



VISLINK

At the heart of the action.

Quantum Receiver Datasheet

Quantum Receiver

IP-Native Wireless Camera Receiver

Premier Sports and Events

OFDM/5G

4K

Low latency



Vislink's Quantum is an IP-native, high-performance RF receiver which enables production teams to fully implement remote production systems, increasing production efficiencies and allowing event operations teams to use their staff and resources more productively. By delivering content directly over IP fiber networks and cutting out additional video compression stages, Vislink's Quantum receiver can remove additional equipment CAPEX costs and increase video quality.

Video production organizations can now benefit from utilizing enhanced IP capability to offer new services. Quantum provides in-built SRT capability to contribute video over the unmanaged internet, enabling event production to be achieved at a fraction of the connectivity costs and making delivery of new content financially viable. Quantum significantly extends the number of RF inputs on a wireless camera receiver to 16—enabling wider area coverage and more robust RF reception through sophisticated MRC and Packet switching technology.

With IP connectivity at the heart of the Quantum receiver, content creators can fully modernize their networks to deliver high-impact wireless camera images and simplify the infrastructure required to bring that content home. Built for both remote production and on-site live event coverage, not only is Quantum capable of moving compressed video around all-IP environments, but it is also a SMPTE2110 device which can enable more efficient operational workflows for video production environments as they also evolve to next generation IP architectures.

Key features

- Diversity LMS-T, DVB-T and ISDB-T reception with up to 16x RF inputs
- 4K UHD and HD decoding with HDR support
- HEVC and MPEG-4 video decode compression technology
- Dual service HEVC HD Decode*
- IP transport stream input and output with SMPTE 2022-2, SRT and NDI support
- Instantaneous Data to Decision Makers

Typical applications

- Live Event on-site coverage
- Remote production Event coverage
- Central receive applications
- ENG applications



* available via software



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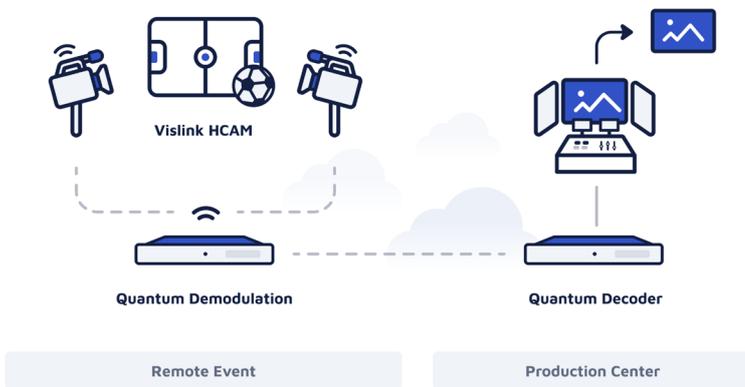
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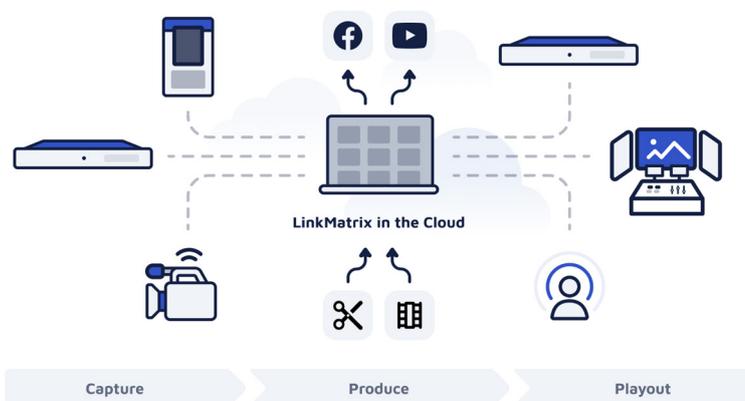
Quantum was created with a modern unit design, incorporating a touchscreen interface and APIs to allow integration into system control and orchestration tools. By enabling an increase in antenna locations, event production teams can achieve greater area coverage with more confidence in robust video transfer without fear of picture breakup. Equipped with low latency video processing technology, Quantum offers multi-format video decoding that supports all major video formats including high frame rate, high dynamic range and 4k resolutions—ensuring premium video productions can benefit from the flexibility and immersive camera views that only wireless camera systems can offer.

Remote Production Workflow with Vislink HCAM and Quantum



LinkMatrix Centralized Control and Configuration

Vislink’s LinkMatrix control platform provides the ability to remotely configure and control Quantum devices from an operations center. By utilizing the LinkMatrix management platform, staff can work more efficiently and workflows can be streamlined. LinkMatrix can be used to simplify ways of working for ad-hoc or scheduled events to ensure that configurations and signal paths are set for data streaming as required.



Quantum Receiver

RF Parameters

RF Input	4x RF inputs implementing MRC Diversity reception per demod card, up to 4x demod cards per unit, packet switching diversity between demod cards
Frequency Band	100MHz -20GHz**Use in conjunction with the L3025- series down converters.
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/32, 1/16, 1/8, 1/4
Frequency Selection	Up to 16 pre-set channels, or tuning in 1MHz steps via front panel control
Demodulation	ISDB-T (2K), DVB-T, LMS-T with deep interleaving
Demodulation Modes	QPSK, 16QAM, 64QAM
Bandwidth	DVB-T bandwidths of 5/6/7/8 MHz, LMS-T bandwidths of 3/4/5/6/7/8/10/12 Dual Pedestal bandwidths of: DVB-T - 10,12,14,16MHz; LMST 4,6,8,10,12,14,16,20,24 MHz ISDB-T bandwidth of 6/7/8 MHz
Receiver Threshold	Receiver threshold: -92dBm to BER 2.2x10 ⁻⁴ th (nom. QPSK)
Service Multiplexing	RF diversity input + ASI Mux, RF diversity input + TSolP input, TSolP input +ASI input

IP Transport Stream Processing

IP Inputs	RTP/UDP IP input, up to 100Mbit/s, SMPTE2022-2 ProMPEG FEC, SRT
IP Outputs	RTP/UDP IP input, up to 100Mbit/s, SMPTE2022-2 ProMPEG FEC, SRT

Video CODEC Profiles Supported	<p>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</p> <p>MPEG-4 AVC (H.264) HD: Profile: 422HP @ L4.2 Sampling: 8bit & 10bit Video rate: 1.0-40Mbps Video format: up to 1080p 60</p>
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Video Outputs	3G-SDI SMPTE-424M (UHD), HD-SDI SMPTE-424M (HD), 6G-SDI SMPTE-2081, 12G-SDI SMPTE-2082 HD, HDR, 4K downconversion to HD, OSD monitor
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Video Formats	<p>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 1080PsF @ 23, 24, 25, 29, 30 2160p @ 23.98, 24, 25, 29.97, 30, 50, 59.94 & 60</p>
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Dual Decode	Dual Service decode* (HEVC only), within same frequency band
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Audio Decoder Profiles	AAC** (AAC-LC & HE-AAC), MPEG-1 (Layer 1 & Layer 2), Linear PCM Passthrough
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** Check availability



Quantum Receiver

Video & Audio Parameters

Audio Outputs

Digital:
Up to 8x stereo pair Embedded audio over HD-SDI, 4x over SDI
Analogue: 2x stereo pair

Frame Sync

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, AES-128, AES-256, Bcrypt-128, Bcrypt-256
BISS-1, BISS-E Injected, BISS-E Buried ID

Connectors

Main Video Output
2x SFP cages each supporting:
4x 3G SDI out
2x 6G SDI out
1x 12G SDI out

Monitor Video Output
2x SFP cages each supporting:
3G SMPTE 2110 Encapsul
4x 3G SDI out
2x SFP cages supporting:
4K SMPTE 2110 (HW option)
1x ASI Input Connector:
75 Ω BNC (F)
GenLock Connector:
75 Ω Micro BNC (F)
1x ASI Output Connector:
75 Ω Micro BNC (F)
Audio Connectors:
2x 5-Pin Lemo
1x Stereo pair per connector
FocalPoint ODU Tx Head**: 6-Pin LEMO Socket
2x 15-way HD D-Type
Return data
RS232/RS485/TTL
OCP**
Sony/Grass Valley/OCP5
Tally**
Red/Green Wet/Dry
Ethernet Transport Stream Control Connectors:
1 x WAN port
RJ45 10/100/1000
3 x LAN port (2 with 802.3at Type 2 "PoE+")**
RJ45 10/100/1000

Test Modes

Color bars
Audio test tone

Flexibility & Power Supply Power

100 – 240VAC; Up to 230W (approximate, depending on configuration)

Physical & Environmental

Size & Weight: 44 mm (H) x 430 mm (W) x 368 mm (L)
(1.7" (H) x 17" (W) x 14.5" (L))



Quantum Receiver

Video & Audio Parameters

User Interface

Touchscreen and push-wheel controlled front panel control and monitoring

Environmental

Operating Temperature: 0°C to 50°C, (32°F to 122°F)
Humidity: 95% long term

Remote Control

Comprehensive remote control and monitoring via Ethernet web browser interface
Rest API, LinkMatrix

Software Upgrade

Unit upgrades via web interface