

ActiveSQX2

Scalable IP encode and decode card



SCALABLE IP ENCODE/DECODE

Today, most professional AV solutions rely on IP networks to distribute content between endpoints with minimal latency and excellent quality. Often there is a need to both encode content for distribution across the network and decode IP based sources for local display, monitoring and control.

Datapath's ActiveSQX2 is a PCI Express plug-in card that delivers a scalable IP encoding and decoding solution. The card is a dedicated processing platform to receive and decode h264 or h265 streams for display on a video wall. In addition it is capable of encoding captured video for delivery elsewhere on the network which may in turn be decoded for display in another part of the environment. Each ActiveSQX2 card has a dedicated processor onboard, removing all burden from the main computer processor which will enable multiple cards to be used within the same system giving the ability to support a large number of simultaneous encodes and decodes.

Whether transmitting local sources over the network for remote display, monitoring and integration, or viewing IP sources alongside local sources, the ActiveSQX2 card provides a single platform to deliver reliable encode and decode operations at scale.

STREAMING MADE EASY WITH SQX

Datapath's SQX technology provides scalable encoding and decoding for large numbers of High Definition streams and is fully compatible with industry standards for video compression and streaming.

In addition, the ActiveSQX2 can be placed in systems alongside graphics cards and video capture cards, such as the Datapath Vision range, to provide powerful IP stream handling for mission-critical environments.

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


DATAPATH
EXCELLENCE BY DESIGN

Advanced video compression technology

KEY FEATURES

- Dedicated encode/decode card with dual RJ45 Ethernet ports
- On-board SQX engine
- Decode up to 12 x 1080p30 streams or equivalent*
- Encode up to 8 x 1080p30 streams or equivalent*
- Supports AVC H.264 and HEVC H.265
- Audio decode and encode support
- AES encryption for each stream
- Two ethernet ports for connecting to separate networks

* All encode and decode operations use shared resource. Maximum figures are when no other activity is taking place (i.e. only encode or only decode).

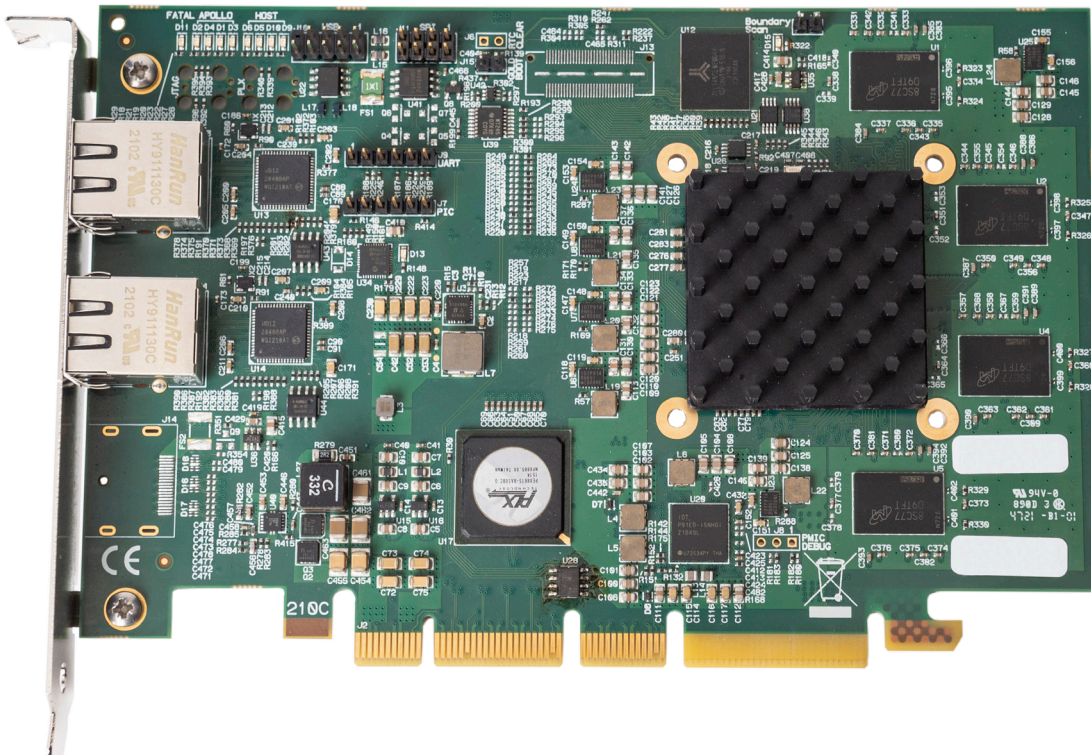
COMPATIBILITY

The SQX drivers provide support for the 64 bit version of the following operating systems:

- Windows® 10
- Windows® Server 2019
- Windows® Server 2012 R2

SERVICES

3 year warranty as standard. 5 year optional. Advanced swap out only available when part of a Datapath built system.



Advanced video compression technology

SPECIFICATION

BOARD FORMAT

PCIe x4 gen 2 plug-in card

CONNECTORS

2 x RJ45 Ethernet ports

ETHERNET

Dual 1000 Base-T Ethernet ports DHCP or Static IP support IPv4 & IPv6

DMA ENGINE

Direct DMA to physical or virtual memory buffers with full scatter-gather support DMA bandwidth: up to 1.3GB/s

SCALING

Hardware downscaling prior to DMA transfer. One to One (1:1) transfer for upscale after DMA

CAROUSEL

IP Window carousel supported including the hardware-based pre-buffering of IP decodes for smoother playback

STREAMING METHODS

Multicast & Unicast support

STREAMING CODECS

H.264 (Mpeg4 Part 10 AVC), VC-1, MPEG2 Part 2, MJPEG, H.265

STREAMING CONTAINERS

MPEG4 part 1, MPEG2-TS, WMV, MOV

STREAMING PROTOCOLS

HTTP, RTSP, RTP, UDP

ENCODE DENSITY

Up to:
3 x 4096 x 2160p at 30fps
6 x 1920 x 1080p at 60fps or 12 x 1080p at 30fps

DECODE DENSITY

Up to:
1 x 4096 x 2160 at 60fps
3 x 4096 x 2160p at 30fps
6 x 1920 x 1080p at 60fps or 12 x 1080p at 30fps
10 x 1080i at 30fps/50 D1 at 30fps

DE-INTERLACING

Supported

STREAM AUTHENTICATION

Basic & Digest Stream Authentication

VIDEO CAPTURE MEMORY

4GB

H.265 PROFILES

Main (Version 1)

H.264 PROFILES

Constrained Baseline Profile (CBP) / Main Profile (MP) / High Profile (HiP)

H.264 LEVELS

Level 3 / 3.1 / 4 / 4.1 / 4.2 / 5 / 5.1 / 5.2

COLOUR FORMAT

NV12 4:2:0(MP) / High Profile (HiP)

POWER REQUIREMENTS

Max current at +3.3 - 1.9A
Max current at +12V-1.9A
Average power ≈ 14W

OPERATING TEMPERATURE

0 to 35 °C / 32 to 96 °F

STORAGE TEMPERATURE

-20 to 70 °C / -4 to 158 °F

RELATIVE HUMIDITY

5% to 90% non-condensing

WARRANTY

3 years

MODELS AVAILABLE

Order Code: ActiveSQX2

All products are shipped with the latest software available, unless stated otherwise. Special requirements may be organised by contacting our Sales team.

Datapath UK and Corporate Headquarters
Bemrose House, Bemrose Park,
Wayzgoose Drive, Derby,
DE21 6XQ, United Kingdom
☎ +44 (0) 1332 294 441
✉ sales-uk@datapath.co.uk

Datapath North America
2490 General Armistead Avenue,
Suite 102, Norristown,
PA 19403,
USA
☎ +1 484 679 1553
✉ sales-us@datapath.co.uk

Datapath Japan
Axon Hamamatsucho,
1-1-23 Shibadaimon,
Minato-ku,
Tokyo-to,
105-0012, Japan
✉ sales-jp@datapath.co.uk


DATA PATH
EXCELLENCE BY DESIGN

www.datapath.co.uk