

M80

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32/48/64 Channels IP to Analog Modulator



M80, analog modulator with LCD Screen can ingest multiple HD or SD IP streams in either MPEG-2/ H.264 /H.265 format and convert them to PAL-B/G, PAL-DK, PAL-I, PAL-M, PAL-N, NTSC modulated RF analog outputs for delivery to legacy analog TV networks.

It can decode MPEG-2, H.264 and H.265 encoded video streams in SD and HD quality. In case of HD decoding, automatic downscaling to SD resolution is performed. Numerous audio formats and modes can be decoded and modulated on TV channels.

M80 ensures a high agility inside the whole RF output frequency range. This enables full flexibility and makes the most efficient use of the available channel spectrum. This allows operators to support legacy analog tiers of service while simplifying headend equipment and power consumption and integrating with modern IP video headend architectures.

Features

- 2/4 GE ports (max 64 IP input over MPTS/SPTS), Max 840Mbps for each GE input
- **Supports LCD and menu function, can detect IP input and output programs, demodulate displays, and set output levels**
- **Support CC/Subtitle/Teletext**
- **Support program info modify, multiple audio select**
- **Support automatic decoding reset function**
- Support H.265/HEVC H.264/AVC, MPEG-2 TS Decoding
- MPEG-1/2 Layer 1/2, (HE-)AAC, AC3, E-AC3 audio decoding
- 32 (or 48/64) standard PAL or NTSC or SECAM TV programs output via 32 (or 48/64) non-adjacent or adjacent carriers output within 400MHz
- Automatic HD to SD downscaling
- Multi-system (PAL-B/G, PAL-DK, PAL-I, PAL-M, PAL-N, NTSC) support
- support Brightness, Saturability, Contrast adjust
- Support Web-based Network management
- passed the EU CE&RoHS certification

TECHNICAL SPECIFICATIONS

Input

Types	2/4 GE ports (max 64 IP input) Max 840Mbps for each GE input
Stream	UDP, UDP / RTP, 1-7 packets, FEC, SPTS, MPTS
Transport Protocol	TS over UDP/RTP, unicast and multicast, IGMP V2/V3
Packet Length	188 / 204 Bytes

Decoding Parameters

Video	H.265/HEVC, H.264/AVC Level 4.1 HP, MPEG-2 MP@HL
Data	Teletext , CC, DVB subtitle
Resolution	
MPEG-2	1080@60I, 1080@50I, 720@60P, 720@50P, 576@50I, 480@60I
H.264	1080@60I, 1080@50P, 1080@50I, 1080@30P, 1080@25P, 720@60P, 720@50P, 576@50I, 480@60I
H.265	1080@60P ,1080@60I, 1080@50P, 1080@50I, 720@60P, 720@50P
Aspect ratio	4:3/16:9
Audio	MPEG-1/2 Layer 1/2, (HE-)AAC, AC3, E-AC3
Audio Channel	Mono L, Mono R, Mono L+R A2 Dual Mono (L, R), A2 Stereo NICAM Dual Mono (L, R), NICAM Stereo

Note: when applying dual audio, one TV program with dual audio will occupy 2 frequencies, which means the total output channels will reduce respectively.

Modulation Parameters

Number of channels	32/48/64
Connectors	75Ω, F-jack
Frequency range	43.25 – 951.25MHz, digital modulation
Output level	maximum 112dBuV

Return loss	≥ 14dB
Spurious frequency dist.	≥ 60dB
Stereo cross talk	> 55dB
Residual carrier accuracy	1%
TV standard	PAL-B/G, PAL-DK, PAL-I, PAL-M, PAL-N, NTSC, SECAM (under developing)
Video-signal to noise ratio	≥ 60dB

Network Interface

Management	1 x 100 Base-T Ethernet (RJ 45)
Data	2 x 1000 Base-T Ethernet (RJ 45)
Protocol	IEEE802.3 Ethernet, RTP, ARP, IPv4, TCP/UDP, HTTP, IGMPv2/v3

Others

CNR	
(after internal combining)	60 dB
SNR	
(after internal combining)	> 53 dB
Sampling frequency	48, 44.1, 32
Output volume adjustment	0 - 100 %
Image resolution output	480i/576i
logo:	JPG, BMP, PNG
CAPTION:	support multiple languages, scrolling direction and speed customized

General

Dimension	483mm×330mm×88mm (WxLxH)
Temperature	0~45℃(operation), -20~80℃(storage)
Power Supply	AC100V±10%, 50/60Hz or AC 220V±10%,50/60Hz

WEB Interface (TV standard)

PAL-DK Standard

Quick Config. [close]

Model: PAL-DK

Channel Level: -1.0 (-5 ~ +5 dBm)

Audio Gain: 0.0 (-6 ~ 2 dB)

Modulation Enable: ☒

Start Frequency: 360.250 (43.25 ~ 951.25 MHz)

Bandwidth: 8.000 MHz

Audio Track: Left

Apply Close

PAL-B/G Standard

Quick Config. [close]

Model: PAL-B/G

Channel Level: -1.0 (-5 ~ +5 dBm)

Audio Gain: 0.0 (-12 ~ 2 dB)

Modulation Enable: ☒

Start Frequency: 112.250 (43.25 ~ 951.25 MHz)

Bandwidth: 8.000 MHz

Audio Track: Left

Apply Close

PAL-I Standard

Quick Config. [close]

Model: PAL-I

Channel Level: -1.0 (-5 ~ +5 dBm)

Audio Gain: 0.0 (-12 ~ 2 dB)

Modulation Enable: ☒

Start Frequency: 112.250 (43.25 ~ 951.25 MHz)

Bandwidth: 8.000 MHz

Audio Track: Left

Apply Close

PAL-M Standard

Quick Config. [close]

Model: PAL-M

Channel Level: -1.0 (-5 ~ +5 dBm)

Audio Gain: 0.0 (-12 ~ 2 dB)

Modulation Enable: ☒

Start Frequency: 112.250 (43.25 ~ 951.25 MHz)

Bandwidth: 8.000 MHz

Audio Track: Left

Apply Close

PAL-NC Standard

Quick Config. [close]

Model: PAL-NC

Channel Level: -1.0 (-5 ~ +5 dBm)

Audio Gain: 0.0 (-12 ~ 2 dB)

Modulation Enable: ☒

Start Frequency: 112.250 (43.25 ~ 951.25 MHz)

Bandwidth: 8.000 MHz

Audio Track: Left

Apply Close

NTSC Standard

Quick Config. [close]

Model: NTSC

Channel Level: -1.0 (-5 ~ +5 dBm)

Audio Gain: 0.0 (-12 ~ 2 dB)

Modulation Enable: ☒

Start Frequency: 112.250 (43.25 ~ 951.25 MHz)

Bandwidth: 8.000 MHz

Audio Track: Left

Apply Close