Tracer Aviation’s TVR-HD1SD4 is a rugged airborne video recorder designed for use with multi-sensor camera systems and capable of recording one High Definition (HD) and up to four Standard Definition (SD) channels of video all with associated audio & metadata information.

The TVR-HD1SD4 is one in a series of Tracer Aviation airborne video recorders offering multi-channel recording capability. Designed as a compact, robust and lightweight unit, The TVR-HD1SD4 uses standard aircraft power, video and audio connectivity. When used in conjunction with a Tracer Aviation Mission Video Display, the recorder’s functions can be simultaneously controlled from the display – allowing single or multiple recorders to be mounted remotely but operated from any workstation or associated display.

The Solid State design provides robust operational capability in extreme environments including very hot and very cold climates. Mechanically the unit is designed for a helicopter or vehicle environment and can be mounted using industry standard DZUS or bolted fastenings.

During operation, any clip can be played back instantly enabling observers in the air to check recorded images for additional information during flight – or to have this data transmitted via a microwave link to ground stations. Playback of the recorded video is independent of the recording function which continues to record live video.

Tracers’ TVR-HD1SD4 enables users to fit one recorder to meet single or multi-channel recording requirements and offers a very simple user interface to ensure all critical video information is being recorded. The unit can be used to replace multiple recording decks in existing installations - thereby reducing weight, creating more space and yet offering a more comprehensive solution to recording both High Definition and Standard Definition [analogue] video.

The airborne video recorder is designed to capture and record from a single HD input and up to four separate SD inputs simultaneously. Each of the five video input channels features a high-quality video input.

PRODUCT FEATURES

Professional quality full resolution recordings
HD (high-definition) and SD recording in one unit.
Small & lightweight
Five Video and Five Audio recordable inputs
Low bit-rate, high compression for minimised mission storage requirements
Records to removable solid state Flash storage providing file-based storage
Designed for use in extreme temperatures and harsh environments
Packaging allows interchange ability with most existing DZUS mounted recorders.
Metadata recording Support (Sensor or Mission Data - record & streaming functions)
Instant Playback of any recording; no need to rewind or stop recording
Video continues to record during playback whilst on mission
Full recovery from power interrupts
frame grabber and has an associated audio digitizer. Each SD frame grabber contains independent digital NTSC/PAL video decoder and each video channel has an associated audio input. A dual audio input is associated and synchronised with each video file.

Tracer Aviation also manufactures a multi-channel High Definition and multi-channel Standard Definition variant of this unit.

Technical information (please refer to Technical Specification document for full information)

Video Compression: high quality professional H.264 (MPEG 4) CODEC for the highest quality video compression over five independent channels.

Inputs

- 1 HD-SDI Video input
- 4 Composite inputs (PAL/NTSC)
- 2 Analogue audio Inputs
- 1 RS422/RS232 data input
- 1 LAN (Streaming input)
- Data Bus (Proprietary CAN)
- ARINC 429 option

Outputs

- 1 Channel HD-SDI out (Live or recorded)
- 1 Channel Composite out (Follows above output – SD channel playback only)
- 1 VGA output for touchscreen MMI
- 1 LAN (Streaming output)

Features

- Removable Storage module (Encryption / Rapid erase options)
- NVG compliant
- Local and remote operation (From a Tracer Display)
- Hard and soft control interfaces
- H.264 Industry standard compression
- Video/Metadata storage
- Integrated screen capture
- “Event mark” storage
- WXGA monitoring output
- Quad/split recording windows option
- Pre-record option
- Single or multi-channel recording option
- Playback while recording
- Extended mission record capability by adjusting bit rates
- Rugged, small & lightweight

Power: Aircraft: nominal 28V DC @30W (input voltage 18-32VDC). A/C Lighting bus, DAY/ Night/NVG switching

Dimensions: Width 146mm x Height 104 x 150mm behind DZUS rail
Mass: 1.7kg