



HCAM

HEVC 4K UHD Camera Transmitter

The Vislink HCAM leads the next generation of lightweight, highly portable, HEVC 4K UHD, HDR-ready wireless systems.

HCAM offers flexibility with highly configurable mounting options and video interfaces, also providing a complimentary range of user-interchangeable RF modules and software options, for use with:

- Broadcast cameras for sporting events
- ENG cameras for news gathering
- Prosumer cameras for the ultimate application flexibility



Key Features

- HEVC 4K UHD Very Low Latency Encoder
- HDR Ready
- Interchangeable, future-proof, dual SFP modules supporting SDI/HDMI/Fiber Optic
- Interchangeable RF module for quick & easy frequency change
- Integrated Camera Control with FocalPoint Compatibility
- Optional direct-docking V-Lock & Anton Bauer battery plates with integral power feed through
- Remote control over WiFi via web interface

Typical Applications

- Event Coverage
- Newsgathering
- Sports Coverage
- PoV Cameras



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RF Parameters

Frequency Band

- 1.300–1.700 GHz¹
- 1.950–2.700 GHz¹
- 3.200–3.900 GHz¹
- 4.400–5.000 GHz
- 6.425–7.125 GHz
- 6.800–7.500 GHz
- 7.200–7.750 GHz

¹pre-distortion correction

Transmit Power

- Adjustable 10 to 250 mW up to 3.9 GHz^{*}
- Adjustable 10 to 100 mW above 3.9 GHz^{*}

^{*}or add Barrel Booster option¹

Frequency Selection

- Manual selection & 16 pre-set channels

Modulation

- DVB-T
- LMS-T

UHF Receiver

- 410 to 490 MHz frequency range
- FocalPoint camera control compatibility

Modulation Modes

- QPSK, 16QAM, 64QAM
- FEC:
 - 1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval:
 - 1/32, 1/16, 1/8, 1/4

Data Rate

- DVB-T 4.98 to 31.7 Mbit/s
- LMS-T 2.90 to 43 Mbit/s, bandwidth dependent (licensed option)

Bandwidth

- DVB-T bandwidths of 6/7/8 MHz
- LMS-T bandwidths of 3/4/5/6/7/8/10/ 12/14/16/20 or 24 MHz with two carrier density options
- Digital pre-distortion for enhanced adjacent channel performance

^{*}Licensed option

^{**}Frequency permitting

Video & Audio Parameters

Video Encoder Profiles

- HEVC (H.265) UHD, HD & SD
 - Main, Main 10, Main 4:2:2 10
 - 4K Native and UHD (1 Service)
 - HD (Up to 4 Services)⁵
 - SD (Up to 4 Services)⁵
- MPEG-4 AVC (H.264) HD & SD
 - Main, High, Baseline up to
 - Level 5.2, High 10/High 4:2:2
- MPEG-2 (H.262) HD & SD
 - 4:2:0 8 bit, up to 1080i60

Video Inputs

- 2 SFP+ module slots supporting electrical and optical interfaces

Video 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

Audio Inputs

- Embedded audio over SDI/ HDSDI/3G SDI/6G SDI/ 12G SDI
- 1x analogue audio stereo pair configured as Mic/Line level
- Mic/Line level support with phantom power

Audio Encoding

- AAC (AAC-LC & HE-AAC)
- MPEG-1 (Layer 1 & Layer 2)
- Dolby E Passthrough
- Linear PCM Passthrough

Latency

- Single frame (4K UHD/1080p)²

Scrambling

- BISS-1
- BISS-E Injected
- BISS-E Buried ID

Connectors

- 2x SFP+ module slots supporting electrical and optical interfaces carrying⁶:
 - 4x SDI SMPTE-259M
 - 4x HD-SDI SMPTE-292M
 - 4x 3G-SDI SMPTE-424M
 - 2x 6G-SDI SMPTE-2081
 - 1x 12G-SDI SMPTE-2082

- Power Connector:
 - 2-pin LEMO socket
- Audio Connector:
 - 5-pin LEMO socket
- Camera Cont. & ASI Connector:
 - 7-pin LEMO socket

- Data & Tally Connector:
 - 3-pin LEMO socket
- Ethernet Control Connector:
 - RJ45 10/100
- USB Connector:
 - Micro-AB USB 2.0

- RF Output Connector:
 - 50 Ω N-Type (M)
- UHF Input Connector:
 - 50 Ω SMA (F)

Flexibility & Power Supply

Power

- Extended operation voltage range, 10V to 32.2V DC
- Power connector to connect to D-Tap power source
- Can be powered with optional IDX or Anton Bauer battery plates

Power Consumption

- 35W max.

ASI

- Input for service multiplexing (Remux)
- Output
- Input and Output on multifunction connector

PIDS

- PIDs user configurable

User Interface

- OLED display for enhanced visibility
- Ethernet control via internal webserver
- WiFi connectivity & control via internal webserver

Optional Licenses:

- HCAM-LICE-0001 - HCAM License Service 1 4K UHD HEVC Encode
- HCAM-LICE-0002 - HCAM License Service 2 HD 1080p HEVC Encode
- HCAM-LICE-0003 - HCAM License Service 3 HD 1080p HEVC Encode
- HCAM-LICE-0004 - HCAM License Service 4 HD 1080p HEVC Encode
- HCAM-LICE-0007 - HCAM License H.264 Encode
- HCAM-LICE-0009 - HCAM License Variable Bandwidth LMS-T
- HCAM-LICE-0010 - HCAM License UHF Rx Camera Control
- HCAM-LICE-0011 - HCAM License BISS Scrambling

Physical & Environmental

- Size & Weight:
 - 165 (L) x 43 (H) x 82 (W) mm³
 - 600g⁴

Environmental

- Operating Temperature:
 - 0°C to 50°C
 - (32°F to 122°F)



Notes:

- Some features specified are available via optional licenses.
- Not all encoder interface options are concurrently available.
- We reserve the right to change specifications at any time without prior notice.
- ¹We recommend using the optional D-TAP cable to power the Barrel Booster.
- ²End to end latency including RF, with ULRX-LD Rx.
- ³Including removable heatsink mounts, excluding RF connectors.
- ⁴Including removable heatsink, excluding antennas.
- ⁵HD & SD Services 2 to 4 can be enabled via optional licenses.
- ⁶Unit supplied with 2x 3G-SDI SFP+ modules.

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learn more at
vislink.com



UltraReceiver LD

Multi-Format Receiver

The UltraReceiver LD is a 1RU half-width, rack mount chassis receiver that perfectly fits the requirements for broadcast sports and ENG news coverage with wireless cameras.



This versatile receiver features 4x dual pedestal UHF inputs with Maximum Ratio Combining LMS-T demodulation capability to ensure maximum signal robustness and best video quality.

In combination with Vislink's HCAM wireless camera transmitter, the UltraReceiver LD decoder delivers high quality 4k UHD video with end-to-end latencies as low as a single frame.

As a multi-format receiver, the UltraReceiver LD also provides decode capability for HD HEVC and HD MPEG-4 video decoding.

The UltraReceiver LD is typically used in conjunction with Vislink L3025 series Down-Converters.

Key Features

- One-box, compact and lightweight solution
- Used in conjunction with the Vislink L3025 series Down-Converters
- Up to 4x UHF inputs RF with Maximum Ratio Combining diversity
- 4K UHD and HD decoding available
- Capability to support HEVC and MPEG4/H.264 decoding
- Available for DVB-T or LMS-T transmissions
- HD HEVC Dual Decode capability in a single transport stream

Typical Applications

- Event Coverage
- News Coverage
- Sports Coverage



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RF Parameters

Frequency bands

- 70MHz -860MHz*

*Use in conjunction with the L3025-series down converters.

Frequency Selection

- Up to 16 pre-set channels, or tuning in 1MHz steps via front panel control

Demodulation

- DVB-T
- LMS-T

Demodulation Modes

- QPSK, 16QAM, 64QAM
- FEC:
 - 1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval:
 - 1/32, 1/16, 1/8, 1/4

Bandwidth

- DVB-T bandwidths of 6/7/8 MHz
- LMS-T bandwidths of 3/4/5/6/7/8/10/12/14/16/20 or 24 MHz with dual pedestal

Receiver Threshold

- Receiver threshold: -92dBm to BER 10-5 (nom. QPSK)

Video & Audio Parameters

Video Decoder Profiles

- HEVC (H.265) UHD & HD:
 - Profile: Main 4:2:2 10 @ L5.1
 - Sampling: 8bit & 10bit
 - Video rate: 1.0-40Mbps
 - Video format: up to 2160p 60
- MPEG-4 AVC (H.264) HD
 - Profile: 422HP @ L4.2
 - Sampling: 8bit & 10bit
 - Video rate: 1.0-40Mbps
 - Video format: up to 1080p 60

Video Outputs

- 3G-SDI SMPTE-424M (UHD)
- HD-SDI SMPTE-424M (HD)

Video 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

Audio Decoder Profiles

- AAC (AAC-LC & HE-AAC)
- MPEG-1 (Layer 1 & Layer 2)
- Linear PCM Passthrough

Audio Outputs

- Digital:
 - Embedded audio over SDI
- Analogue:
 - 1x stereo pair (decoder 1 only)

Framelock

- CVBS Black & Burst
- Tri-level sync

Latency

- Single frame latency*
- *In combination with Vislink HCAM transmitter in HEVC mode and in combination with Vislink L1700 & Clip On-4 transmitters

De-Scrambling

- BISS-1
- BISS-E Injected (not available in dual decode mode)

Dual Decode (HEVC only)

- Ability to decode dual services on a single multiplex.

Connectors

- UHF Input Connectors:
 - 4x 75 Ω BNC (F)
- ASI Input Connector:
 - 75 Ω BNC (F)
- Video Output Connectors:
 - 4x 75 Ω Micro BNC (F)

- Monitor Output Connector:
 - 75 Ω Micro BNC (F)
- GenLock Connector:
 - 75 Ω Micro BNC (F)
- ASI Output Connector:
 - 75 Ω Micro BNC (F)

- Audio Connectors:
 - 2x 3-Pin XLR (M)
- Camera Control & MPEG Data Connector:
 - 6-Pin LEMO Socket

- Alarm Connector:
 - 6-Pin LEMO Socket
- Ethernet Control Connector:
 - RJ45 10/100
- TS over IP Connector:
 - RJ45 10/100 (not used)

Flexibility & Power Supply

Power

- 100 - 240VAC; 100W (approximate, depending on configuration)

ASI

- Input for decoding or ASI Packet Switching (configurable)
- Output from demodulator or decoder (configurable)

User Interface

- Comprehensive front panel control and monitoring
- White backlit LCD display:
 - Summary display detailing status and internal lock alarms
 - RF Rx signal level (dBm bar graph)
 - MER level (dB bar graph)

Remote Control

- Comprehensive remote control and monitoring via Ethernet power/web browser interface and SNMP control.

Software Upgrade

- Unit upgrades via USB port

Physical & Environmental

Size

- 44 mm (H) x 210 mm (W) x 350 mm (L)
(1.7" (H) x 8.2" (W) x 13.7" (L))
- 1U Height, 1/2-rack width

Weight

- 1.2 kg (2.6 lb)

Environmental

- Operating Temperature:
 - 0°C to +50°C (32°F to 122°F)

- Humidity:
 - 95% long term

Optional Licences

- ULRX-LICE-0001 - ULRX Licence 4K UHD Decode
- ULRX-LICE-0002 - ULRX Licence H.264 SD & HD Decode
- ULRX-LICE-0006 - ULRX Licence 4 Input Demod
- ULRX-LICE-0007 - ULRX License ASI Packet Switching
- ULRX-LICE-0008 - ULRX Licence 4 Input LMS-T (D)
- ULRX-LICE-0009 - ULRX-LD License Dual Channel Decode
- ULRX-LICE-0010 - ULRX License BISS De-Scrambling

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