

MPX-1c

MPX codec

Professional single channel MPX IP codec



MPX-1c – MPX over IP codec



MPX-1c Base unit

- ▶ Base unit with decoding function
- ▶ Analog & Digital MPX interface
- ▶ ProMPEG FEC Practice #3 release 2 to reduce packet loss and burst errors in IP data stream
- ▶ 2x Gigabit IP Interface
- ▶ Optional 2x 230VAC internal PSU's or hot-pluggable power supplies

Options: MPX-1c

- ▶ Option: Activation MPX encoder
MPX-1c acts as a MPX over IP encoder
- ▶ Option: Dual Streaming
Simultaneous transmission and reception of 2 IP streams and seamless exchange of IP packages in case of failure
- ▶ Option: SFN/1PPS
Synchronization of MPX streams for FM-SFN networks accurate to the microsecond
- ▶ μ MPX decoder or encoder

Flexible in application

- ▶ Synchronization with microsecond accuracy is possible by an implemented latency control (useful for synchronous playout)
- ▶ One device can be used as an encoder or as a decoder

Pay as you grow

- ▶ Upgradable, because of pure SW module
- ▶ MPX encoder and decoder modules in one device

Hybrid operation

- ▶ Forwarding the MPX signal via IP or via SAT by using MPE to increase coverage

Transmission robustness

- ▶ Dual Streaming to increase transmission robustness
- ▶ Pro-MPEG FEC (Forward Error Correction) to reduce bit errors in data stream



Technical details 1/2



Audio

Codecs

Type	100% lossless audio encoding & decoding
Bit depth	16, 20, 24 bit
Encoding type	PCM raw
FEC	ProMPEG FEC #3 release 2
Bandwidth	2.4 up to 22.7 MBPS

Decoder outputs

FM MPX signal

Signal	FM MPX digital or analog
Signal	FM analog L+R Signal
Frequency response	20 Hz – 90 kHz: <0.05 dB
Stereo separation	>55 dB
Harmonic distortion	<0.0025 dB
SNR (CCIR-weighted)	>75 dB
SNR (A-weighted)	>90 dB
Connectors MPX OUT	1x XLR (digital), balanced, >10 kΩ 1x BNC, 75 Ω, analog, unbalanced

FM μMPX signal

Signal	analog
Frequency response	40 Hz – 15 kHz: <0,15dB
Stereo separation	>36dB @500Hz >50dB
Harmonic distortion	>56dB bzw. <0,16% @500Hz >70dB bzw. <0.035%
SNR (CCIR-weighted)	>69dB
SNR (A-weighted)	>78dB

Encoder inputs

FM MPX signal

Signal	FM MPX digital or analog
Frequency response	20 Hz – 90 kHz: <0.05 dB
Input voltage range	0 ... 14 dBu
Connectors MPX IN	1x XLR, balanced, >20 Ω, digital 1x BNC, 75 Ω, analog unbalanced

Interfaces

Synchronization

External	1PPS, PTP, REF IN
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Front Panel

Headphone	6.3 mm / 1/4" socket
LEDs	Power, Input, Output, Warning
Operation	Display and Jog Wheel



Technical details 2/2

Back Panel

Power supply

Single supply	230 VAC or -48 VDC
Dual supply (optional)	Second integrated 230 VAC or -48 VDC power supply with auto switchover and prioritisation

Redundant hot plug power supply (optional)	Hot pluggable redundant power supply, each combination of 230 VAC and 48 VDC is possible, with auto switchover and prioritisation
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Gigabit IP

Type	10/100/1000 Base-T
Data	MPEG TS or RAW Data via UDP, UDP/RTP, as Unicast or Multicast IGMPv2
	Optional: dual streaming

Connectors	3x RJ45 (2x Data & 1x Control)
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General data

Power consumption	20 VA
Case dimensions	19", 1RU 310x424x484 (d x w)
Weight	< 4 kg
Housing	Steel plate (aluminium-zinc coated)
Operating temp. Range	0...+45°C
Storage temp. Range	-40...+70°C
Supply voltage	90...260 V AC 47...63 Hz -48V DC (option)
Language	English