

TREK-550

Intel® Atom™ Industrial In-Vehicle Computing Box

NEW



Features

- Supports Win CE 6.0, XPE, XP and Linux
- Automotive grade working temperature range (-30° C 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 GSM/GPRS/HSDPA/CDMA, WLAN & Bluetooth
- GPS with AGPS and dead reckoning technology (Gyro & speed line)
- Certifications: CE/FCC/e-mark, MIL-SD810F, ISO 7637-2, SAE J1455, SAE J1113 regulations
- Dual display/audio output for both driver and passenger
- Ignition on/off delay; SW detectable/controllable for car power management



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 degrees). 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 support rear view monitor through connecting video in port. With this feature, driver can real time monitor the environment on two sides of the truck for driving safety. TREK-550 can also support dead-reckoning feature, which means the truck can still be traced even the driver is driving in a tunnel.

Specifications

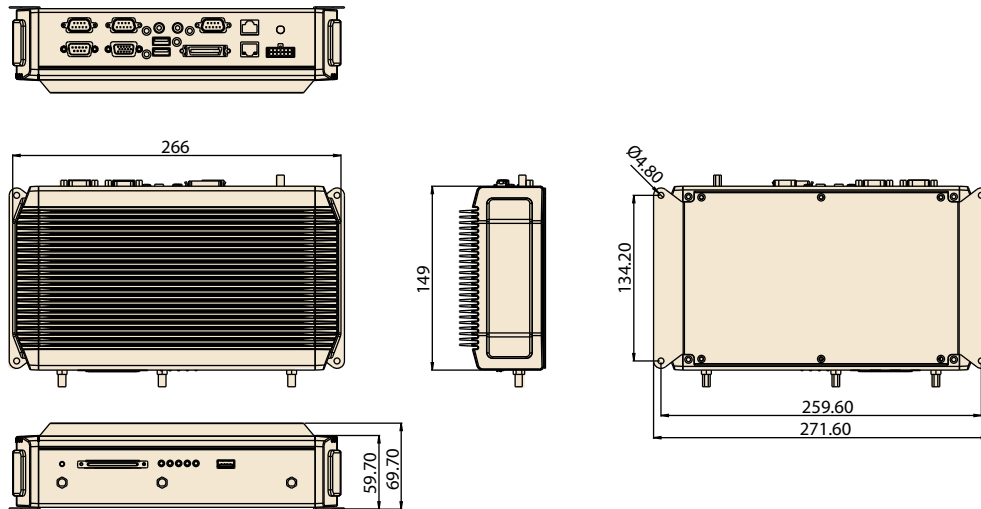
System	CPU	Intel Atom XL Z510PT 1.1 GHz (Z520PT 1.3 GHz as option)
	Chipset	Intel LE82US15EE
	System Memory	1 x 200-pin SODIMM socket, Supports up to 2 GB DDR2 400/533 memory module
	Mini PCI-Express	1 x standard Mini PCI express sockets, user accessible, for WLAN
Physical	Dimensions (W x H x D)	266 x 149 x 68.2 mm
	Weight	2 kg
Storage	Compact Flash	Default 2 GB Industrial Grade CF card, supports Advantech SQFlash utility
	HDD	40 GB/80 GB (SATA)
Display interface	High Density Port	Design compatible with TREK-303, support 7" LCD 800 x 480 resolution, the signal includes:
		- 18 bits LVDS out - 2 x RS-232 - Mono audio out - 1 x USB Host - 12V DC output
I/O	CAN	1 x CAN 2.0 A/B by RJ45 (Note1: J1939 protocol is ready, Note2: 2500Vrms isolation protection)
	USB Host	3 x USB host ports with A type receptacle
	Mic in	1 x Mic-in jack
	Line out	1 x line out jack
	COM port	- 2 x Full function RS-232, 5V@ 500mA, 12V@ 250mA, 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
	Video in	- 2 x composite video input selection supported format (for rear view monitor) by RJ-45 connector (NTSC, PAL, SECAM with automatic format detection)
	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	GSM/GPRS - Wavcom Q55 (default), CDMA - Sierra 5728V and HSDPA- MC8790V (option), with SMA connector for external antenna
	WLAN	Optional, support 802.11 a/b/g, with SMA connector for external antenna.
	Bluetooth	Optional, support Bluetooth Class II, Version 2.0 + EDR, antenna built in
GPS (dead reckoning)	Model	LEA-4R (built in Gyro) LEA-5S (default)
	RF Receiver Type	16 Channels (ublox LEA-4R) 50 channels
	Cold Start	GPS L1 frequency, C/A code 34 s 29 s
	Warm Start	33 s 29 s
	Hot Start	< 3.5 s <1 s
	AGPS	Supports AGPS on line only, <5 s <1 s
	Tracking and Navigation	-150dBm -160 dBm
	Acquisition	-140dBm -160 dBm
	Protocol	NMEA (GGA, GLL, GSA, GSV, RMC, VTG, TXT) UBX (u-blox proprietary protocol)
	G sensor	Yes, built in (by project)

Specifications Cont.

LED	LED indicator	- Power on (Red) - Storage Access (Green) - WLAN data transfer (Green) - WWAN link (Green) - GPS operation (Blue)
Car Power Design	DC-input	Supports 12/24V car power system (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 - Supports S4 suspend mode
	Reset	Yes, 1 reset button
Environment	Operating Temp.	-30° C ~ +70° C
	Storage Temp.	-40 °C ~ +85° C
	Vibration/Shock	MIL-STD-810F, Method 516.5
	EMC	CE, FCC, IC
Certifications	Safety	CE, CB
	Vehicle Power Regulation	e-mark, SAE J1455, SAE J1113, ISO7637-2
Mechanical	Material	Top cover (Aluminum extrusion)
		Side cover (PC)
		Bottom & I/O cover (metal)

Dimensions

Unit: mm



Ordering Information

Part Number	Description
TREK-550-A00E	Intel Atom 1.1 GHz (Option: GPRS)
TREK-550-A20E	Intel Atom 1.1 GHz (Option: HSDPA/CDMA)
TREK-550-A40E	Intel Atom 1.3 GHz (Option: GPRS)
TREK-550-A60E	Intel Atom 1.3 GHz (Option: HSDPA/CDMA)
TREK-303R-HA0E	7" vehicle display system, 800 x 480 resolution, with 4wire resistive touchscreen, 2-watt speaker

Packing List

Description	Quantity
CAN /Video in cable	x1
Power cable	x1
GPS Antenna	x1
WWAN Antenna	x1
Screw	x4
Startup manual CD	x1

Rear-Side Connectors

