



Applications

- Transcoding for Cable Networks
- Monitoring Receiver

Features

- Up to 12 independent FM/DAB+ Receivers in 1RU
- Optional: RAVENNA/AES67/Livewire+/ST2110-30/-31 outputs
- 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 most flexible FM/DAB+ transcoder.

The Q9X-T is the successor to the Q565/Q567 FM/DAB+ DVB Transcoders, combining the features of both and many new additions into a versatile new envelope.

Featuring up to 12 tuners that may each be switched between FM and DAB+ reception, a previously unparalleled density is achieved.

The received audio signals may be transcoded and output as a fully DVB-compliant MPEG-2 Transport Stream, with RDS data converted back to UECP, ensuring that the customers always get their title information.

The MPEG-2 Transport Stream can either be output over IP or via ASI.

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.

Q9X-T FM/DAB+ Transcoder

Specifications



FM/DAB+ Tuners

Up to 12 independent FM/DAB+ Tuners	
Input Frequency (FM)	87.5 MHz to 108 MHz
Input Frequency (DAB)	168 MHz to 240 MHz (DAB Band III)
Input Signal Level	17 dB μ V to 110 dB μ V
Input Connectors	12x Female F Connector, 75 Ω
Supported Standards (DAB)	<ul style="list-style-type: none">DAB (ETSI EN 300 401)DAB+ (ETSI TS 102 563)

Audio-over-IP 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	32, 48, 96, 192 kHz
Discovery	mDNS, SAP, Manual Configuration
Channel assignment by internal crossbar	
Seamless Protection Switching (according to SMPTE ST2022-7)	

Output Protocols

MPEG-2 Transport Stream (according to ISO 13818-1)	<ul style="list-style-type: none">SRT, RIST, RTP, Plain UDPForward Error Correction (according to Pro-MPEG Code of Practice #3, release 2)Unicast, Multicast (IGMPv2/v3)Up to 256 Services per StreamService Information (according to ETSI EN 300 468)Fully DVB compliant
Elementary Stream (according to RFC3550, RFC3551, RFC3016, RFC3640)	<ul style="list-style-type: none">SRT, RIST, RTP, Plain UDPUnicast, Multicast (IGMPv2/v3)

Encoding Algorithms

- MPEG-1/2 Layer 2 (according to ISO 11172-3, ISO 13818-3)
- MPEG-1/2 Layer 3 (according to ISO 11172-3, ISO 13818-3)
- AAC-LC, HE-AACv1, HE-AACv2, AAC-LD, AAC-ELD (ADTS and LOAS framing, according to ISO 13818-7, ISO 14496-3)
- xHE-AAC® (according to ISO 23003-3, ISO 14496-3/Amd 3)
- AC-3/E-AC-3 (according to ATSC A/52)
- Opus
- G.711 μ -Law/A-Law, G.722
- Others on request

Audio Channel Configurations (dependant on algorithm)	<ul style="list-style-type: none">Stereo, Joint StereoMono (Extract/Mixdown)5.0/5.17.0/7.1
Embedded Metadata	<ul style="list-style-type: none">RDS/UECP for DVBID3 Tags

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	<ul style="list-style-type: none">REST APIEmBER+NMOS IS-04/IS-05SNMPv2c
User Management	<ul style="list-style-type: none">Fine-grained permission controlLDAP(S) authentication

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Specifications (continued)

Power Requirements

Connectors	<ul style="list-style-type: none">● 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	<ul style="list-style-type: none">● 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 / 365 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