

## TL4 – Trooper 4-CHANNEL MOBILE VIDEO RECORDING SYSTEM

### Digital Video Recording (DVR) System Specifications

- The DVR must record up to 4 channels of video simultaneously, ***“switching” systems are not acceptable.***
- The DVR must record 4 channels of audio.
- The DVR must be capable of both vertical and horizontal mounting, including under-mount.
- The DVR must support data storage on 2.5” mobile ruggedized hard drives.
- Hard disk capacity: Up to 750 GB
- The DVR hard drive must be hot-swappable and mounted in a removable, locking carrier
- The DVR hard drive must connect to a PC or laptop via a USB cable
- The DVR must offer a “One Touch Download” feature to download recordings with a single key press.
- The DVR must have alarm settings and be programmable by recording resolution, frame rate, and quality per video channel
- The DVR must have:
  - Compression: H.264
  - Recorded Resolution: Selectable 720 x 480, 720 x 240, or 360 x 240
  - Recorded Quality Settings: 4 levels, adjustable for each channel
  - Per Channel Recording Rate: 1 to 30 frame per second, adjustable for each channel
  - Aggregate Recording Rate: 60 frames-per-second
- The DVR must have automatic repeat-record when hard drive is full (user selectable on/off).
- The DVR must have configurable protected memory for alarms.
- The DVR must have programmable timer record settings with selectable frame rates and image quality.
- The DVR must record vehicle voltage.
- The DVR must record vehicle position, direction, and speed with an optional GPS receiver.
- Vehicle speed recording using optional speed harness; external speed conditioner **NOT** required.
- The DVR must record up to five functions (signals) including brake lights, stop lights, warning lights, turn signal, stop arm, wheelchair lift, etc... (user programmable).
- DVR record Delay Off: 0 - 60 min (user-selectable)
- DVR record Delay On: 0 - 60 min (user-selectable)

### Video and Data Search Playback and Display Specifications

- Display modes: Single camera, quad
- Playback rate: 1x to 32x
- Search function: By time and date or event, alarms, signals
- User interface: OSD with remote control, pointing device, web browser, vMax software suite
- On-screen display vehicle position, direction, and speed if equipped with optional GPS receiver
- On-screen display vehicle speed using optional speed harness; **external speed conditioner NOT required**
- On-screen voltage display

- On-screen time and date display
- On-screen display of up to five functions (signals) including brake lights, stop lights, warning lights, turn signal, stop arm, wheelchair lift, etc... (user programmable Built-in real time clock with automatic Daylight Savings Time adjustment (selectable on/off))
- Automatic Daylight Savings start/end dates and times setting must be configurable

## **Electrical Specifications**

- The DVR must have input voltage range from 8VDC to 32 VDC
- The DVR must have Smart-Start™ power up protection to prevent damage from extreme environmental conditions and voltage transients
- Back-up battery saves settings for 10 years without powering the unit

## **Remote Access Specifications**

- The DVR must include Ethernet network port (RJ45) for connection to a Local Area Network (LAN) or wireless modem.
- The DVR must have multilevel user access control and must be password protected.
- The DVR must support industrial Wi-Fi networking with Smart-Reach™ Mobile (wireless bridge) or equivalent with roaming capability. **Consumer-grade wireless bridge is not acceptable.**
- The DVR must have a temporary power button for operation and programming when bus is off.
- The DVR must have a programmable monitor output for quad view or toggle view of video.
- The DVR must have a front panel video output for easy setup and programming.
- The recorded video and audio can be transferred to a PC by means of the hot-swappable hard drive, USB flash drive, or wireless transmission via Smart-Reach mobile (industrial wireless bridge) or equivalent.
- The DVR must be able to transfer recorded video and audio to a removable USB Flash drive.

## **Mechanical Specifications**

- The DVR must have an 18-gauge steel enclosure, powder painted finish with tamper-proof lock.
- The lock box and DVR are integrated with removable locking door for easy access to the DVR. **Separate lock box is not acceptable.**
- The door must have rounded edges for safety. **Straight edges are not acceptable.**
- The DVR must attach to a low-profile mounting plate.
- The DVR must be capable of vertical, sideways, and horizontal mounting.
- The DVR dimensions: 2.5 " x 7 " x 9.5" (HxWxD).

## **Environmental Requirements**

- The DVR must have a built-in fan (reversed to draw clean filtered air into DVR); field-replaceable filter.
- The DVR must come standard with built-in internal heater.

- The DVR must have high and low temperature protection – the DVR will power up but will not start recording until a safe internal temperature is reached.
- The DVR must have a Smart-Start power-up protection to prevent damage from voltage transients.
- The DVR must have a Smart-Temp power-up protection to not start recording until a safe internal temperature is reached.

### **Software Requirements**

- The HD Reader Software must be able to save recordings in a proprietary EDS format as well as in a standard AVI format, which can be played back on a standard PC running Windows XP, XP Pro, or Vista and Windows 7 OS.
- The DVR firmware must be field upgradeable.

### **Warranty Requirements**

- The DVR must have 3-year parts and labor warranty.
- The Hard Drive must have 3-year parts and labor warranty.

### **Other Requirements**

- Decoy systems must use live cameras.

### **Brand**

- **SEON TROOPER TL4 SYSTEM**

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