



# AeroLink

## HEVC 4K UHD Airborne Transmitter

The AeroLink Transmission System is the next-generation component of the Vislink Airborne Video Downlink System (AVDS). It features an agile IP-based workflow that includes centralized management and distribution via the Quantum Receiver.

The AeroLink Transmission System is a full-featured 4K or 2 x 1080p 60 HEVC digital encoding video downlink solution built to address the unique requirements of aircraft downlink operations. The gains from the HEVC technology enables superior quality video with reduced bandwidth enabling larger geographical coverage.

The AeroLink also features an optional Public 5G or MANET (MESH) component for bi-directional video, data and connectivity. An API is available to integrate a public 5G Modem/Transceiver into existing infrastructure.

The AeroLink features IP input, wayside user data and KLV telemetry information. The video in may be HDR/UHD HD SD SDI, ASI or composite or via Transport Stream (IP).

AeroLink also includes key security features such as advanced AES encryption and FIPS 140-2 and complies with all aircraft regulations.



### Typical Applications

- Law Enforcement
- Event Coverage
- Newsgathering
- Sports Coverage
- Ship-to-Shore
- ISR (Military and LE)
- First Responders
- Command Vehicles
- National Security
- Unmanned Aerial Vehicles
- Aerostats
- Dissemination

### Key Features

- Dual HDR/UHD SDI Encoder (Independent Format)
- 2 x 1080p 50/59.94/60 and below
- 4K Input
- HEVC Dual Encoding
- 5G Modem Integration (Public Infrastructure)
- MESH Node Integration
- KLV Meta Data
- GigE IP Input/Output
- AirRinc Frame
- SRT/RTSP/RTP I/O for Data/Video
- Restful API for Integration
- Quantum EcoSystem Receive/Video dissemination



### RF

#### RF Frequency Bands

Bands Available:.....1.7 – 2.2GHz  
 .....2.0 – 2.4GHz  
 .....4.4 – 5.0GHz  
 .....6.425 – 6.540  
 Power:.....Up to 10Watt (version dependent)  
 Selection:.....16 Presets  
 .....1MHz Step Size

#### Modulation 1 (DVB-T)

Modulation Type:.....COFDM DVB-T  
 Carriers:.....2k  
 Constellation:.....QPSK, 16 QAM, 64QAM  
 Code Rate:.....1/2, 2/3, 3/4, 5/6, 7/8  
 Guard Interval:.....1/32, 1/16, 1/8, 1/4  
 Bandwidth:.....6/7/8 MHz  
 Bit Rate Max:.....31.7Mbps

#### Modulation 2 (LMST)

Modulation Type:.....COFDM LMST  
 Carriers:.....Proprietary  
 Constellation:.....QPSK, 16QAM  
 Code Rate:.....1/2, 3/4  
 Guard Interval:.....1/16, 1/4, 1/8  
 Bandwidth:.....3/4/5/6/7/8/10/12/14/16/20 or 24 MHz  
 .....Quantum BDC Receiver Only  
 Data Rate:.....43Mbps

### Encoding – Video, Audio, and Data

#### Video Encoder Profiles and Formats

HEVC (H.265):.....UHD, HDR HD & SD  
 .....Main 10 4:2:2 @ L5.1  
 .....8 and 10bit sampling  
 .....4K Native and UHD (1 Service)  
 .....HD (2 Service)  
 .....SD (2 Service)  
 MPEG-4 AVC (H.264):.....HD & SD  
 .....Level 4.0, High/Main 4:2:0  
 .....8-bit sampling  
 Formats:.....480i@29.97  
 .....576i@25  
 .....720p@50/59.94/60  
 .....1080i@50/59.94/60  
 .....1080p@23.98/24/25/29.97/30/  
 50/59.94/60  
 .....2160p@23.98/24/25/29.97/30/  
 50/59.94/60

#### Video Inputs

Video SDI: .....2x SD-SDI SMPTE-259M  
 .....2x HD-SDI SMPTE-292M  
 .....2x 3G-SDI SMPTE-424M  
 .....1x 12G-SDI SMPTE-2082  
 IP Transport stream:.....10/100/1000 Base T  
 ASI Input/Output:.....MPEG-TS

#### Audio

Analog Audio Coding:.....MPEG1 Layer II  
 .....De-Embedded from SDI  
 Audio Inputs Embedded:.....2 x Stereo Pairs Embedded  
 Audios over SDI  
 Analogue:.....2 x Mono or 1 x Stereo Pair

#### Data

KLV:.....Over UDP, SDI SMPTE 336M  
 .....MISB 0601, 603  
 .....KLV Meta Data Processing  
 Wayside Data:.....RS 232  
 .....256 Baud



**Connectors**

Main Video:.....2 x BNC 75Ω  
 .....1 x 3G SDI input  
 .....1x 12G SDI input  
 ASI Input/Output:.....1 x 75Ω BNC Female  
 Audio Embedded:.....2 BNC SDI  
 Audio Analog:.....26 Pin Break-Out Cable  
 .....2 Mono or 1 x Stereo Pair  
 Power:.....26 Pin Chassis Receptacle  
 Ethernet:.....4 x RJ45 10/100  
 USB:.....USB 2.0  
 RF Output:.....50Ω N-Type Female

**System**

**Descrambling**

Biss:.....Biss 1  
 .....Biss-E  
 Legacy AES:.....128Bit  
 .....256Bit  
 BCRYPT:.....AES 128Bit  
 .....AES 256Bit

**Test Generator**

Video Present:.....Remote Standby/Test Generator selectable  
 Test Generator (Dynamic):.....SMPTE CB(NTSC)/100% CB(PAL)  
 .....1kHz and 2KHz Tone  
 .....Moving Color Bars

**User Interface**

Local:.....Webpage GUI  
 Remote Control Protocol.....Available  
 Physical Remote Control.....HRCP  
 .....DZUS  
 .....Serial Connection  
 .....Night Vision

**Power**

Input Range:.....+28VDC  
 Power Consumption:.....<230W  
 Circuit Breaker:.....20 AMPS

**Physical**

Dimensions:.....3.56" (W) x 7.62" (H) x 12.56" (7.62)  
 .....9.6 (W) x 19.35 (H) x 32.19 (L) cm  
 Temperature Range:.....Full Range -20° to +50°C  
 Weight:.....< 13 lbs. or 6 kg

**Regularity**

Compliance:.....FCC Parts 15, 90, 74 and 101 (version dependent)  
 .....CE  
 .....RoHS  
 .....ETSI EN 300, 744  
 EMC:.....RTCA DO160

**Optional License**

ALINK-LICE-0001:.....4K UHD HEVC Encode  
 ALINK-LICE-0002:.....Descrambling