

Aligo

4K AV over IP



ALIGO

INTRODUCING ALIGO – INTELLIGENT AVOIP

Aligo, Datapath's AV over IP solution, provides pristine quality 4K content across a 10G network and compressed streams on 1G infrastructure at the same time, delivering unprecedented quality and flexibility in IP content distribution.

FEATURES

- **Pristine Quality 4K60 Content** - Every source is provided as a visually lossless, zero latency feed over a dedicated 10G network.
- **Flexible Distribution with Simultaneous H264/5 Encoding** - Each source is provided as a H264/5 stream over a 1G network for storage, distribution over external networks or integration with third-party systems.
- **Powered by Aetria - AV-over-IP Made Simple** - Aligo appliances are fully managed and controlled by Aetria, Datapath's integrated solution for the delivery and management of Pro-AV solutions of any size.

Engineering the **world's best** visual solutions


DATAPATH
EXCELLENCE BY DESIGN

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PRISTINE QUALITY WITH DS10G

Aligo's primary 10G channel delivers content using Datapath's proprietary DS10G codec.

- **Engineered for pro-AV applications:** Purpose built for use in professional, mission-critical installations.
- **Quality without compromise:** DS10G delivers visually lossless content, with zero-latency 4K60 intra-frame encoding, optimised for switched distribution over 10Gb networks.
- **Built by Datapath:** Benefitting from decades of video management and processing experience, DS10G has best-in-class signal acquisition, EDID handling, genlocking and mode management.
- **Reliability by design:** Designed for critical applications, DS10G has built-in resilience against bit errors, jitter and dropped packets.

SIMULTANEOUS LIVE STREAMS

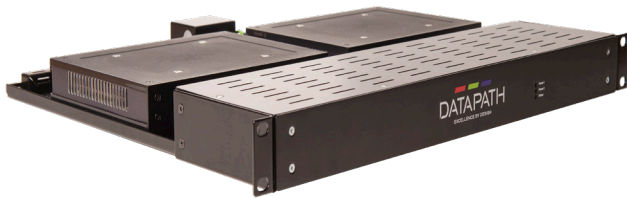
Aligo's secondary 1G channel provides a compressed, secure live stream of every input.

- **Flexible distribution over 1G:** Every input is provided as an SQX live stream encoded as HEVC (H.265) or AVC (H.264) as well as the primary DS10G stream.
- **Security first:** Encrypted streams are received only by legitimate users and decoded by pre-authenticated Datapath resources.
- **Configurable external access:** RTSP streams can be configured by admin for remote viewing, archiving, or integration into third-party systems.

RACK MOUNT KIT

A 1U rack mount kit supports Aligo RX100 (8 HD outputs) appliances. The rack mount kit:

- is made from high quality and robust steel construction.
- contains dual internal independent power supplies with full redundancy (load sharing).
- has PSU failure signalling to external environment monitoring equipment.
- and has cable management provided via rear cable clamps.



NO COMPROMISE STREAM MANAGEMENT

- Aligo always transmits sources to endpoints in 4K. Endpoints that do not support 4K can receive a HD version of a 4K source, whilst other endpoints still get full 4K.
- With DS10G, each 4K link can be used as four independent HD streams, which can be sourced from anywhere within an Aetria system.
- All streams are genlocked to source, maintaining their suitability for IP based video walls.
- AES bitstream encryption is maintained for all primary DS10G and secondary SQX streams.

Datapath's DS10G codec allows a number of options for the flexible routing of video streams when handling mixed HD and 4K sources and displays. It allows customers to comfortably future-proof their project designs by catering for 4K sources and displays whilst still handling HD endpoints. This is done by minimizing the number of network switch ports required without ever compromising quality in any scenario.

POWERED BY AETRIA

Aligo is fully managed and controlled by Aetria, Datapath's integrated solution for the design, management and operation of control rooms of any size.

4K AV over IP

QTX100

Quad 4K Transmitter with SQX Encoding

- Connects up to four HDMI 2.0 inputs (4K60) to your 10G AV network. Can be used in conjunction with a VSN controller to distribute up to 16 independent HD outputs per unit.
- On-board SQX encoding enables compressed content to be sent over lower bandwidth networks.
- Low latency KVM is supported for each source via the onboard USB HID interfaces.
- Independent routing of video and embedded audio channels.



SPECIFICATION QTX100

INPUT CONNECTIONS

4 x HDMI 2.0

HDCP SUPPORT

HDCP v2.2

HDMI PIXEL CLOCK MAXIMUM

600MHz @ 8-bit 4:4:4

HDMI PIXEL CLOCK MINIMUM

25MHz

TYPICAL RESOLUTIONS, HD STREAM

Up to 150Mpixels/sec, maximum line length 2048

Examples:

1920 x 1080p at 60Hz (SMPTE timings)

1920 x 1200p at 60Hz (CVT-Reduced Blanking)

2048 x 1080p at 60Hz (CVT-Reduced Blanking)

TYPICAL RESOLUTIONS, 4K STREAM

Up to 600Mpixels/sec, maximum line length 4096

Examples:

3840 x 2160p at 60Hz (SMPTE timings)

4096 x 2160p at 60Hz (CVT-Reduced Blanking)

SCAN TYPE

Progressive. Interlaced video not supported

VIDEO SAMPLING FORMATS

[1] – 10,12-bit modes coming soon

RGB 8-bit, RGB 10-bit[1], YCbCr 4:4:4 8-bit, YCbCr 4:4:4 10-bit[1], YCbCr 4:2:2 12-bit, YCbCr 4:2:0[1]

STREAMING CODECS AND PROFILES

DS10G by Datapath (visually lossless & low latency over 10Gb network)

Additional H.264 SQX streaming at source resolution for each port

NETWORK CONNECTIONS

4x 10Gb SFP+ Fiber ports (Lossless streaming interface), Note: Compatible 850nm multi-mode SFP modules are available as a separate accessory

1x 1Gb RJ45 (Control/Management port)

1x 1Gb RJ45 (Media port for SQX streaming)

MULTICAST STREAMING SUPPORT

Each source is available at any number of displays in parallel. Requires IGMPv2 enabled at network switch

MAXIMUM SOURCES PER SYSTEM

At least 220 (UHD), 650 (HD)

AUDIO SUPPORT

Transmit stereo HDMI embedded audio for each input independently routable to multiple sinks. The embedded audio consists of up to four channel pairs encoded in PCM format, up to 96KHz sampling.

KVM SUPPORT

4 x Type-B USB host ports for connecting to a USB host PC
HID device support (keyboard, mouse etc.) independently routable to sink

POWER CONSUMPTION

35W

MECHANICAL

318mm (l) x 176mm (w) x 43mm (h)

WEIGHT

1.8kg

RELATIVE HUMIDITY

5%-90% non-condensing

4K AV over IP

RX100

Single 4K Receiver with Quad HD Outputs

- Receives either a single 4K or four independent HD feeds.
- VESA mountable behind a screen or desk mountable for use as a remote access station (thin client).
- Keyboard and mouse connectivity is supported for KVM control of sources via the onboard USB 2.0 interfaces.



SPECIFICATION RX100

OUTPUT CONNECTIONS

1 x HDMI 2.0, 3 x HDMI 1.4 full size connectors

HDCP SUPPORT

HDCP v2.2

HDMI PIXEL CLOCK MAXIMUM

600MHz (output 1), 165MHz (outputs 2-4)

HDMI PIXEL CLOCK MINIMUM

25MHz

STREAMING MODES

Single 10Gb network receiver up to 600MPixels/sec

Receive 4K image and display on HDMI2.0 output 1

or

Up to four HD independent streams received and displayed on four HD outputs.

SCAN TYPE

Progressive. Interlaced video not supported.

VIDEO SAMPLING FORMATS

[1] – 10,12-bit modes coming soon

RGB 8-bit, RGB 10-bit[1], YCbCr 4:4:4 8-bit, YCbCr 4:4:4 10-bit[1], YCbCr 4:2:2 12-bit, YCbCr 4:2:0[1]

STREAMING CODECS AND PROFILES

DS10G by Datapath (visually lossless & low latency over 10Gb network)

Additional H.264 SQX streaming at source resolution for each port

NETWORK CONNECTIONS

1 x 10Gb SFP+ Fiber port (Lossless streaming interface), Note: Compatible 850nm multi-mode SFP modules are available as a separate accessory.

1x 1Gb RJ45 (LAN extension port)

MULTICAST STREAMING SUPPORT

Each source is available at any number of displays in parallel. Requires IGMPv2 enabled at network switch

MAXIMUM SOURCES PER SYSTEM

At least 220 (UHD), 650 (HD)

AUDIO SUPPORT

Receive embedded HDMI audio and outputs all channel pairs to display via HDMI cable.

One selectable channel pair routable to the analog line level jack output.

KVM SUPPORT

2 x Type-A USB client ports for connecting HID devices (keyboard, mouse etc.) independently routable to sink

POWER CONSUMPTION

15W

MECHANICAL

205 x 162 x 34 mm, VESA mounting holes for mounting behind a screen

Feet including for desktop mounting.

WEIGHT

1kg

RELATIVE HUMIDITY

5%-90% non-condensing

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MODELS AVAILABLE

Order code: ALIGORX100-1 (Aligo RX100 - With PSU. Single AVoIP receiver with four HDMI outputs)

Order code: ALIGORX100-2 (Aligo RX100 - No PSU. Single AVoIP receiver with four HDMI outputs)

Order code: ALIGOQTX100-UK (Aligo QTX100 - Internal PSU. UK mains cable. Quad AVoIP transmitter with four HDMI inputs)

Order code: ALIGOQTX100-EU (Aligo QTX100 - Internal PSU. EU mains cable. Quad AVoIP transmitter with four HDMI inputs)

Order code: ALIGOQTX100-US (Aligo QTX100 - Internal PSU. US mains cable. Quad AVoIP transmitter with four HDMI inputs)

Order code: ALIGOQTX100-AU (Aligo QTX100 - Internal PSU. AU mains cable. Quad AVoIP transmitter with four HDMI inputs)

Order code: RMK01 (1U Rack mounting kit, supports 2 units. Compatible with Aligo RX100, TX100, IQS4)

Order code: PSUALIGOIQS4 (SFP+ Tranceiver Module 850nm for Aligo)

Order code: PSUALIGOIQS4 (External Power Supply for Aligo RX100, TX100 and IQS4)

Order code: PSURMK01 (Replacement internal power supply module for Aligo 1U rackmount kit)

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