

DVB-SH Modulator

**Most advanced
and proven
DVB-SH technology**

Future proof platform

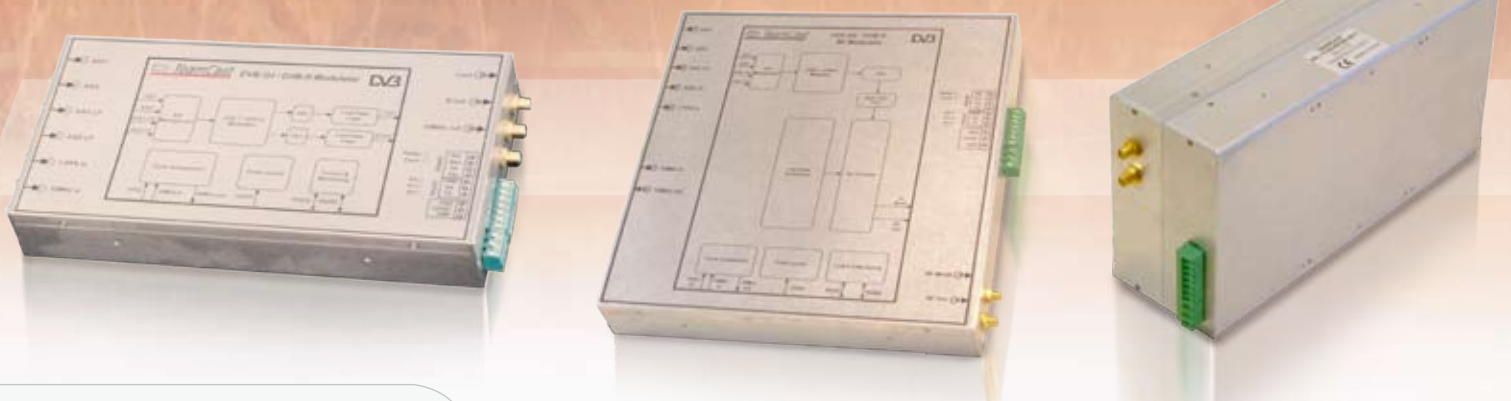
Fastest time to market

**Highest performance
and reliability**

MSH-1000/MSH-2000:

The unique OEM modulator supporting DVB-SH modulation for:

- DVB-SH terrestrial components: transmitters and repeaters
- R&D and laboratory experimentation
- DVB-SH early demonstration



Description

Get ready for the DVB-SH market now !

The MSH-1000/2000 is the most advanced and the most integrated DVB-SH modulator for addressing the OEM market. TEAMCAST has developed an unique experience in designing and implementing DVB-SH technology thanks to a close pathnership with Alcatel-Lucent. With the launch of the MSH-1000/2000 product range, this technology is now available for any system integrators and transmitter manufacturers who aim at developing their own DVB-SH product ranges.

The unique DVB-SH experience:

The MSH-1000/2000 takes benefit from the partnership established between TEAMCAST and Alcatel-Lucent and the active participation of TEAMCAST in the definition of the DVB-SH standard. The DVB-SH modulation technique implemented in the MSH-1000/2000 product has already been fully tested and qualified. MSH-1000/2000 is the unique solution available today on the market that ensures the technology, the product stability and reliability required for high quality DVB-SH transmission systems.

Fastest time to market:

As with all TEAMCAST modules, the MSH-1000/2000 products consist of compact and powerful units, especially designed and developed for fast integration. Designers can elect to manage the TEAMCAST module by using the open and easy to use serial protocol or to develop their own GUI as required.

Performance & Reliability:

MSH-1000/2000 modules include all the state-of-the-art technological features for DVB-SH modulation. They provide designers with a best of class performance, providing a high MER value, excellent shoulder levels and lowest phase noise. Simple to use non-linear and linear digital pre-correction circuits are incorporated to compensate output filter and power amplifier characteristics, if required. The product fulfils both transmitter manufacturers and system integrators' requirements producing the highest quality reference test systems for the new DVB-SH standard.

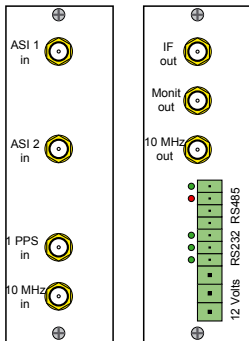
Key Features

- Proven DVB-SH operating
- Very high modulation performance (MER, RF stability, shoulder level, low phase noise)
- Linear and non-linear digital pre-correction circuits
- Optional onboard GPS
- Compact size for easy OEM integration
- Single 12V power supply

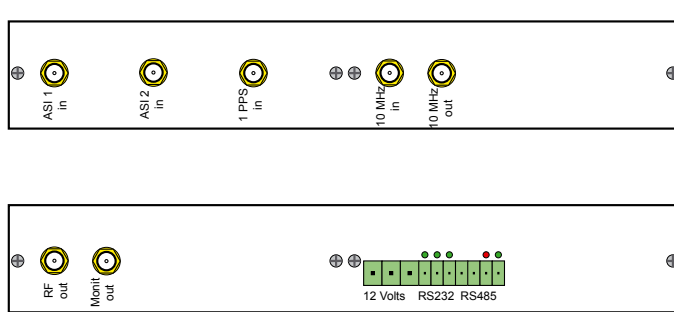
DVB-SH Modulator

Connectors

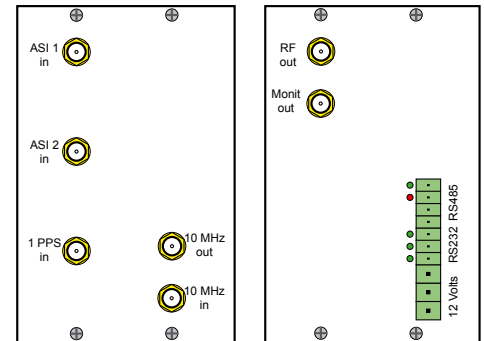
MSH-1000



MSH-2000 Size A



MSH-2000 Size B



Specifications

Standards

- o DVB-SH: EN 302 583, TS 102 585
- o DVB-ASI: EN50083-9, ETSI TR 101 891
- o MPEG-TS: ISO/IEC 13818-1

MPEG-TS Inputs

- o 2 x ASI connectors
- o 188/204 bytes, bit rate adaptation and PCR restamping
- o Automatic input switching for redundancy

IF/RF Outputs

- o IF from 30 MHz to 45 MHz (0 dBm – 50 Ω) – MSH-1340
- o RF from 30 MHz to 860 MHz (0 dBm – 50 Ω) – MSH-2010
- o S-Band from 2170 MHz to 2200 MHz (-10 dBm – 50 Ω) – MSH-2070
- o Low level (-20 dB) output available for monitoring

Clock and Synchronization

- o High quality internal clock
- o 10 MHz & 1 PPS
- o Onboard GPS (Optional onboard GPS)

Modulation*

- o DVB-SH multi-carrier modes
- o 3GPP2 Turbo-codes encoding
- o Adjustable time interleave
- o 1.7, 5, 6, 7 or 8 MHz bandwidth
- o MFN and SFN network operation
- o High performance MER (> 38 dB measured)
- o Low shoulder levels (> 45 dB rejection)

Digital Pre-correction circuits

- o Linear pre-correction (2 x 32 points - Group Delay and Amplitude)
- o Non-linear pre-correction (2 x 32 points - AM/AM and AM/PM)

Control & Monitoring

- o RS-232 & RS-485 control ports with ASCII protocol

Physical

- o Single power supply voltage: 12 VDC
- o MSH-1000: 220 x 110 x 35 mm (size C)
- o MSH-2000: 220 x 220 x 35 mm (size A) or 220 x 110 x 70 mm (size B)
- o Operating temperature range: 0°C to 50°C

Ordering Information

TCM-MSHO-1340	DVB-SH modulator with IF output
TCM-MSHO-2010	DVB-SH modulator with VHF/UHF output
TCM-MSHO-2012	DVB-SH modulator with VHF/UHF and onboard GPS
TCM-MSHO-2070	DVB-SH modulator with S-Band output
TCM-MSHO-2072	DVB-SH modulator with S-Band and onboard GPS

* depending on model & software version.