IPLink 3.0
ATSC 3.0 Ready Digital Video Microwave System

STL · TSL · ICR

Vislink's IPLink 3.0 is the next-generation, ATSC 3.0-ready digital microwave system. This IP-centric solution is specifically designed to meet broadcasters' studio-to-transmitter requirements.

The 2RU chassis provides the look and feel of a classic broadcast microwave system.

The streamlined physical layout includes single enclosure TX/RX transceivers with front-panel touchscreen displays that monitor key performance and alarm metrics. The rear chassis input/output interfaces include space-efficient RF channel filter mounted branching assemblies.

The system delivers enhanced RF gain performance through improvements in linearization and LDPC forward error correction (FEC) which reduces the incidence of packet loss over long or unreliable transmission paths.

Vislink's IPLink 3.0 offers increased data throughput by utilizing modulation architectures up to 1024QAM and XPIC (cross-polarization interference cancellation). XPIC is a spectrally-efficient technique that doubles data rates by simultaneously operating on both horizontal and vertical polarizations using the same channel frequency. XPIC is highly beneficial when only one channel frequency per path is available.

Systems are available in both protected (1+1, hot-standby) and non-protected duplex configurations and can be designed for simplex operation, including spatial diversity receive systems*.

*Seamless switching available in protected spatial diversity receive system configurations only.

Features

o All-indoor, space-efficient 2RU x 19" (48cm) rack mount
o Ultra-high linear broadband RF power amplifiers
o Exceptional system gain performance
o High capacity ASI & Gigabit Ethernet IP data transport
o Automatic transmitter power control
o Adaptive code modulation
o User selectable asymmetrical modulations from QPSK to 1024QAM
o XPIC cross-polarization interference cancellation
o ANSI and ETSI channel bandwidths selections
o Intuitive web-based GUI for remote monitoring and control

Typical Applications

o Studio-to-Transmitter Links (STL)
o Transmitter-to-Studio Links (TSL)
o Inter-city Relay Backhaul (ICR)
o Multi-hop Microwave Relay Systems
o High capacity IP Microwave Systems
o Ideal for ATSC1.0/3.0 Lighthouse applications

	IPLink 3.0
RF Parameters	
RF Output Level (prior to filter branching)	• +34dBm to +25dBm* @ 6 GHz BAS • +33dBm to +24dBm @ 7 GHz • +32dBm to +23dBm @ 8 GHz • +35dBm QPSK @ 2G • +29dBm to +20dBm @ 13 GHz BAS *Modulation dependent from QPSK to 1024 QAM
RF Band Support*	• 5.900 – 6.425 GHz (FCC TV-BAS) • 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) • 2.0-2.37GHz(FCC,TV-BAS) *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 (3xChannel BW, filtering dependent*) • Waveguide Interface: WR137 @ 7 GHz, WR75 @ 13 GHz • N-Type Connector, @2GHz *Please ask for additional WG interface availability
Data Transport Parameters	
Modulations	• QPSK, 16 QAM, 32 QAM, 64 • QAM, 128 QAM, 256 QAM, 512 • QAM, 1024 QAM
Encryption	AES 256
Data Throughput Capacity (one-way)	• 15 Mbps to 452 Mbps • Automatic Transmitter Power Control (ATPC) • Adaptive Code Modulation (hitless 0ms)
Prime Power (Mains) Parameters	
100W (power consumption) Switching	• AC (90-132V & 180-264V @ 47 – 63 Hz) • DC (42-55V)
User Interface Parameters	
Ethernet (payload)	• 2 × 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)

IPLink 3.0

User Interface Parameters

Hot-Standby ASI Transmit Switch	2 × 1 DA
Hot-Standby ASI Receive Switch	2 × 1 A/B typ. 40 msec.
Hot-Standby Ethernet TCP/IP Switch	600 -1100 msec.
Local and Remote Link Web-browser Management	1 × 100/1000 Base-T (RJ45)
System Management Interface Parameters	• Hot-Standby (1+1) and SpaceDiversity • 1x DB9 for Alarm Fault switching – RF PA, RSL, etc.

Regulatory Parameters

Regulatory Parameters	• FCC Type Certification in accordance with CFR 47 Part, sub-part J including: • CFR 47, Part 74, sub-part J • CFR 47, Part 101, sub-parts 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

Mechanical Parameters

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)