TREK-550

NEW

Intel® Atom™ In-Vehicle Computing Box

Features

- Supports Win CE 6.0, XPE, 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, isolation 4DI/4DO, 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

CCC E 13 Windows Embedded FC CE 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 System). 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 through connecting to a video port. With this feature, driver can monitor the environment on two 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 as option)	
	Chipset	Intel LE82US15EE	
	System Memory	1 x 200-pin SODIMM socket, Supports up to 2 GB industrial DDR2 400/533 memory module	
Physical	Dimensions (W x H x D)	266 x 149 x 69.7 mm	
	Weight	2 kg	
Storage	Compact Flash	1x Type II (external accessible)	
Display interface	Smart Display Port	Design compatible with TREK-303H, 7" smart display the signal includes: - 18 bits LVDS out - 2 x RS-232 - 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) by box header	
	Video in	- 2 x composite video input for rear view monitor, by pass 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 connector 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 port	- 2 x Full function RS-232, 5 V @ 500 mA, 12 V @ 250 mA, ping9, by jumper selected - 1 x 4-wire RS-232, 1 x RS485, 1 x J1708	
	Isolation DI/DO	- 4 x Isolated Dry Contact Digital Inputs by DB9 (2500 Vrms protection) - 4 x Relay driver by DB9	
	VGA output	1 x VGA output by DB-15 (independent display)	
	LAN	1 x 10/100/1000 Ethernet (with LEDs) by RJ-45	
Communication	WWAN	GPRS - Cinterion MC55i (option), CDMA -SirerraWireless 5728V (option) and HSDPA-MC8790V (option), with SMA connector for external antenna	
	WLAN	Optional, supports 802.11 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 (dead reckoning)	Model	LEA-4R (built in Gyro) (option)	LEA-5S (default)
	RF Receiver Type	16 Channels GPS L1 frequency, C/A code	50 channels GPS L1 frequency, C/A code
	Cold Start	36 s	29 s
	Warm Start	33 s	29 s
	Hot Start	< 3.5 s	<1 s
	AGPS	-	<5 s
	Acquisition	-140 dBm	-160 dBm
	Protocol	NMEA (Input/Output, ASCII, 0183,2.3 (compatible to 3.0) UBX (u-blox proprietary protocol)	
G sensor		Yes, built-in	
LED	LED indicator	- Power (Red) - Storage Access (Green) - WLAN data transfer (Green) - WWAN link (Green) - GPS operation (Blue)	

Specifications Cont.

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Car Power Design	DC-input	Supports 12/24V 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	Yes, 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, Method 516.5
	EMC	CE, FCC, IC
Certifications	Safety	CE, CB
	Vehicle Power Regulation	E-mark, SAE J1455, SAE J1113, ISO7637-2 compliant
Mechanical	Material	Top cover (Aluminum extrusion) Side cover (PC) Bottom & I/O cover (metal)

Dimensions

Unit: mm

266
149
134.20
Ø4.80
259.60
271.60
59.70
69.70
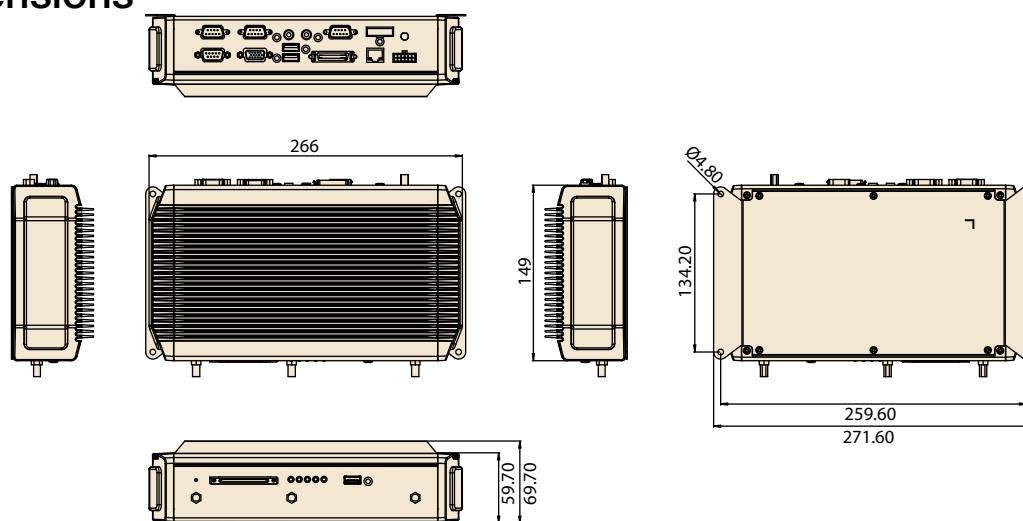
Ordering Information

Part Number	Description
TREK-550-GXPEA0E	Intel Atom 1.1 GHz, GPS, GPRS, 1GB DDR, 4GB CF, WinXPe
TREK-550-GA0E	Intel Atom 1.1 GHz , GPS, GPRS module built-in
TREK-550-CA0E	Intel Atom 1.1 GHz , GPS, CDMA module built-in
TREK-550-HA0E	Intel Atom 1.1 GHz , GPS, HSDPA module built-in
TREK-303R-HA0E	7" vehicle display system, 800 x 480 resolution, with 4wire resistive touchscreen, 2-watt speaker
1700018342	2-meter cable(paired with TREK-550)
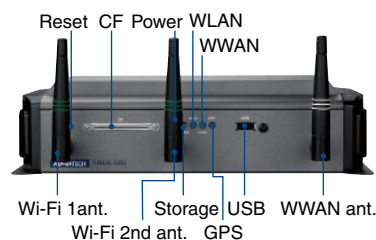
Packing List

Description	Part Number	Quantity
TREK-550		x1
CAN/Video-in cable (15 cm)	1700018743	x1
Power cable (1.8 m)	1700018306	x1
GPS Antenna (5 m) (if your configuration has GPS module)	1750001380	x1
WWAN Antenna (if your configuration has WWAN module)	1750006080	x1
Startup manual CD	2068055000	x1
Cable clip for Mic in, line out, USB host, LAN	1990018848T000	x6

I/O Connectors

Reset CF Power WLAN
WWAN
Wi-Fi 1ant.
Wi-Fi 2nd ant.
Storage USB WWAN ant.
GPS

Power
Smart Display USB RS-232
LAN VGA
GPS ant.
CAN x1 & Video in x2
DI/DO MIC in RS-232
Line out RS-232/RS-485/J1708