TREK-550

ADVANTECH DLoG
Competence in Mobile Computing

Intel eMenlow In-Vehicle Computing Box

Features

- Win CE 6.0, WES 2009, XP and Linux (Ubuntu 10.04/2.6.34)
- Automotive grade working temperature range (-30 to 70° C)
- Rich I/O including CAN, LAN, RS-232, RS-485, J1708, 4DI/4DO (isolated), Line out, Mic in, USB, and Video-in
- Built-in communication modules, including GPRS/HSDPA/CDMA, WLAN & Bluetooth
- GPS with AGPS and dead reckoning technology (Gyro & speed line)
- Certifications: CE/FCC/E-mark, MIL-STD-810G, ISO 7637-2, SAE J1455, SAE J1113 regulations
- Dual independent display/audio output for both driver and passenger
- Ignition on/off delay; SW controllable for car power management

PTCRB E 13 RoHS COMPLIANT 2002/95/EC

Introduction

The TREK-550 is a dedicated box computer for industrial vehicle fleets, transport trucks, buses and taxis. TREK-550 combined with variety of I/O connectors can be connected to devices like OBD-II or TPMS (Tire Pressure Monitoring Systems). Dual display/dual audio interfaces supporting different resolutions can deliver different applications to different displays; eg: one application to a fleet driver and another to a digital signage application.

Built-in wireless communications (WWAN, WLAN, BT) enable TREK-550 to send important driver/vehicle/location/cargo information back to the control center. TREK-550 can also operate in extreme environments with features like a wide working temperature range (-30 to 70° C). TREK-550 also uses a special design to handle the critical issue of in-vehicle power. Special power protection (ISO7637-2/SAE J1455 Class A/ SAE J1113) and car power management software (Ignition on/off, delay on/off, low battery monitor) prevent electrical noise and surges from impacting the system, guarding against damage from transient car power. TREK-550 also supports a rear view monitor via a video port connection. With this feature, drivers can monitor the environment on both sides of the truck in real-time for driving safety. TREK-550 can also support dead-reckoning, meaning the truck can still be traced even when the driver is driving in a tunnel.

Specifications

System	CPU	Intel Atom XL Z510PT 1.1 GHz (Z520PT 1.3 GHz is optional) (Industrial grade)
	Chipset	Intel LE82US15EE
	System Memory	1 x 200-pin SODIMM socket; Supports up to 2 GB industrial DDR2 400/533 memory module
	OS	Windows Embedded Standard 2009, Windows CE 6.0, Windows XP
Physical	Dimensions (W x H x D)	266 x 149 x 69.7 mm
	Weight	2 kg
Storage	Compact Flash	1x Type II (externally accessible)
Display interface	Smart Display Port	Design compatible with TREK-30 X Series ▪ 18-bit LVDS out ▪ 2 x RS-232 ports ▪ Mono audio out ▪ 1 x USB host ▪ 12V DC output @ 1A output
I/O	CAN	1 x CAN 2.0 A/B (J1939 protocol is ready, 2500Vrms isolation protection) via box header
	Video In	2 x composite video inputs for rear view monitor; bypass to digital display port; doesn't support video recording (NTSC, PAL, SECAM with automatic format detection)
	USB Host	3 x USB host ports type A connectors with cable clip (front I/O panel x1; rear I/O panel x2)
	Mic In	1 x Mic-in jack with cable clip
	Line Out	1 x line out jack with cable clip
	COM Ports	▪ 2 x full function RS-232 ports, 5 V @ 500 mA, 12 V @ 250 mA, ping9, jumper selected ▪ 1 x 4-wire RS-232, 1 x RS485, 1 x J1708
	Isolated DI/DO	▪ 4 x isolated dry contact digital inputs via DB9 (2500 Vrms protection) ▪ 4 x relay drivers via DB9
	VGA Output	1 x VGA output via DB-15 (independent display)
	LAN	1 x 10/100/1000 Ethernet (with LEDs) via DB9 with cable clips
Communication	WWAN	GPRS - Cinterion MC55i (option), CDMA -Sierra Wireless 5728V (option) and HSDPA-MC8090/MC8092 (option), with SMA connector for external antenna
	WLAN	Optional, supports 802.11 a/b/g/n, with SMA connector for external antenna (through internal Mini PCI Express)
	Bluetooth	Optional, supports Bluetooth Class II, Version 2.0 + EDR, antenna built-in
GPS	Model	ublox industrial grade LEA-6S
	RF Receiver Type	50 channels GPS L1 frequency, C/A code
	Cold Start	29 s
	Warm Start	29 s
	Hot Start	<1 s
	AGPS	<5 s
	Acquisition	160 dBm
	Protocol	NMEA (Input/Output, ASCII, 0183,2.3 (compatible to 3.0) UBX (u-blox proprietary protocol) (Note: Dead Reckoning optional)
G sensor		Built-in

Remark: New TREK-550 is with Advantech DLoG logo.

All product specifications are subject to change without notice

Last updated : 12-Nov-2013

TREK-550

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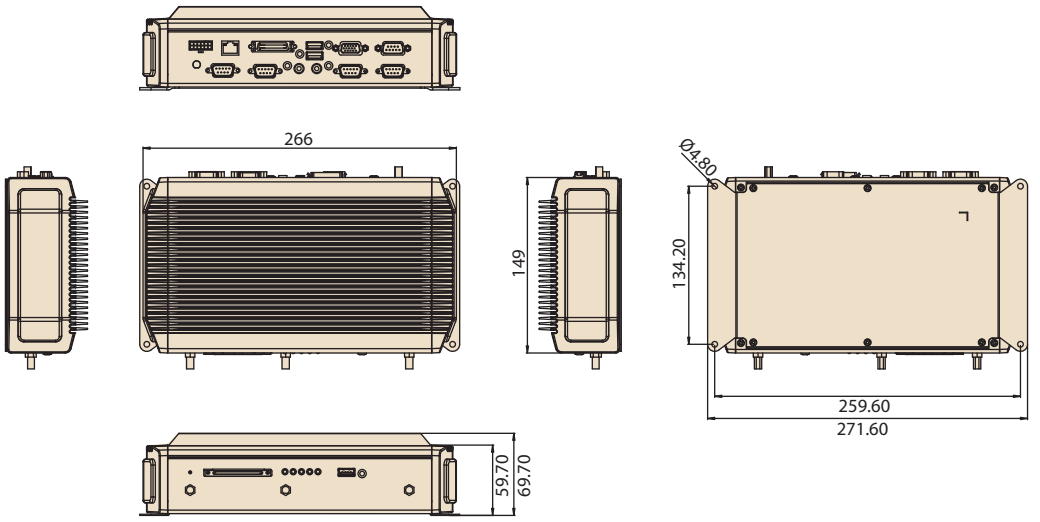
LED	LED Indicator	▪ Power (Red) ▪ Storage Access (Green) ▪ WLAN data transfer (Green) ▪ WWAN link (Green) ▪ GPS operation (Blue)
Car Power Design	DC-input	Supports 12/24 V car power system by ISO7637-2 & SAEJ1113 (6V ~ 36V wide DC input)
	Power Management	Power on/off delay, ▪ Power on delay, 2 sec default ▪ Power off delay, 5 sec as default ▪ Delay time controllable by SW configuration ▪ Low voltage protection
	HW Reset	1 reset button
Environment	IP Rating	IP 31
	Operating Temp.	-30° C ~ +70° C
	Storage Temp.	-40 °C ~ +85° C
	Vibration/Shock	MIL-STD-810G/ 202A, Method 516.5, EN60721-3 (5M3) compliant
	EMC	CE, FCC, IC
Certifications	Safety/ RF	CE, CB, PTCRB
	Vehicle Power Regulation	E-mark, SAE J1455, SAE J1113, ISO7637-2 level IV compliant
Mechanical	Material	Top cover (Aluminum extrusion) Side cover (PC) Bottom & I/O cover (metal)

Dimensions

Unit: mm



Ordering Information

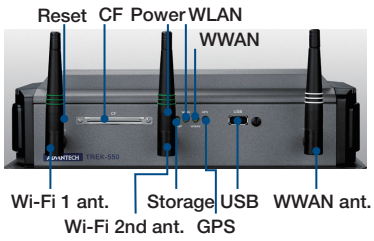
Part Number	Description
TREK-550-00A2E	Intel Atom Z510PT 1.1 GHZ GPRS Barebone
TREK-550-00A2E	Intel Atom Z510PT 1.1 GHZ HSXPA CDMA Barebone
TREK-550-10A2E	Intel Atom Z520PT 1.3 GHZ GPRS Barebone
TREK-550-11A2E	Intel Atom Z520PT 1.3 GHZ HSXPA / CDMA Barebone
9668TREK20E	Cinterion MC55i 4 Band GPRS Kit
9668TREK21E	Sierra Wireless 5728V CDMA Module Kit
9668TREK66E	802.11 B/G/N Module Kit
9668TREK64E	TREK 550 BT module kit
9668TREK68E	Sierra Wireless 8090 HSUPA for USA only
9668TREK69E	Sierra Wireless 8092 HSUPA
9668TREK70E	Ublox LEA-6S GPS module

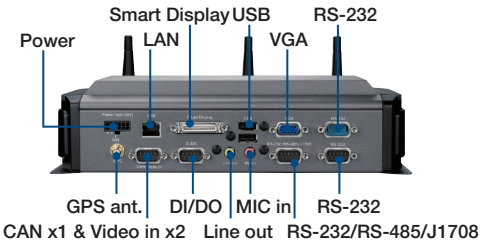
(Note: Module kits include RF, antenna and internal cable)

Packing List

Description	Part Number	Quantity
TREK-550		x1
CAN/Video-in cable (15 cm)	1700021556-01	x1
Power cable (1.8 m)	1700018306	x1
Cable clip for Mic in, line out, USB host, LAN	1990018848T000	x6
Cap Plug-Power for TREK-550	199021213T000	x1

I/O Connectors





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