TREK-668

ADVANTECH DLOG

Digital Logistics & Fleet Management



Premium In-vehicle Computing Box for Surveillance & Fleet Management

Features

- Intel Atom N2600 CPU inside
- One-Cable-Connection to pair with TREK In-Vehicle Smart Display (TREK-303/306)
- Embedded Stretch S7 video hardware encoder, support up to 12-ch analog video inputs and 8-ch audio inputs
- One PSE port to support addtional IP Camera
- Dual External accessible HDD/SSD tray with key-lock protection
- Vehicle diagnostic interface with configurable protocols support: CAN (J1939) and J1708 (J1587)
- Built-in GNSS, WLAN, Bluetooth and WWAN (with dual SIM cards) modules
- Intelligent Vehicle Power Management: Ignition on/off delay, and car power protection
- Wide working temperature (-30 ~ 60° C), 12/24V Car power system compliant (ISO 7637-2) and Anti-shock/vibration (MIL-STD-810G & 5M3)

Introduction

TREK-668 is an industrial-grade, dual-core computing box designed to provide high-quality video surveillance and fleet management for police car, ambulance, fire engine, buses and trains. TREK-668 delivers tracking and positioning and also supports dead-reckoning, which allows a truck to be traced even if the driver is in a tunnel. It supports the J1939 protocol for vehicle diagnostics and driver behavior management, and it supports high-quality, MJPEG, H.264 recording, and transmission for up to 12 camera inputs. It has one PSE for an IP camera, and dual display/dual audio interfaces which support different resolutions. Each camera input provides motion detection capabilities; there are 8 audio inputs. The TREK-668 provides reliable on-board recording and can transmit images or alarms for remote monitoring over a wireless, GPRS, 3G, or HSDPA network connection.

Specifications

Core	Processor	Intel Atom N2600 (Dual Core, 1.6 GHz)
	Memory	1 x SO-DIMM socket Support up to 2GB DDR3-800 memory module; (Default configuration: 2GB)
	Graphic	Integrated 2D/3D Graphic Engine
	Video HW Encoder	Stretch S7, support H.264, MJPEG format; Resolution up to D1, 30fps per channel
	O.S	Windows 7, WES 7 (32-bit) Linux Ubuntu 12.04(32-bit)
Storage	CF Card	1 x external accessible Type I/II CompactFlash card slot with cover, support system boot up Default configuration: 16GB, SLC SQFlash Cfast card
	SSD	2 x external accessible 2.5" Mobile HDD/SSD tray with key-lock protection, support system boot up
Display	Smart Display Port (*1)	12V/2A power output for TREK-30x 1 x 18-bits LVDS (Resolution: 800 x 480 or 1024 x 768, auto-detection) 1 x Line-Out (*2) (For Speakers on TREK-30x) 2 x UART (TX/RX, TX/RX/RTS) (For T/S, Hot keys, brightness, light sensor control) 1 x USB 2.0 Type A 1 x PWR Button Signal 1 x Reset Button Signal
	VGA	1 x DB15 (Resolution up to 2560 x 1600)
I/O	CAN/J1708 Port (DB15 female)	1 x CAN Bus (Support Raw CAN, J1939) 1 x J1708 1 x 4-Wire Dead Reckoning signals. (Optional, by Project-based) 4 x Isolated DI (Dry Contact)
	High Density Connector	1 x RS-485 with auto flow control 1 x Full RS-232 4 x Isolated DI (Dry Contact) 4 x Isolated DO (Open collector output, driving by relay) 1 x Line-Out (*2) 1 x Line-In 1 x Mic-In 12V/1.5A and 5V/1.1A power output reserved for external modules
	Standard I/O Port	1 x USB 2.0 Type A (Front side) 2 x USB 2.0 Type A (Rear side, with cable clip) 1 x High Speed Full RS-232, DB-9 (Pin 9 with 12V/0.5A) 1 x Giga LAN, with 8-pin M12 connector, IEEE 802.3af compliant (PSE), provides up to 15.4 watts power output to support external IP Camera
	Video / Audio input (AV1 & AV2, via dual DVI-I connector)	12-ch Video inputs, Video Compression: support H.264, MJPEG format; Resolution up to D1, 30fps per channel 8-ch mono Audio inputs, Audio Compression: G.711 1 x RS-485 for PTZ camera 12V/2A power output for cameras
	LED	6 x LEDs (Power (Red), CF (Green), WiFi (Green) ,WWAN (Green), GPS (Blue), HDD/SSD (Amber))
	Power Button	Via TREK-30x (In-Vehicle Smart Display); System is powered on by Ignition in default
	Reset Button	1 x Reset button (Front side)

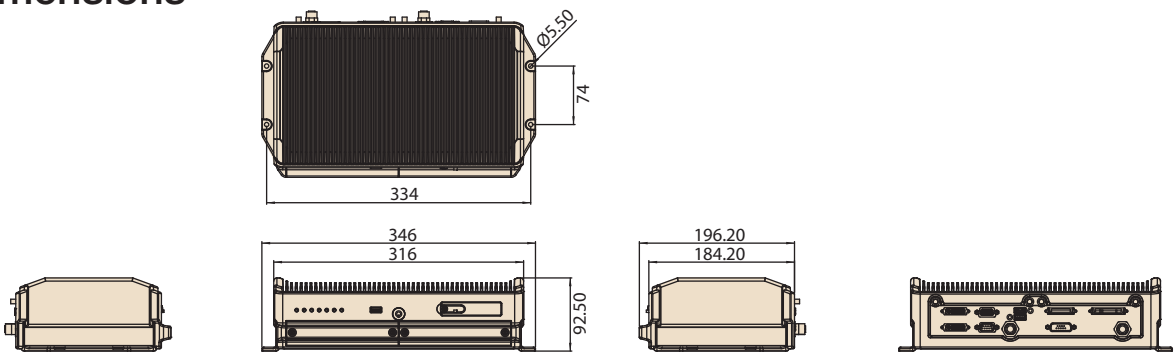
TREK-668

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Dimensions

Unit: mm



Specifications Cont.

RF	WLAN + Bluetooth	IEEE 802.11a/b/g/n + Bluetooth (V4.0 V3.0+HS,V2.1+EDR) combo module via Full Mini-PCIe Slot
	WWAN	HSPA+, GSM/GPRS/EDGE: Sierra Wireless AirPrime MC809x via Full Mini-PCIe Slot (Default: MC8090 for US / MC8092 for EU) (Optional: CDMA 1xRTT/EV-DO Rev.A: Sierra Wireless AirPrime MC5728, by Project-based) 2 x external accessible Mini-SIM card socket (User selectable) with cover (Note: Support Dual WWAN modules when WLAN is not required, by Project-based)
	GNSS	Build-in u-blox LEA-6S module, support AGPS (Optional: Dead Reckoning/Galileo/BeiDou module, by Project-based)
	Antenna	4 x SMA type antenna hole for GPS/ WWAN/ WLAN/ BT
Power	Voltage input	Supports 12/24 V car power system. (9V ~ 32V wide DC input, ISO 7637-2 & SAE J1113 compliant.)
	Intelligent Vehicle Power Management (iVPM 1.0)	System power on/off/hibernate management (e.g. Programmable Ignition On/Off Time delay) Support Wake up Events: - Alarm (RTC) Wake up. System power protection (e.g. Car Battery Low Voltage Protection)
Mechanical	Dimensions (W x H x D)	346 x 92.5 x 196.2 mm
	Weight	5.9 kg (with two HDDs)
Environment	IP Rating	IP30
	Vibration/Shock	MIL-STD-810G, EN60721-3(5M3)
	EMC	CE, FCC, CCC
	Safety	UL/cUL, CB
	Vehicle Regulation	E-MARK (E13), SAE J1455 class C, ISO 7637-2, SAE J1113, EN50155
	RF Regulation	CE (R&TTE), FCC ID, Part 22/24E certified whole system PTCRB
	Operating Temperature	-30 to 60° C
	Storage Temperature	-40 to 80° C

*1: To be paired with TREK-303/306 directly. (One-Cable-Connection)
*2: Support single audio stream only. (i.e. The Line-Out interface in "Smart Display Port" and "High Density Connector" share the same audio path.)

Ordering Information

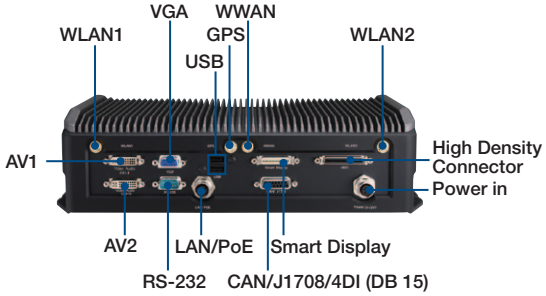
Part Number	Description
TREK-668-HWB7A1E	System w/2G RAM/GPS/WWAN(EU)/WLAN/16G CF/BT/ Win7
TREK-668-HWB7B1E	System w/2G RAM/GPS/WWAN(USA)/WLAN/16G CF/BT/ Win7
TREK-668-GWB7A1E	System w/2G RAM/GPS/16G CF/BT/Win7

Optional items

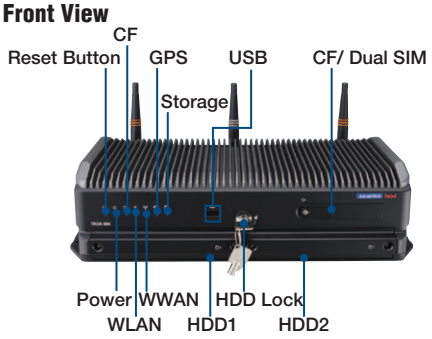
Part Number	Description
9668TREK58E	WLAN Kit w/antenna for TREK-668
9668TREK60E	HSXPA Kit w/antenna for TREK-668
9668TREK61E	GPS (LEA-6S) Kit w/antenna for TREK-668
9668TREK62E	GPS (LEA-6R) Kit w/antenna for TREK-668
9668TREK70E	HSXPA kit w/antenna for TREK-668 (USA)

I/O Connectors

Rear View



Front View





Remark: RS-485 x1 (Either AV1 or AV2)