

# TREK-753

## 7" Mobile Data Terminal with Intel Atom Z510PT/Z520PT



### Features

- 7" WVGA LCD with 5 programmable adjustable brightness hot keys
- Windows Embedded Standard (WES) 2009, WinCE6.0 and Ubuntu Linux 10.04
- Supports analog video input & CAN2.0b with J1939 protocol
- Supports CDMA/HSDPA/GPRS, GPS, WLAN, BT communications
- Supports 12V/24V (default) car power system by ISO7637-2 & SAE J1113 (6 ~ 36V wide DC input)
- Supports 48V (project base) car power system (18 ~ 58V wide DC input)
- Fanless and ruggedized aluminum chassis, able to work under -30 ~ 60° C temperature range



### Introduction

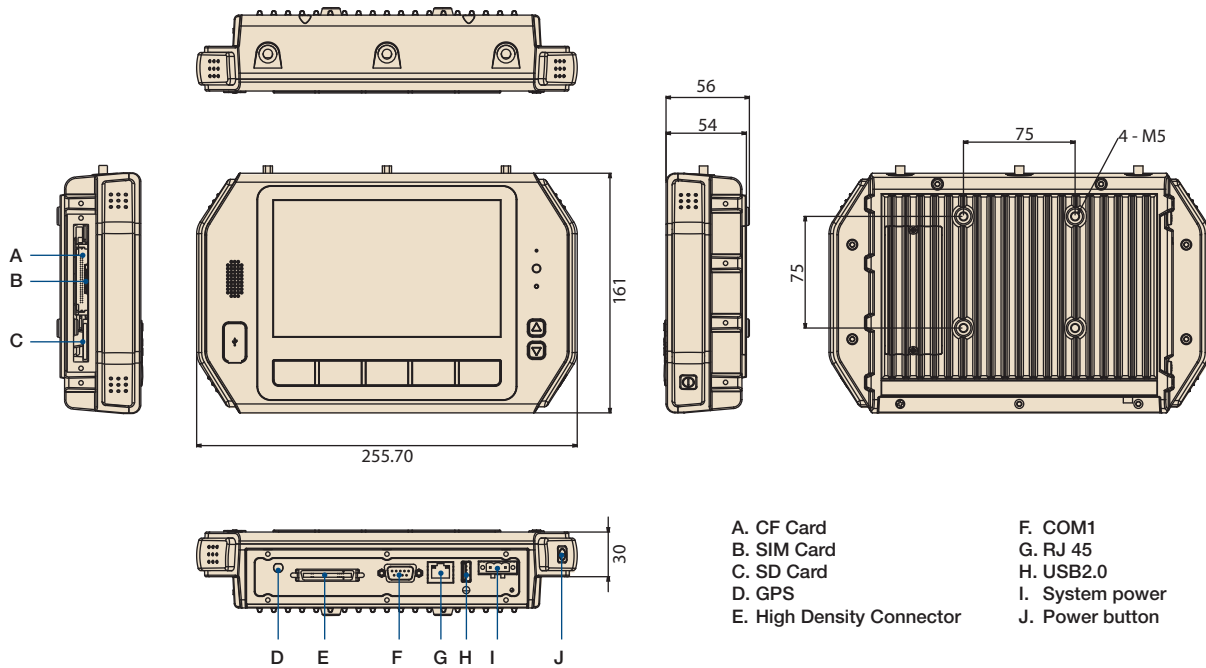
TREK-753 is a new generation, all-in-one 7" mobile data terminal with touchscreen, with a compact design for commercial vehicles. With an Intel Atom Z510PT/Z520PT processor, the system is high performing with wired connections like Gigabit Ethernet & CAN2.0b with J1939 protocol support; users can also connect to network services using easily with CDMA/ HSDPA/ GPRS/ GPS/ WiFi/ BT options. Focused on the automotive market, TREK-753 is designed with vehicle power which is compliant with ISO7637-2 & SAE J1113, ensuring the system is more stable during engine starts. Die casting and a ruggedized chassis not only provide more capabilities in a wide range of temperatures (-30 ~ 60° C), but TREK-753 is also suitable for harsh environments subject to shock (100 G, 6 ms) and vibration.

### Specifications

Processor	OS	Windows Embedded Standard (WES) 2009, WinCE6.0 and Ubuntu Linux 10.04
	CPU	Onboard Intel Atom 1.1 GHz / 1.33 GHz (optional)
	Chipset	Onboard Intel LE82US15EE
	Watch Dog	Yes
	RTC	Yes with one time 200mAh li-ion coin battery
	RAM	1 x 200-pin SODIMM socket supports a memory module of up to 2 GB
	Storage	1 x external accessible type II Compact Flash memory card (bootable device) 1 x SD card with external access for extra capacity (SD function is not available with WinCE6.0)
	Bus Expansion	1 x mini-PCIe slot for built-in WLAN (b/g/n) module 1 x mini-PCIe slot for built-in CDMA/HSDPA (USB 2.0 interface)
LCD	Display Type	7" 16:9 industrial degree TFT color TFT LCD, LED backlight
	Luminance	400 cd/m2 (average with TS)
	Max. Resolution	WVGA 800 x 480, 10% ~ 100% brightness controlled by two hardware buttons on the front panel and a light sensor
Touchscreen	Type	4-wire analog resistive type, continuous resolution, optional support for sunlight readable touchscreen
I/O Functions	COM	3 x COM ports: <ul style="list-style-type: none"> <li>1 x full function RS-232 port supports high speed (up to 1Mb max.) with 12 V/2.5 A in I/O plate</li> <li>1 x full function RS-232 supports high speed (up to 1 Mb max.) port via high density cable (*1)</li> <li>1 x RS-485 port via high density cable (*1)</li> </ul>
	Audio	1 x built-in 2 W speaker on front panel 1 x line-in, 1 x line-out, 1 x microphone input via high density cable (*1)
	Function Keys	5 x green lit, programmable function keys, 2 x for LCD back light adjustment
	USB	3 x USB 2.0 ports 1 x rubber door protection at front panel, 1 x type A connector with cable clip, 1 x high density cable (*1)
	Video Input (Rear View Monitor)	1 x video input for rear view camera via high density cable (*1)
	LAN	1 x 100/1000T Gigabit Ethernet via RJ-45 connector
	Light Sensor	1 x light sensor on front cover for auto LCD backlight adjustment
	DI/DO	4 x isolated digital input & 4 x isolated digital output ports via high density cable (*1)
	CAN Bus	1 x CAN 2.0b with J1939 protocol via high density cable (*1)
	J1708	1 x J1708 via high density cable (*1)
RF Functions	GPS (Optional)	Built-in 50 channel GPS uBlox LEA-5S with SMA connector for external antenna
	Bluetooth (Optional)	Built-in Class 2 Bluetooth V2.0 + EDR module with internal antenna
	WWAN (Optional)	<ul style="list-style-type: none"> <li>Built-in Quad-band 900/1800/850/1900MHz GSM/GPRS module Cinterion MC55i with SMA connector for external antenna</li> <li>Built-in HSDPA module Sierrawireless MC8790V with SMA connector for external antenna</li> <li>Built-in CDMA module Sierrawireless MC5728 with SMA connector for external antenna</li> </ul>
	WLAN (Optional)	Built-in AzureWave AW-NE768 IEEE 802.11b/g/n with SMA connector for external antenna
Power Supply	Input Voltage	<ul style="list-style-type: none"> <li>Supports 12V/24V (default) car power system by ISO7637-2 &amp; SAE J1113 (6 ~ 36V wide DC input)</li> <li>Supports 48V (project base) car power system (18 ~ 58V wide DC input)</li> </ul>
	Ignition On/Off	Power on delay, default 2 seconds; Power off delay, default 5 seconds; Hardware power off delay, default 30 seconds. SW configurable
	LED indicator	1 x yellow LED shows system power ready (on front panel)

**Dimensions**

Unit: mm



**Specifications Cont.**

Mechanical Design	Material	Aluminum
	Protection	IP54 (except I/O plate), option to support entire system IP54 with additional I/O cover (9668TREK37E)
	Weight	2.2 kg (-4.85 lbs)
	Dimensions (W x H x D)	255.7 x 161 x 56 mm (10.04" x 6.30" x 2.20")
Environmental Specifications	Operating Temperature	-30 ~ 60° C
	Relative Humidity	Compliant to 10 ~ 90% @ 40° C (non-condensing)
	Vibration Shock	MIL-STD-810G (US highway truck), Method 516.5, SAE J1455, Class 5M3 in accordance with DIN EN 60721-3-5
	Certifications	CE, FCC, UL/cUL, CB, CCC, E-mark, PTCRB, EN50155

**Ordering Information**

Part Number	Description
TREK-753R-0A0E	TREK-753R Bare bone with Z510 1.1 G CPU
TREK-753R-1A0E	TREK-753R Bare bone with Z520 1.3 G CPU
TREK-753S-0A0E	TREK-753R Bare bone with 1.1 G CPU/SR T/S*
TREK-753R-CWBXPA0E	TREK-753R w/CDMA/GPS/WLAN/BT/1 GB RAM/4 G CF/WES
TREK-753R-HWBXPA0E	TREK-753R w/HSDPA/GPS/WLAN/BT/1 GB RAM/4 G CF/WES
TREK-753R-GWBXPA0E	TREK-753R w/GPRS/GPS/WLAN/BT/1 GB RAM/4 G CF/WES

\*Note: SR T/S stands for Sunlight Readable TouchScreen.

**TREK-753 CTOS Kit**

Part Number	Description
9668TREK30E	TREK-753R RevA0 GPS kit
9668TREK31E	TREK-753R RevA0 WiFi (Azurewave) kit
9668TREK32E	TREK-753R RevA0 HSDPA kit
9668TREK34E	TREK-753R RevA0 GPRS kit
9668TREK35E	TREK-753R RevA0 AC/DC power kit
9668TREK36E	TREK-753R RevA0 BT module kit

**Optional items**

Part Number	Description
1700019307	High density cable (2 meters)
1700019611	Cigarette lighter cable for testing purpose (30cm)
RAM-MOUNT-01	VESA RAM mount w/clamp base 1.5" ball
RAM-MOUNT-06E	VESA RAM mount w/VESA base, 1.5" ball
9668TREK37E	IP54 I/O housing cover for TREK-753