TeamCast technology

TWISTER

High-End Rack Modulator/Exciter

DVB T2
DVB T
PAL

Key features:

- Built-In AGC
- DAP with «Green Adaptive Processing»
- Embedded monitoring: SNR, shoulder, power levels
- ASI/IP inputs redundancy
- Full DVB-T2 modes
- Onboard GPS/GLONASS
- Up to +20dBm output
- Web GUI & SNMP

Key Benefits

GAP Green Adaptive Processing

- **Top class of RF signal performances**
- **Worldwide leading and field-proven DVB-T2 technology**
- **Cost-effective solution (Design-To-Cost)**
- **Straightforward integration within transmitter**
- **Ready-to-drive Power Amplifier Stages**
- **Cutting Edge Digital Adaptive Precorrection algorithm (GAP®)**
- **DualCast modulation for smooth Analogue to Digital transition**

Description

TWISTER is a very innovative and unique solution especially designed to meet transmitter manufacturers' demand for integrating a high-end and cost-effective modulator/exciter within their own transmitter design.
TWISTER comes as the ideal choice for any Transmitter manufacturers' who are willing to hit new market opportunities with limited investment and in a very short-time period. It features several key functionalities such as built-in Automatic Gain Control (AGC), embedded monitoring (SNR, Shoulder levels, forwarded & reflected power levels) as well as comprehensive WEB GUI control, to ease integration process and to drive the Power Amplifier stage in the most efficient way.
TWISTER Digital Adaptive Precorrection circuits, powered by TeamCast GAP® - *Green Adaptive Processing* - algorithm, permits to run transmitters very closed to their saturation limit, with unequalled RF signal performances and allowing significant gain in transmitter Power Efficiency.

World-wide leading and proven DVB-T2 technology

TWISTER inherits from the world-wide leading DVB-T2 technology designed by TeamCast already in use in most of the DVB-T2 commercial networks today in operation. TeamCast DVB-T2 modulation core brings unmatched standard usage flexibility supporting MFN System A, SFN System B, SISO/MISO, Multi-PLP layered modulation and hybrid T2-Base & T2-Lite simultaneous transmission.

TWISTER

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Connectors

Specifications[1]

Standards
- o DVB-T2: EN 302 755 v1.3.1, 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

ASI Stream Interfaces
- o 2 x ASI input BNC connectors - 75 Ω
- o 1 x ASI output BNC connector - 75 Ω
- o 188/204 Bytes- 80 Mbps maxi. Packet/burst mode

Gigabit Streaming Inputs (Option)
- 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 RF output from 470 MHz up to 862 MHz, up to 0 dBm (modulator rack), up to 20dBm (exciter rack)
  - N connector 50 Ω
- o High MER: 44dB (typical)
- o Low level (-20 dB) output available for monitoring
  - SMA connector 50 Ω

AGC input (Option)
- o VDC (external sensor) or RF input - user selectable
- o User-configurable AGC high limit

Monitoring
- o SNR, left & right shoulders, forwarded & reflected powers

Clock and Synchronization
- o 10 MHz & 1 PPS input/output
- o Onboard GPS/GLONASS (option)

Stream Process and Modulation
- o Stream input redundancy management
- 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 Adaptive Precorrection
- o Linear DAP: Amplitude ±3 dB, Delay 0 to 3µs
- o Non Linear DAP: Phase ±180°
- o Crest Factor Reduction (PAPR) and Protection clipping
- o 2 x RF feedback inputs for DAP: -15 dBm to -5 dBm
  - SMA connector 50 Ω

Control & Monitoring
- o 1 x 10/100/1000 base-T Ethernet port
- o Customizable Web GUI and SNMP
- o LCD Front Panel Display

Physical
- o Dimensions: (D x W x H) 250 x 483 x 44 mm
- o Weight: 4.5 Kg
- o Operating temperature range: 0°C to 50°C
- o Power supply: 90 to 240 VAC - 50 Hz

Ordering Information

XTTR-TWS0-3032	DVB-T/T2 rack modulator - with UHF output, DAP and onboard GPS
XTTR-TWS0-3033	DVB-T/T2 rack modulator - with UHF output, DAP and onboard GPS/GLONASS
XTTR-TWS0-4X3X	DVB-T/T2 rack exciter - with UHF output (up to +20dBm) and DAP
XTTR-TWS0-X2XX	Rack with PAL modulation
XTTO-TWS0-TSIP	TSoIP input streaming license for TWISTER
XTTO-TWS0-T2LI	T2-Lite software license for TWISTER
XTTO-TWS0-EGAP	Green Adaptive Processing (GAP) software license for TWISTER
XTTO-TWS0-AGC	Automatic Gain Control software license for TWISTER

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

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