Sigmacom Broadcast
TELECOM INNOVATIONS

EtherMPX NG

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Technical specifications

GENERAL	
Model name	EtherMPX NG
Dimensions	19" 1U chassis
Power supply	230VAC 50Hz, 12W per device
Operating temp	-20 to +60 Celsius
Transport protocol	Proprietary UDP Unicast or Multicast based on RFC2365 and IGMPv2 (RFC2236). AES67 compatible in specific modes.
QoS management	IETF RFC2474 compliant
Audio compression	None (Linear PCM) in Legacy, HD or AES67 Proprietary lossless / lossy in other modes
Audio sample rate	8 – 192kHz input for Digital L/R input 48kHz internal for Analog L/R input 128–192kHz input for Digital MPX input 192kHz internal for Analog MPX input
Audio latency	L/R mode: 10.0–125.0mS, user adjustable MPX mode: 5.0–62.5mS, user adjustable Low Latency Option: Down to 5.0mS (for L/R), 2.5mS (for MPX)
Network usage	L/R mode: 0.59 - 2.44 Mbit/s selectable MPX mode: 1.11 - 4.89 Mbit/s selectable
Audio monitor	Stereo ¼" Female jack in front panel
User interface / control	Locally: Front panel UI (LCD + rotary knob) Remotely: EtherMPX NMS NG Software
Input SYNC for SFN (Option #1)	10MHz sine or square, 0dBm typical, and 1PPS square TTL 3.3V 10kOhm typical
Output SYNC for SFN (Option #1 with #6)	10MHz TTL 3.3V, +14dBm @ 50Ohm, and 1 PPS TTL 3.3V @ 50 Ohm
GPS RF In (Option #6)	-165dBm for 30sec to lock GPS + GLONASS <100ppb holdover for 12 hours
ETH port (for audio)	RJ45 female, IEEE802.3, 10/100Mbps MDIX

DECODER	
Output name	Port A
Output type	Digital electrical interface
Connector	XLR-3 male
Impedance	110 Ohm balanced - transformer isolated
Supported formats	AES3, IEC60958, S/PDIF
Audio sample rate	32 – 192 kHz (128 –192kHz for D-MPX)
Audio sample resolution	Up to 24 bit

Output name	Port B
Output type	Analog electrical interface - 2 outputs, 1 input
Connectors	2 x XLR-3 male (balanced R, L/MPX) output 1 x BNC female (unbalanced MPX only) output 1 x BNC female (unbalanced MPX only) AUX in **XLR is DC coupled, BNCs are AC coupled
Impedance	100 Ohm
DAC resolution	24 bit
DAC sample rate	48kHz for L/R input, 192kHz for A-MPX
DAC THD+N	-108dB (0.0004%) at 48kHz L/R output -96dB (0.0015% at 192kHz MPX output
DAC Dynamic range	Max 129 dB (A-weighting) at 48 or 192kHz
Channel separation	124 dB typical
Reference output	4.37Vpp (+6dBu) for 0 dBFS
Input BW @ 48kHz SR	-0.1dB @ 21.8 kHz
Input BW @ 192kHz SR	-0.1dB @ 87.2 kHz

ENCODER	
Input name	Port A
Input type	Digital electrical interface
Connector	XLR-3 female
Impedance	110 Ohm balanced - transformer isolated
Supported formats	AES3, IEC60958, S/PDIF
Maximum data rate	12.3 Mbit/s typical
Audio sample rate	32 – 192 kHz (174–192kHz for D-MPX)
Audio resolution	Up to 24 bit

Input name	Port B
Input type	Analog electrical interface - 3 inputs
Connectors	2 x XLR-3 female (balanced R, L/MPX) input 1 x BNC female (unbalanced MPX only) input **XLR is DC coupled, BNC is AC coupled
Impedance	1 kOhm
ADC resolution	24 bit
ADC sample rate	48kHz for L/R input, 192kHz for A-MPX
ADC THD+N	-106dB (0.0005%)
ADC Dynamic range	121 dB (no weighting)
Channel separation	135 dB typical
Reference input	3.47Vpp (+4dBu) for 0 dBFS
Input BW @ 48kHz SR	-0.1dB @ 20 kHz
Input BW @ 192kHz SR	-0.1dB @ 80 kHz

HARDWARE OPTIONS	
Input SYNC for SFN (Option #1)	10MHz sine or square, 0dBm typical, and 1PPS square TTL 3.3V 10kOhm typical
Output SYNC for SFN (Option #1 with #6)	10MHz sine or square, +15dBm @ 50Ohm, and 1 PPS TTL 3.3V @ 50 Ohm
GPS RF In (Option #6)	-165dBm for 30sec to lock GPS + GLONASS <100ppb holdover for 12 hours
2nd ETH port for MGMT (Option #4)	RJ45 female, IEEE802.3, 10/100Mbps MDIX SNMPv1 for Management
Dual Power Supply (Option #7)	Additional 3W consumption for each device

Operational modes and required bandwidth (in Mbps):

	Legacy	HD	SD	LD	LLD	AES67
L/R	2.37 M	2.37 M	1.60 M	1.22 M	0.84 M	2.39 M
L/R LL	2.44 M	2.44 M	1.68 M	1.29 M	0.91 M	N/A
L/R NB	1.58 M	1.58 M	1.07 M	0.81 M	0.56 M	N/A
MPX	4.74 M	4.75 M	3.21 M	2.44 M	1.68 M	3.18 M
MPX LL	4.88 M	4.89 M	3.35 M	2.58 M	1.82 M	N/A
MPX NB	3.15 M	3.16 M	2.14 M	1.62 M	1.11 M	N/A

CE FC RoHS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: Technical specifications are subject to change without notice. Please contact us if you have questions, or to get latest information and updates.

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