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 Datagram 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
- DSGN 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

www.enensys.com
**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=power (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 Output
- 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

**ORDERING CODES**

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**FEATURES**

**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-S
- **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
- **ETS1 TR 101 891**: DVB; Professional Interfaces: Guidelines for the implementation and usage of the DVB Asynchronous Serial Interface (ASI)
- **ETS1 TR 102 034**: DVB; Transport of MPEG-2 TS Based DVB Services over IP Based Networks
- **ETS1 EN 301 192**: DVB; DVB specification for data broadcasting
- **ETS1 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-S 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