

MPX OVER IP NETWORKS

IQOYA X/LINK-MPX is a 1U rack IP codec designed for transporting an FM/MPX composite signal over IP networks. It offers the support of analog MPX or MPX over AES192, and includes a rich set of features enabling the reliable transport of the uncompressed or compressed MPX signal over managed or unmanaged networks.

IQOYA X/LINK-MPX also ensures continuity of audio service on transmitter sites thanks to two backup levels (secondary MPX IP stream, MPX file on SD card). Built on a powerful, fan-less and energy-efficient hardware platform that runs the acclaimed Digigram Fluid IP streaming technology, IQOYA X/LINK-MPX is designed for 24/7/365 operation.

Easy status monitoring: status LEDs, LCD display and keypad, vu-meters, headphones.

SDHC card reader for backup MPX file,

Low consumption, fanless

1 digital AES192 MPX input
1 digital AES192 MPX output
2 analog MPX inputs
2 analog MPX output

2 internal redundant PSUs for secure operation

2 balanced analog audio inputs & outputs

4 network ports for full separation of IP traffics: - IP MPX, IP baseband audio, dual streaming, remote management

RS 232 port for serial data tunneling

KEY FEATURES



Transport your MPX signal uncompressed, or compressed (μ MPX) to lower the network bitrate requirement



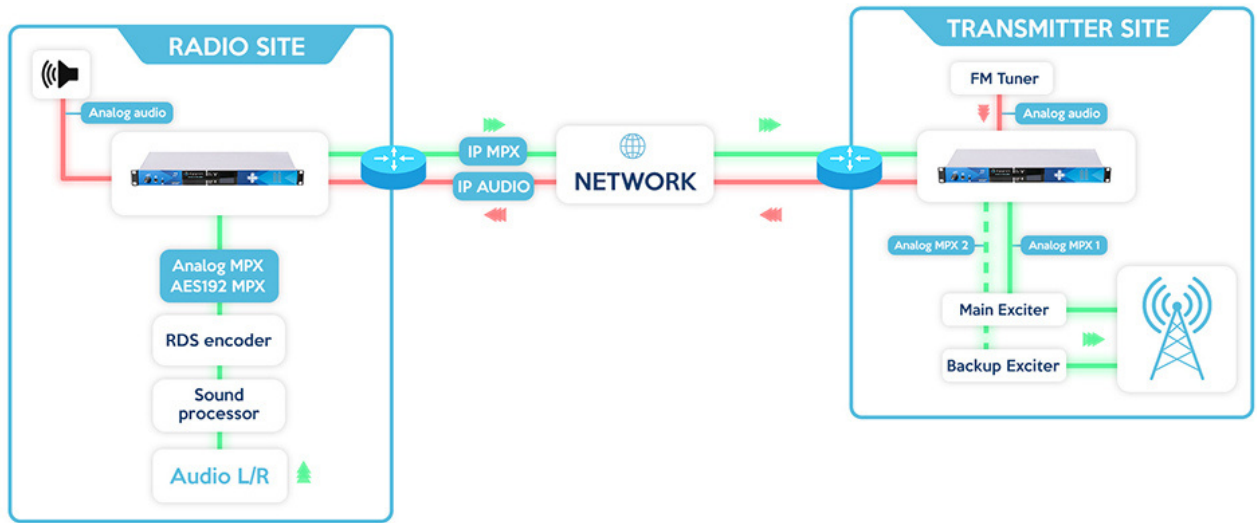
Redundant MPX outputs (2 analog and 1 AES192) with independent level adjustments, allowing for exciter redundancy.



Get a monitoring IP audio stream from your transmitters site



Lower your CAPEX and OPEX: less equipment at transmitter sites
Less power consumption, less space required and less maintenance operations at transmitter sites



1 I/Os AND POWER

- 2 internal redundant PSUs 100-250VAC (Max 15W consumption)
- 4 RJ-45 network ports: 1x100 Mbps and 3 Gbps ports
- 2 analog MPX inputs on BNC
- 2 analog MPX outputs on BNC
- 1 digital MPX AES192 input (XLR)
- 1 digital MPX AES192 outputs (XLR)
- 2 balanced analog audio I/Os
- 4 GPI/4 GPO and 1 RS232 port for data tunneling
- Max analog MPX input/output levels: +15 dBu
- Adjustable input and output analog gains by 0.01 dB steps
- Max analog input sensitivity: 0dBfs for -15dBu
- Adjustable MPX input and output digital gains by 0.01 dB steps

2 NETWORKING

- Possibility to separate the network traffics (WAN, LAN, management) via the 4 network ports
- Transport protocol: RTP for uncompressed MPX, UDP for microMPX
- VLAN, QoS (VLAN Tagging, DSCP)
- Unicast, multicast and multi-unicast
- IGMPv2 and V3

3 ENCODING, DECODING AND STREAMING

Uncompressed MPX

- Samples format: PCM 12, 16, 20, 24 bits
- Sampling frequency: 192 kHz, or 144 kHz for analog to analog MPX transport
- IP bitrates
 - At 192 kHz: 12 bits : 2.3 Mbps - 16 bits: 3.1 Mbbs - 20 bits: 3.9 Mbps
 - 24 bits: 4.6 Mbps
 - At 144 kHz: 12 bits : 1.73 Mbps - 16 bits: 2.3 Mbbs - 20 bits: 2.9 Mbps
 - 24 bits: 3.5 Mbps
- Dual-port redundant streaming, with time diversity up to 3 seconds in uncompressed MPX
- FECs: +10%, +20%, +25%, +50%, +100%
- Real-time metrics on network path quality for the primary stream as well as for the FEC/redundant stream for uncompressed MPX transport.

Compressed MPX (Optional)

- Compression format: microMPX
- Sampling frequency: 192 kHz
- IP bitrates: 320, 384, 488, 512, 576 kbps
- In-band FEC: +10%, +25%, +33%, +50%

Baseband audio

- Audio formats: PCM linear 16/20/24 bits, ITU G.711/722, ISO MPEG-1/2 Layer II, Layer III, MPEG-4 AAC, AAC-LD, AAC-ELD, HE-AACv1, HE-AACv2, Opus
- Sampling frequency: 48 kHz
- Dual-port redundant streaming, with time diversity up to 3 seconds
- FECs: +10%, +20%, +25%, +50%, +100%
- Real-time metrics on network path quality for the primary stream as well as for the FEC/redundant stream

4 FUNCTIONS

- Encoding of the analog MPX or digital MPX input
- Decoding to all the MPX outputs (2 analog and 1 AES192)
- Simultaneous IP MPX encoding and baseband IP audio decoding
- Or simultaneous IP MPX decoding and IP baseband audio encoding
- Baseband audio encoded from analog inputs or decoded to analog outputs at 48 kHz
- Two backup levels when decoding the MPX IP stream: secondary MPX IP stream, backup MPX file stored on the local SDHC card
- Monitoring of the low band of the MPX signal to the headphones output, or monitoring of the baseband audio input or output signal
- Front panel vu-meters to monitor the level of the MPX signal, or the level of the baseband audio input or output signal
- Input and output levels adjustment in steps of 0.01dB
- Levels adjustment on each MPX output
- SNMP Monitoring and traps via SNMP (SNMPv1, V2)