Applications

- Digital MPX Transport

Features

- Up to 4 MPX outputs, both digital and analog
- MicroMPX support
- SRT/RIST support
- RAVENNA/AES67/Livewire+/ ST2110-30/-31 inputs
- Quad 10/100/1000 Ethernet interfaces with dynamic role assignment
- Highly energy efficient
- Remote control using REST API, SNMPv2c, EmBER+, NMOS IS-04/IS-05
- State-of-the-art security

The high density MPX-over-IP decoder

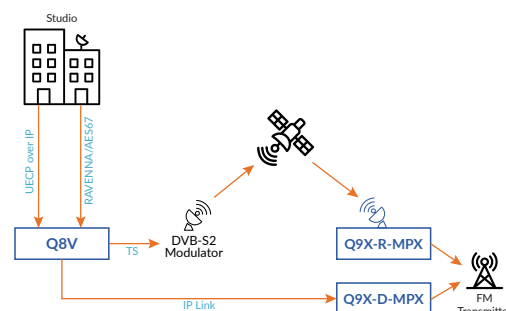The Q9X-D-MPX is a 4-channel MPX-over-IP decoder built on the Q9X platform.

Supporting MPX transport using either linear PCM as well as MicroMPX it is a really versatile device. The signal may be transported using RTP/UDP as well as SRT or RIST to support reliable streaming over unstable networks or even the public internet.

Dual streaming allows to seamlessly combine multiple transmission paths for utmost reliability.

As all other devices using the Q9X platform, it offers 4 freely assignable network interfaces to adapt to every application.

The system has a flexible licensing model that allows field upgrading of channel counts and options as all devices are always delivered with a full channel configuration.

Example Application: Studio-to-Transmitter Link

The Q8V can be used as a high density Stereo Encoder for up to 25 programs with full RDS encoder.

The MPX signal can be transported to the Q9X-D-MPX via IP or to the Q9X-R-MPX via satellite, with optional MicroMPX compression.
The output is directly fed to the FM transmitter.

This is a highly cost-effective approach to FM distribution.

WE TRANSPORT YOUR AUDIO

Q9X-D-MPX MPX-over-IP Decoder

Specifications

Input Protocols: IP

MPEG-2 Transport Stream (according to ISO 13818-1)	• SRT, RIST, RTP, Plain UDP • Forward Error Correction (according to Pro-MPEG Code of Practice #3, release 2) • Unicast, Multicast (IGMPv2/v3) • Service Information (according to ETSI EN 300 468)
Elementary Stream (according to RFC3550, RFC3551, RFC3016, RFC3640)	• SRT, RIST, RTP, Plain UDP • Unicast, Multicast (IGMPv2/v3)

MPX Audio Output

Digital	4x AES/EBU, XLR (IEC 958)
Analog	4x BNC, 75 Ohm
Performance (Analog)	• 24-bit high quality D/A converters • THD+N: < 0.01 % @ 1 kHz • Crosstalk attenuation: > 100 dB @ 1 kHz • S/N ratio (weighted): > 80 dB
Sample Rate (Digital/Analog)	192 kHz

Audio-over-IP Input/Output

Standards	RAVENNA, AES67, SMPTE ST2110-30/-31, Axia Livewire+™, Dante® in AES67 mode
Supported Formats	L24, L16, AM824
Number of Channels	Up to 64 per Stream
Sample Rates	48, 96, 192 kHz
Discovery	mDNS, SAP, Manual Configuration
Channel assignment by internal crossbar	
Seamless Protection Switching (according to SMPTE ST2022-7)	

Encoding Algorithms (Decoding)

• MicroMPX(R)
• Others on request

Network Interfaces

4x Ethernet interfaces (IEEE 802.3, RJ-45, 10/100/1000 Mbps)

Isolation of all networks by integrated firewall

Roles can be freely assigned to any of the interfaces (Management, Data, etc.)

System Configuration, Control and Monitoring

HTML5 Web UI	
Remote Control	• REST API • EmBER+ • NMOS IS-04/IS-05 • SNMPv2c
User Management	• Fine-grained permission control • LDAP(S) authentication

Power Requirements

Connectors	• 1x IEC60320 C14 ○ 1x IEC60320 C14 (for 2nd power supply 100-230 V AC) ○ 1x Neutrik powerCON (for 2nd power supply -48 V DC)
Power Supply	• 100 to 240 V AC +/- 10%, 50 to 60 Hz ○ -48 V DC ○ Redundant Power Supply
Power Consumption	< 20 W

Physical Parameters

Chassis	19", 1 RU
Size (W/D/H)	483 mm / 400 mm / 44 mm
Weight	6 kg

Environmental Conditions

Operating Temperature	0 to 45 °C
Storage Temperature	-20 to 70 °C
Humidity	< 95 % (non-condensing)

Legend: • Default   ○ Optional