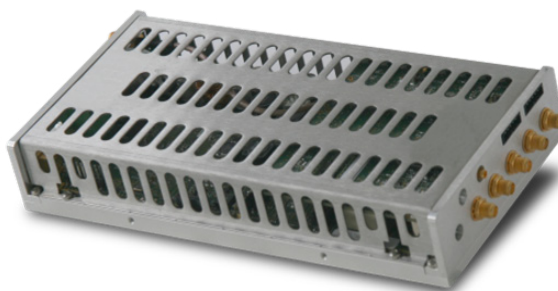


MT2-2210

OEM PAL/DVB-T/T2 Modulator



PAL
DVB-T2[®]
DVB-T[®]

Key features:

- Software selectable PAL, DVB-T or DVB-T2
- Built-in analogue video decoder
- Built-in NICAM 728 digital sound encoder
- Fully Digital modulation core
- Manual Linear and Non-Linear Precorrection
- Full DVB-T2 modes
- Onboard GPS/GLONASS

Key Benefits

- Dual Analogue PAL and Digital DVB-T/DVB-T2 Modulation
- Smooth Analogue to Digital Switchover with the same firmware
- World-wide leading and proven DVB-T2 technology
- Full digital process with premium performances modulation
- Comprehensive set of audio & video input interfaces

Description

The MT2-2210 OEM product incorporates latest state-of-the-art digital modulation providing transmitter manufacturers with maximum flexibility for standard transition support. Specifically designed to meet Broadcaster's demand to invest in digital-ready transmitters, it allows a smooth and cost-effective transition to Digital.

This modulator features Analogue PAL plus DVB-T and DVB-T2 modulation schemes, without requiring a hardware upgrade or firmware software upload! It includes a comprehensive set of signal input interfaces including Analogue Video (CVBS) and Audio (Balanced and unbalanced), as well as digital inputs (SDI and ASI).

When operating in Analogue PAL mode, the MT2-2210 provides maximum performance in terms of input signal robustness as well as radiated modulated signal quality. An integrated video decoding processor, combined with a Digital Noise Reduction mechanism, authorizes locking to weak, noisy and unstable video sources. This modulator gives users capability for manual adjustment including peak white, hue, brightness, saturation and contrast. They also embeds native and specific test modes dedicated to analogue transmitter final testing and commissioning.

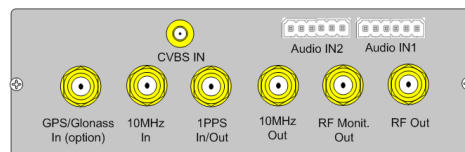
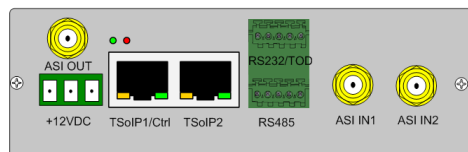
This multistandard module also integrates a NICAM 728 encoder for digital sound broadcasting, compliant with EN 300 163 standard. This avoids the need for complex and expensive solutions such as external NICAM encoders.

In order to achieve maximum power efficiency, user-friendly linear and non-linear digital precorrection circuits are included for compensating the output filter and power amplifier distortions.

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Connectors



Specifications¹

Standards

- o DVB-T2: EN 302 755, TS 102 831, TS 102 773 (T2-MI)
- o DVB-T: EN 300 744, TS 101 191
- o PAL: ITU-R BT.470-7, ITU-R BT.1700, ITU-R BT.1701-1
- o NICAM Audio: EN 300 163 V1.2.1 (NICAM 728)
- o SDI: SMPTE 259M-C, ITU-R BT.601-4, ITU-R BT.656-4

Digital Stream Inputs

- o 1 x ASI/SDI input SMA connector - 75 Ω
- o 1 x ASI input SMA connector - 75 Ω
- o 1 x ASI output SMA connector - 75 Ω

Analogue Video Input and Process

- o Format: CVBS PAL B/G, D/K, I, H, N - 625 lines
- o SMB connector - 75 Ω
- o Input Level: 1Vpp
- o Return loss: >34dB (up to 5.5MHz)
- o SNR (weighted): ≥ 60 dB RMS
- o Non-Linear precorrection (amplitude & phase, plus independant luma & chroma pre-correction)
- o Linear precorrection (amplitude & group delay)
- o Test modes: CCIR, Color bars, Sin(x)/x...

Analogue Audio Input

- o 2 x analogue audio inputs - 6 pins connector
- o Balanced & unbalanced
- o Impedance: 600 Ω / 10 k Ω selectable
- o Return loss: >30dB (between 30Hz to 15kHz)
- o SNR: <-60dB
- o Modes: Mono, Dual, Stereo
- o NICAM-728 encoding for digital sound broadcast (option)

Gigabit Streaming Inputs (TSolP)

- o 2 x 10/100/1000 base-T - RJ45
- o Protocols: IP, RTP, UDP, IGMP (V2 & V3)

- o VLAN ID (1 to 4094) - IEEE 802.1q
- o TS encapsulation and FEC decoding: SMPTE-2022

RF Outputs

- o 2 x SMA connectors 50 Ω (main output/monitoring output)
- o RF output from 30 MHz up to 900 MHz, 0 dBm (MT2-2210)
- o Low level (-20 dB) output available for monitoring
- o Bandwidth : 5 MHz, 6 MHz, 7 MHz and 8 MHz

Clock and Synchronization

- o High quality internal clock
- o 10 MHz & 1 PPS input/output
- o Clock and time source redundancy management
- o Optional Onboard GPS

Stream Process and Modulation

- o Stream input redundancy management (primary & secondary)
- o Transmission modes: MFN, SFN-SISO, SFN-MISO
- o Modulation modes: System A, System B, Multi-PLP
- o T2-Lite 1.3.1 Annex 1 (option)
- o Test modes: PRBS, Sinus, Spectrum-Gap and Null Symbol insertion

Digital Precorrection

- o Manual Linear and Non-Linear pre-correction
- o Signal Clipping (PAPR)

Control & Monitoring

- o 1 x 10/100/1000 base-T Ethernet port
- o 1 x RS232 + 1 x RS485 serial control ports

Physical

- o Single supply voltage (12 VDC < 32 W)
- o 240 x 110 x 35 mm (Size C - MT2-2210)
- o Temperature: 0°C to 50°C

¹ Specifications are not contractual and are subject to revision without notice.

Ordering Information

XTTM-MT20-2210	PAL / DVB-T modulator - DVB-T2 ready - with RF output (UHF/VHF)
XTTM-MT20-2212	PAL / DVB-T modulator - DVB-T2 ready - with RF output (UHF/VHF) and onboard GPS
XTTO-MT20-T2SW	DVB-T2 software licence for MT2
XTTO-MT20-TSIP	TSolP input streaming licence for MT2
XTTO-MT20-T2LI	T2-Lite software licence for MT2
XTTO-MT20-NICA	NICAM 728 encoding software licence for MT2