TeamCast **Neptune**

Satellite Demodulator

SATELLITE MARKET

The most flexible and cost-effective DVB-S/S2/S2X demodulator.

TeamCast Neptune is the latest generation of satellite demodulator fully compliant with the DVB-S, DVB-S2 and DVB-S2X standards. It is a high-performance demodulator for advanced DVB satellite reception supporting all DVB-S2X configurations over up to 8 ASI outputs as well as over 2 Ethernet ports with its dual L-Band inputs with independent LNB controller on each RF input.

Dense chassis

TeamCast Neptune 1U Rack chassis is equivalent to 8 independent demodulators running with their own carrier frequency with one or two RF inputs. Objectives are: 1/ reduce cabling in front of the rack when several carriers over same polarization 2/ keep RF sensitivity to always extract signal even if low C/N margin.

Full implementation of DVB-S2 & S2X standard

TeamCast Neptune integrates the latest satellite technologies required to perform high quality modulation based on the DVB-S, DVB-S2 and DVB-S2X standards up to 256APSK and 80/125/250/500Mbits/s.

Ready for efficient DTT distributions

TeamCast Neptune is able to extract up to 8 ISI in parallel with a smooth process to respect the ETR-290 requirements. Each MPEG-TS stream (identified by its ISI label) can be route either to ASI and/or TSoIP outputs. These outputs feed terrestrial modulators by respecting the SFN constraint. By adding an embedded MPEG-TS matrix, TeamCast Neptune allows terrestrial modulator inputs redundancy.

Flexible demodulator

TeamCast Neptune is a high-performance demodulator for advanced DVB satellite reception supporting all DVB-S2/DVB-S2X configurations up to 210Mbits/s over 8 ASI outputs as well as 500Mbits/s over 2 Ethernet ports with its dual L-Band inputs with independent LNB controller on each RF input. TeamCast Neptune allows a lot of possible configurations to output data: MPEG-TS over ASI, IP Datagrams over Ethernet or BaseBand Frames over Ethernet.

Hybrid demodulation

TeamCast Neptune is able to manage MPEG-TS from ASI and IP traffic from Ethernet on the same carrier. Also MPEG-TS contents as well as IP data content could be demodulated and out over ASI/IP. A typical use case is to mix digital radio contents and digital TV video contents for an efficient DTT distribution (OPEX and CAPEX reductions).

Applications

- Satellite distributions
- Satellite contributions
- DSNG applications
- DTT distributions
- DTT distributions
- DAB/FM distributions

Benefits

- Top class of RF signal performances for a better QoS
- Dense solution with 8 independent demodulators
- Outputs over ASI as well as IP
- Hybrid architecture

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INPUT

2 x RF Inputs

- Connector F - 75 Ω
- LNB independent DiSEqC Control (off, + 13/18 Vdc, 22 KHz)
- Frequency from 950 MHz to 2150 MHz
- Minimum input signal power: (-80+Es/No+10log(SR)) dBm where SR=Symbol Rate (Mbaud) & Es/No=value (dB) for QEF reception
- Noise factor: less than 5dB with Maximum input power: - 40 dBm

OUTPUT

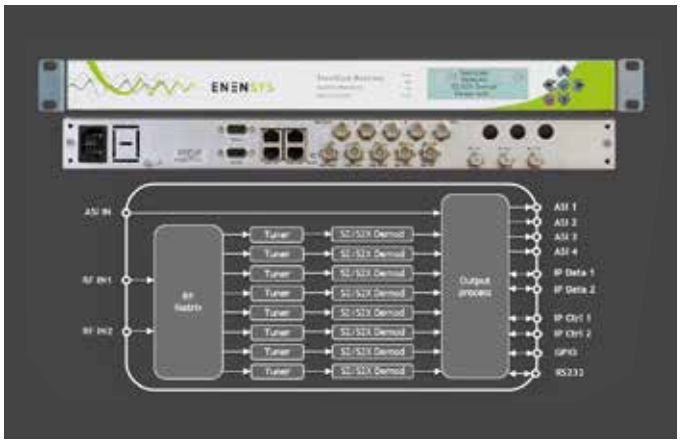
4 ASI outputs or 8 ASI outputs (option) - BNC - 75 Ω
- MPEG-TS over ASI, up to 200 Mbps

2 Ethernet DATA ports - RJ 45, 10/100/1000Base-T
- MPEG-TS over IP, RTP/UDP, up to 500Mbps
- IP Datagrams up to 500Mbps
- BaseBand Frame over IP up to 500Mbps

1 x RF Ouput
- Connector F - 75 Ω
- Copy of the RF Input signal

PHYSICAL

Power Supply	90 to 240 VAC
Dimensions	(D x W x H) 250 x 483 x 44 mm
Weight	2.5 kg
Temperature	0°C to 50°C
Power Consumption	25W without LNB 90W with 2 LNB



FEATURING

Standards

EN 300 421: DVB; Framing structure, channel coding and modulation for 11/12 GHz satellite services (DVB-S)

EN 302 307: DVB; Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications; Part 1: DVB-S2

EN 302 307-2: DVB; Second generation framing structure, channel coding and modulation systems for Broadcasting, Interactive Services, News Gathering and other broadband satellite applications; Part 2: DVB-S2X

ETSI TR 101 891: DVB; Professional Interfaces: Guidelines for the implementation and usage of the DVB Asynchronous Serial Interface (ASI)

ETSI TR 102 034: DVB; Transport of MPEG-2 TS Based DVB Services over IP Based Networks

ETSI EN 301 192: DVB; DVB specification for data broadcasting

ETSI TS 102 606-1: DVB; Generic Stream Encapsulation (GSE)

Demodulation

Symbol Rate:	From 1 to 72 MBaud (1 baud steps)
DVB-S	• Outer/inner FEC: Reed Solomon/Viterbi • Roll-off value: 0.35 • QPSK: 1/2 to 7/8
DVB-S2/S2X	• Outer/Inner FEC: BCH/LDPC • Stream Type: Singlestream & Multistream • Operating modes: - CCM: Constant Coding and Modulation, - VCM/ACM: Variable/Adaptive Coding and Modulation, • Pilots ON or OFF • Frame Length: Normal & Short • PL Scrambling codes [0, 262141] • All MODCODs except VL-SNR MODCODs • DVB-S2 Roll-off factor: 0.20, 0.25, 0.35 • DVB-S2X Roll-off factor: 0.05, 0.10, 0.15, 0.20, 0.25, 0.35 • Annex M up to 4 slices in parallel

De-encapsulation

MPE De-encapsulation	• Multi PID de-encapsulation • PID filtering
GSE De-encapsulation	• GSE-Lite Profiles • GSE-HEM

Control & Monitoring

1 dedicated Ethernet port for	• SNMP (V2C) over Ethernet • HTTP over Ethernet (Embedded HTML5 Web client)
Front panel keyboard and display	
SCPI commands over RS232	

ORDERING CODES

TeamCast Neptune		Satellite Demodulator
Hardware	XSSR-NEP0-3000	S2X/S2/S Satellite demodulator - QPSK-32APSK - 36Mbaud - 2 RF inputs - 4 ASI outputs - 4 Eth ports - 1U Rack
	XSSR-NEP0-3001	S2X/S2/S Satellite demodulator - QPSK-32APSK - 36Mbaud - 2 PSU - 2 RF inputs - 4 ASI outputs - 4 Eth ports - 1U Rack
	XSSR-NEP0-3010	S2X/S2/S Satellite demodulator - QPSK-32APSK - 36Mbaud - 2 RF inputs - 8 ASI outputs - 4 Eth ports - 1U Rack
	XSSR-NEP0-3011	S2X/S2/S Satellite demodulator - QPSK-32APSK - 36Mbaud - 2 PSU - 2 RF inputs - 8 ASI outputs - 4 Eth ports - 1U Rack
Software	XSSO-NEP0-256AM	DVB-S2/S2X modcods up to 256APSK
	XSSO-NEP0-72MB	BaudRate up to 72 MBauds
	XSSO-NEP0-BISE	BISS-0/1/E Encryption license
	XSSO-NEP0-BBFR	BaseBand Frame Output over IP
	XSSO-NEP0-WBAM	DVB-S2/S2X Annex M Time Slicing

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RoHS