

TeamCast TWISTER II Dualdrive Kit

TeamCast TWISTER II Dualdrive Kit for Exciter Redundancy Management



TERRESTRIAL
MARKET



The TeamCast TWISTER II Dualdrive kit combines two TeamCast TWISTER II digital exciters and a RF switch unit. At the system management level, specific functionalities have been designed to simplify the system configuration and user operation. The RF switch unit is fully and transparently managed by the TeamCast TWISTER II exciters, covering a comprehensive set of parameters such as the multiple switching triggers. In addition, the TeamCast TWISTER II Dualdrive kit maintains control of the transmitter Power Amplifier stage, handling the power on/off cycle and displaying the different transmitter conditions.

TeamCast TWISTER II Dualdrive kit addresses Broadcaster's demands to extend the existing TV transmitters life by replacing or upgrading the dual drive exciter stage while aiming also at improving performance, gaining power efficiency or upgrading operations to the latest DVB-T2 and T2-Lite standards.

Easy to Integrate

TeamCast TWISTER II Dualdrive kit 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.

TeamCast TWISTER II Digital Adaptive Precorrection

TeamCast TWISTER II Digital Adaptive Precorrection circuits, powered by ENENSYS 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

TeamCast TWISTER II inherits from the world-wide leading DVB-T2 technology designed by ENENSYS already in use in most of the DVB-T2 commercial networks today in operation.

ENENSYS 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.

Stand-alone system

As a stand-alone system, TeamCast TWISTER II Dualdrive kit can be easily used to upgrade a transmitter that was not including a dualdrive system. With an automatic cloning system (including parameters and precorrection curves) from one TeamCast TWISTER II to the other one, there is no need for an additional controller to administrate such system.

**The ENENSYS
TeamCast TWISTER II
Dualdrive kit is the
solution to upgrade
any existing
transmitter with an
autonomous
dualdrive system.**

Applications

- Transmitter upgrade
- Transmitter manufacturing
- Exciter redundancy management

Benefits

- Top class of RF signal performances
- Worldwide leading and field-proven DVB-T2 technology
- Straightforward integration within transmitter
- Ready-to-drive Power Amplifier Stages
- Cutting Edge Digital Adaptive Precorrection algorithm (GAP®)
- Simple and autonomous dualdrive system

INPUT

Each TeamCast TWISTER II:

- 2 x ASI input BNC connectors - 75 Ω
- 188/204 Bytes - 80 Mbps maxi.
- Packet/burst mode

4 x 10/100/1000 base-T - RJ45

- Protocols: IP, RTP, UDP, IGMP (V2 & V3)
- VLAN ID (1 to 4094) - IEEE 802.1q
- TS encapsulation and FEC decoding: SMPTE-2022

OUTPUT

RF switch main RF output - N connector 50 Ω

- Output bands: UHF, VHF Band I & III
- Up to 0 dBm (TW2x-3xxx), up to 14dBm (TW2x-4xxx), up to +20dBm (TW2x-5xxx)
- High MER: 44dB (typical)

Monitoring output - SMA connector 50 Ω (from each TeamCast TWISTER II)

- -30dB compare to Main RF output

1 x ASI output BNC connector - 75 Ω (from each TeamCast TWISTER II)

PHYSICAL

Dimensions Exciter	(D x W x H) 250 x 483 x 44 mm
Weight	4.5 Kg
Dimensions Switch	(D x W x H) 285 x 483 x 44 mm
Weight	5 Kg
Operating temperature range	0° C to 50° C
Power supply	90 to 240 VAC - 50 Hz



FEATURING

Standards

DVB-T2: EN 302 755 v1.3.1, TS 102 831, TS 102 773 (T2-MI)

DVB-T: EN 300 744, TS 101 191

ISDB-T/TB: ARIB STB-B31 and TR-B14

DTMB: GB20600-2006, GY/T 229.1-2008 (SIP)

Monitoring

- SNR, left & right shoulders, forwarded & reflected powers
- 2 x inputs for powers measurement
- -15 dBm to -5 dBm - SMA connector 50 Ω
- VDC (external sensor) or RF input - user selectable

Clock & Synchronization

10 MHz & 1 PPS input/output

Onboard GPS (optional GLONASS)

Stream Process and Modulation

Stream input redundancy management

Transmission modes: MFN, SFN

T2-Lite support (option)

Test modes: PRBS, Sinus, Spectrum-Gap and Null Symbol insertion

Digital Adaptive Precorrection

Linear DAP: Amplitude ±3 dB, Delay 0 to 3µs

Non-Linear DAP: Phase ±180°

Crest Factor Reduction (PAPR) and Protection clipping

2 x RF feedback inputs for DAP: -15 dBm to -5 dBm - SMA connector 50 Ω

AGC feature (Option)

User-configurable AGC high limit

Linked with forward power measurement

Control & Monitoring

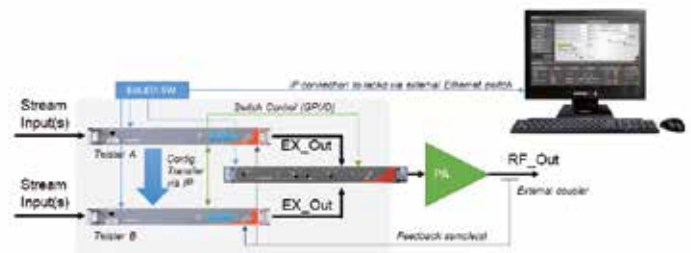
2 + 1x 10/100/1000 base-T Ethernet ports

Customizable Web GUI and SNMP

LCD Front Panel Display

2 x GPI and 4 x GPO for external switch and PA control

Additional CONTROL connector for N+1 management - 8 GPI & 2 fast INTERLOCK inputs



ORDERING CODES

XTTK-TW20-4000

Dualdrive Kit with 2x DVB-T/T2 TeamCast TWISTER II exciter +14dBm UHF, VHF band I & III output, DAP adaptive precorrections, onboard GPS and CTRL port, 1x RF switch and cables

XTTK-TW20-xxx3

Onboard GPS + GLONASS

Options	License Description
XTTO-TW20-TSIP	TSoIP input streaming license for TeamCast TWISTER II - only for DVB-T & DVB-T2 standards
XTTO-TW20-T2LI	T2-Lite software license for TeamCast TWISTER II
XTTO-TW20-EGAP	Green Adaptive Processing (GAP) software license for TeamCast TWISTER II
XTTO-TW20-AGCO	Automatic Gain Control software license for TeamCast TWISTER II
XTTO-TW20-SNMP	SNMP client software license for TeamCast TWISTER II
XTTO-TW20-ISDBX	ISDB-T/TB software license for TeamCast TWISTER II
TTO-TW20-DTMB	DTMB software license for TeamCast TWISTER II



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