transmit Switch

- 2 x 1 DA

### Hot-Standby ASI Receive Switch

- 2 x 1 A/B typ. 40 msec.

### Hot-Standby Ethernet TCP/IP Switch

- 600 -1100 msec.

### Local and Remote Link Web-browser Management

- 1 x 100/1000 Base-T (RJ45)

### System Management Interface Parameters

- Hot-Standby (1+1) and Space Diversity
- 1x DB9 for Alarm Fault switching – RF PA, RSL, etc.

## Regulatory Parameters

- FCC Type Certification in accordance with CFR 47 Part, subpart J including:
  - CFR 47, Part 74, subpart J
  - CFR 47, Part 101, subparts C, H and I
- FCC part 15 EMC unintentional emission radiators
- ETSI; EN 301 489-1, 489-28, EN 302 064-1
- Safety per EN/CE EN60950

## Licence Key Upgrades

- IPLink-365-LIC
  - 200 Mbps to 360 Mbps data throughput license (per non-protected terminal)

## Mechanical Parameters

- Weight: 18 lbs. (8.2 kg)\*
- 2 RU x 19" (48cm) EIA Rack Mount
- 38cm (15.0") depth exclusive of filter branching

\*approximate figure.

## Environmental Parameters

### Operating to full specifications

- 0° to 50° C (32° to 122° F)
- Humidity up to 95% non-condensing

### Operational

- -10° to 60° C (14° to 140° F)

### Storage

- -40° to 70° C (-40° to +158° F)