



VISLINK

Aerolink Datasheet

At the heart of the action.

AeroLink HEVC 4K UHD Airborne Transmitter

Aerial Downlink Solution

Low Latency

4K



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 enable superior quality video with reduced bandwidth — enabling larger geographical coverage and the ability to provide instantaneous data to decision makers. AeroLink supports custom client applications and is scalable via licenses. Its flexible and modular API integrates with 3rd-party software and edge devices

The AeroLink features IP input, wayside user data and KLV telemetry information. The video-in may be HDR/UHD HD SDI, ASI or composite or via Transport Stream (IP). Key data, network and penetration security features such as AES encryption and FIPS 140-2 are included, and are compliant with all aircraft regulations.

Workflow

Vislink AVDS is a bi-directional, end-to-end solution comprised of downlink transmitters, receivers and antennas that capture real-time, seamless high-definition video from helicopters, drones and fixed-wing aircraft for display at command centers, mobile units and on video management systems. Vislink's **Air-to-Anywhere™** design allows the collected video to be simultaneously distributed, viewed and managed across wide areas to all deployed assets.

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)
- KLV Meta Data
- GigE IP Input/Output
- AirRinc Frame
- SRT/RTSP/RTP I/O for Data/Video
- Restful API for Integration
- AI-mapping geofencing tracking
- Cloud, virtual or bare metal
- Asset control and monitor
- Transcode and distribute

Typical applications

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



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Aerolink

RF

RF Frequency Bands

Bands Available	1.7 – 2.2 GHz, 2.0 – 2.4 GHz, 4.4 – 5.0 GHz, 6.425 – 6.540 GHz
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Power	Up to 10Watt (version dependent)
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Modulation 1 (DVB-T)

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

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)
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MPEG-4 AVC (H.264)	HD & SD, Level 4.0, High/Main 4:2:0, 8-bit sampling
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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
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Video Inputs

Video SDI	2x SD-SDI SMPTE-259M, 2x HD-SDI SMPTE-292M, 2x 3G-SDI SMPTE-424M, 1x 12G-SDI SMPTE-2082
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IP Transport Stream	10/100/1000 Base T
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ASI Input/Output	MPEG-TS
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Encoding – Audio and Data

Aerolink

Audio

Analog Audio Coding

MPEG1 Layer II, De-Embedded from SD

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	Aerolink
Decryption	
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 Bar
User Interface	
Local	Web page GUI
Remote Control Protocol	Available
Physical Remote Control	HRCF, DZUS, Serial Connection, Night Vision
Power	
Input Range	+28VDC
Power Consumption	<230
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	Decryption