TREK-572

Compact In-Vehicle Computing Box for Fleet Management

Features

- Intel® Atom™ E3815 system-on-chip (SOC) processor
- Can be paired with TREK-303/306 in-vehicle smart display via a single-cable connection
- Supports Intel® IDP 3.x Moon Island
- Vehicle diagnostics interface with support for configurable CAN (J1939, OBD-II/ISO 15765) and J1708 (J1587) protocols
- Built-in GNSS, WLAN, Bluetooth, and WWAN (with a SIM card slot) modules
- Intelligent vehicle power management system for ignition on/off delay, wake-up event control, system health monitoring, and diagnostics functions
- Wide operating temperature range (-30 ~ 70 °C/-22 ~ 158 °F)
- Compliant with 12/24 V vehicle power (ISO 7637-2)
- MIL-STD-810G and 5M3 certified for shock and vibration tolerance

Introduction

TREK-572 is a compact and economical in-vehicle computing box powered by an Intel® Atom™ E3815 SOC and can be paired with TREK-303/306 in-vehicle smart displays via a single-cable connection. Aimed at fleet management applications, TREK-572's wide operating temperature and MIL-STD-810G and 5M3 certification for shock vibration resistance enable it to withstand harsh environments. The inclusion of an intelligent vehicle power management (VPM 2.0) chip protects against transient voltage (ISO 7637-2/SAE J1455/ SAE J1113) and enables programmable functions (ignition on/off, delay on/off, and low battery monitoring). TREK-572 also features various I/O for integrating CAN bus devices and peripherals, such as a tire pressure monitoring system. The dual CAN bus ports support diverse protocols (J1939, OBD-II/ISO 15765) to facilitate vehicle diagnostics and driver behavior management. Built-in wireless communication technologies (WLAN, WWAN, Bluetooth) enable vehicle tracking and real-time data transmissions to a centralized control center.

Specifications

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Core	Processor	Intel® Atom™ E3815, single-core, 1.46 GHz
	Memory	1 x 2 GB DDR3L SODIMM 1066 MHz, non-ECC (up to 8 GB)
	Graphics	Integrated 2D/3D graphics engine
	Operating System	WES7, WES8, Win10 IoT LTSB, Linux Ubuntu 14.04 Lite (32 bit), Intel® IDP 3.x Moon Island (available upon request)
Storage	mSATA	1 x 16 GB UMLC, SQFlash mSATA, with support system bootup
Display	Smart Display Ports[1]	1 x 12V/2A power output for TREK-30x 1 x 18-bit LVDS with 800 x 480/1024 x 768 resolution and automatic detection 1 x Line-Out2 (for TREK-30x speakers) 2 x UART (TX/RX, TX/RX/RTS) (for touchscreen, hot keys, and brightness/light sensor control) 1 x USB 2.0 Type A 1 x Power button 1 x Reset button
I/O	Vehicle I/O	2 x CAN bus with raw CAN, J1939, and OBD-II/ISO 15765 support (configurable via firmware) 1 x J1708 with J1587 support 1 x 4-wire RS-232 (RX/TS/CTS/RTS)
	Standard I/O	1 x USB 2.0 Type A (rear side) 1 x Giga LAN with standard RJ45 connector 1 x Line-Out[2] 1 x Mic-In
	LED Indicators	1 x Power LED (red)
	Power Button	Via TREK-30x in-vehicle smart display; system is powered on by vehicle ignition as a default
	Reset Button	1 x Reset button (rear side)
RF	WLAN + Bluetooth	IEEE 802.11a/b/g/n + Bluetooth V4.0 combo module via full mini PCIe slot (optional high-power WLAN/WLAN roaming available upon request)
	WWAN	4G (LTE, HSPA+, GSM/GPRS/EDGE, EV-DO Rev. a1, 1xRTT) Sierra Wireless MC73xx via full mini PCIe slot (default: MC7354 for US/MC7304 for EU) 1 x Internal mini SIM card slot
	GNSS	1 x u-blox MAX-7Q GPS/GLONASS module with AGPS support (optional 3-in-1 GPS/GLONASS/BeiDou module available upon request)
	Antenna	3 x SMA-type antenna holes for GPS, Wi-Fi+Bluetooth MIMO, WWAN/LTE MIMO[3]
Power	Input Voltage	Compatible with 12/24 V vehicle power (9 ~ 32 VDC input; ISO 7637-2 and SAE J1113 compliant)
	Intelligent Vehicle Power Management (iVPM 2.0)	System power on/off/hibernate management (programmable ignition on/off delay) Supports wake-up events: Wake on Alarm (RTC) and Wake by G-sensor System power protection (low voltage protection for vehicle battery) System monitoring and diagnostics

[1] When paired with TREK-303/306 via a single-cable connection
[2] Both Line-Out interfaces share a single audio codec and the same audio stream
[3] The box-side connector is RP-SMA, female (external female thread with male internal pin)

Dimensions

Unit: mm
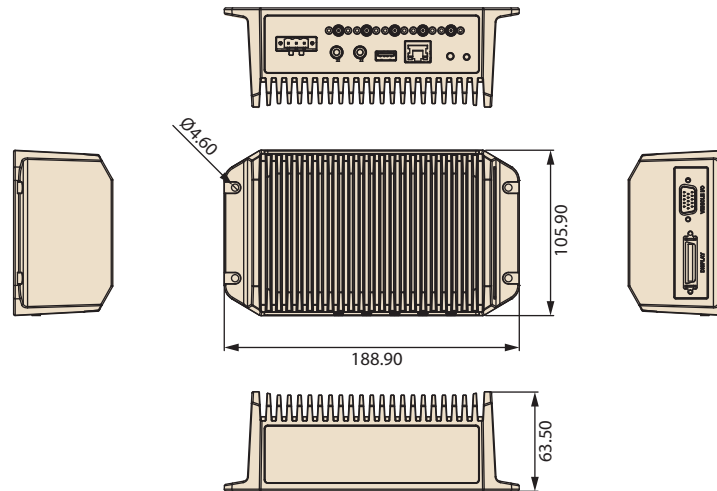
Specifications Cont.

Mechanical	Dimensions (W x H x D)	188.9 x 63.5 x 105.9 mm (7.43 x 2.5 x 4.16 in)
	Weight	1.15 kg (2.53 lb)
Environment	IP Rating	IP30
	Vibration/Shock	MIL-STD-810G
	EMC	CE, FCC Class B
	Safety	UL/cUL, CB
	Vehicle Regulations	SAE J1455, ISO 7637-2, SAE J1113
	RF Regulations	CE (R&TTE), FCC ID, PTCRB
	Operating Temperature	-30 ~ 70 °C (-22 ~ 158 °F)
	Storage Temperature	-40° C ~ 80° C (-40 ~ 176 °F)

System I/O
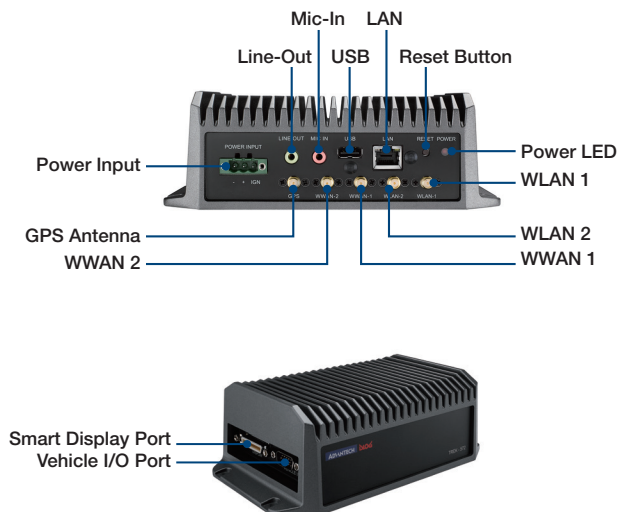
Ordering Information

Part Number	Description
TREK-572-LWB7B0E	TREK-572 w/LTE(US)/GPS/WLAN/BT/WES7
TREK-572-LWB7A0E	TREK-572 w/LTE(EU)/GPS/WLAN/BT/WES7

Notes:
a. Win10 IoT LTSB and Linux OS images are available upon request.
b. SKU for Europe will be available soon.
c. TREK-572 can only output to TREK in-vehicle smart displays. If you require a display unit to serve as a driver console, please order a TREK-30x unit and connecting cable.

Packing List

Part Number	Description
1700019031	Power cable, 2 m
1700023051-01	Vehicle I/O cable
1750007724-01	3-in-1 (LTE/GPS/Wi-Fi) antenna, 3 m
1750007723-01	Wi-Fi antenna, 3 m

Optional Accessories

Part Number	Description
TREK-303R-HA0E	TREK-303 7" WVGA in-vehicle smart display
TREK-306D-HA0E	TREK-306DH 10.4" XVGA in-vehicle smart display
1700020007	M cable SCSI-36P(M)/SCSI-36P(M), 2 m, for TREK-303
1700020008	M cable SCSI-36P(M)/SCSI-36P(M), 5 m, for TREK-303
1700019464	A cable 1*3P-5.08/DC jack, for in-house testing
96PSA-A65W19V1-1	Adaptor 100-240 VAC, 60W, 12 V, 5A, w/o PFC FSP060-DBA, for in-house testing