TeamCast solutions

Satellite

JupiTer

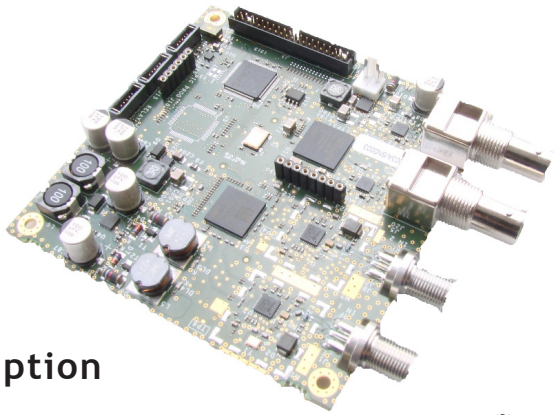
Carrier ID Extractor

The most integrated and cost effective OEM Carrier ID Extractor[2] board for:

- IRDs,
- Probe.

Applications:

- Satellite distributions,
- Satellite contributions,
- DSNG applications,
- Monitoring systems.



5%

Low Roll Off

Description

Jupiter has **a full DVB Carrier ID (CID) extraction**[2] (following the standard ETSI TS 103 129) capability so that a professional IRD using Jupiter can identify the signal received, and can be used as a tool for checking "on-the-fly" signal accuracy of the DVB -CID data.

In addition, JupiTer is a state-of-the-art high performance professional DVB-S and DVB-S2 demodulator. The JupiTer DVB-S & DVB-S2 demodulator supports **up to 240Mbit/s** and operates in 16APSK and 32APSK with a very low implementation loss as well as the DVB-S2X roll off.

In parallel, the JupiTer demodulator can be used either with LNB satellite blocks or with L-band (from 950 MHz to 2150 MHz) receivers. In the most robust MODCOD, the C/N can operate at below 0 dB and the JupiTer module synchronizes and demodulates the input signal with automatic MODCOD detection.

JupiTer is a DVB-S2 demodulator supporting multi-stream (as defined in EN 302 307) and will deliver up to 2 simultaneous Input Stream Identifier (ISI), corresponding to the 2 MPTS contents (Multiple Program Transport Streams). The ACM feature in JupiTer allows seamless MODCOD switching, this allows changing the robustness of the transmission while maintaining your Quality of Service.

Depending on your integration, to facilitate your time to market and to have a better efficiency, JupiTer offers the possibility to use standard ASI outputs or a dedicated connector.

Customers can control JupiTer by using a very simple API protocol using I2C and/or Serial. Moreover, full control and error monitoring facilities are available and signal statistics (C/N, FER, PER) are provided including Carrier ID information as Global Unique Identifier (GUI), GPS positions, telephone number and some user data to identify the uplink used (as decribed in the standard ETSI TS 103 129).

An evaluation kit is available to discover all the JupiTer possibilities & performances to perform a quick integration. JupiTer Starter Kit is a complete development board solution giving customers instant access to the capabilities of JupiTer.

Key features :

- Standalone CID Extractor[2]
- DVB-S2X roll off included
- Dual L-Band input
- Full compliance with DVB-S and DVB-S2 technology
- Top performance for 16APSK and 32 APSK reception
- Adaptive equalization
- Up to 240 Mbps useful bit rate, up to 65MBaud
- Physical Layer Scrambling according to EN 302 307 standard
- Low power consumption less than 9 W (fanless)

Main advantages:

- Stand Alone Carrier ID extractor[2],
- Dedicated setup to optimize the DVB-S2X low roll off reception,
- High compactness, All-in-One, full features, easy maintenance management,
- Reduce time to market (easy to operate),
- High performance with 16APSK and 32APSK modulations with high Baudrate,
- Very large Symbol Rate range: from 0.2 MBaud up to 65 MBaud,
- Flexible Inputs/Outputs definition.

JupiTer

Standalone Carrier ID Extractor[2]

Specifications[1]

Standards

- o Carrier ID: ETSI TS 103 129
- o DVB-S2: EN 302 307
- o DVB-S: EN 300 421
- o DVB-ASI: EN 50083-9, ETSI TR 101 891
- o MPEG-TS: ISO/IEC 13818-1

Carrier ID extraction[2]

- o Carrier ID detection : < 10s
- o Carrier ID Global Unique Identifier extraction : < 20s
- o Carrier ID optional parameters (up to 4) : < 20s each
- o Total CID Extraction time = 30s + 20x(number of parameters)

RF inputs

- o 2 Connector F - 75 Ω
- o L-Band: From 950 MHz to 2150 MHz
- o Return loss > 9 dB
- o -25 dBm to -65 dBm (sensitivity -100 dBm @ QPSK-1/4)
- o LNB: 2 independent DiSEqC controls
  (off, + 13/18 Vdc, 22 KHz, 750mA max)

Outputs

- o DVB-S2 & DVB-S Single Stream management
- o DVB-S2 Multi-Stream management
- o Packet length 188/204 auto-detection
- o ASI : - 2 x connector BNC - 75 Ω
  - MPEG-TS over ASI, up to 210 Mbps
- o HE10 with 40 pins (2mm pitch)
  - MPEG-TS over HE10, up to 240 Mbps

Modulation

- o DVB-S:
  - Outer/inner FEC: Reed Solomon/Viterbi
  - QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
  - Roll-off value: 0.05, 0.10, 0.15, 0.20, 0.25, 0.35
- o DVB-S2
  - Outer/Inner FEC: BCH/LDPC
  - QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
  - 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
  - 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
  - 32APSK: 3/4, 4/5, 5/6, 8/9, 9/10
  - PL Scrambling codes [0, 262141]
  - Supported DVB modes: CCM / VCM / ACM
  - Short and long frame
  - Roll-off values: 0.05, 0.10, 0.15, 0.20, 0.25, 0.35
  - Pilots ON or OFF
  - Variable Symbol rate (Mbauds) 0.2 to 65 Mbauds
  - Embedded adaptive equalizer

Control & Monitoring

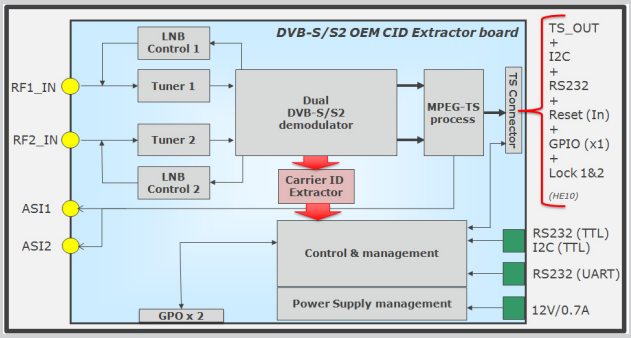
- o 1 x RS232 serial port (HE10 & standard connectors)
- o 1 x I2C port (HE10 connector & standard connectors)
- o 1 x GPIO pin (HE10 & standard connectors))
- o 2 x demod lock output pins (HE10 connector)
- o 1 x Reset input pin (HE10 connector)

Physical

- o Power supply: 12VDC (standard connector)
- o Power consuption < 9W
- o Dimensions: single PCB, 100 x 100 x 20 mm
- o Temperature: 0°C to 50°C

Starter - Kit content:

- o JupiTer board fixed in an aluminium box
- o A power kit (90/240AVC to 12VDC),
- o A cable kit,
- o A USB/RS232 transceiver,
- o A GUI for control and monitoring easily the board,
- o Documents (application notes, data sheets, etc.)



[2] *The patent policy regarding the CID demodulation is currently under study. No patent royalty are included in the Jupiter package and it is the responsibility of the integrator or the user to check if any royalty has to be paid to patent owners regarding CID demodulation.*

Order Information

XSSB-JUP0-2910[3]	DVB-S2 Demod 32APSK - 5% Roll Off with CID extraction - L band In - ASI & Parallel Out - Board
XSSK-JUP0-2910	DVB-S2 Demod 32APSK - 5% Roll Off with CID extraction - L band In - ASI & Parallel Out - Starter Kit

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

[3] A minimum quantity is required

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