

# 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
- 12 V/24 V option: 6 ~ 36 V input range compliant to ISO7637-2 & SAE J1113 standards
- 48 V option: 18 ~ 58 V input range for specific applications
- 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)<br>1 x SD card with external access for extra capacity (SD function is not available with WinCE6.0)  |
| Bus Expansion |                                 | 1 x mini-PCle slot for built-in WLAN (b/g/n) module  |
|               |                                 | 1 x mini-PCle 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:<br>▪ 1 x full function RS-232 port supports high speed (up to 1Mb max.) with 12 V/2.5 A in I/O plate<br>▪ 1 x full function RS-232 supports high speed (up to 1 Mb max.) port via high density cable (*1)<br>▪ 1 x RS-485 port via high density cable (*1)  |
|               | Audio                           | 1 x built-in 2 W speaker on front panel<br>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<br>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)  |
|               | 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   |
|               | RF Functions                    | WWAN (Optional)<br>▪ Built-in Quad-band 900/1800/850/1900MHz GSM/GPRS module Cinterion MC55i with SMA connector for external antenna<br>▪ Built-in HSDPA module Sierrawireless MC8790V with SMA connector for external antenna<br>▪ Built-in CDMA module Sierrawireless MC5728 with SMA connector for external antenna |
| Power Supply  | WLAN (Optional)                 | Built-in AzureWave AW-NE768 IEEE 802.11b/g/n with SMA connector for external antenna   |
|               | Input Voltage                   | ▪ 12 V/24 V option supports 6 ~ 36 V car power design with ISO7637-2 & SAE J1113 compliance<br>▪ 48 V option supports 18 ~ 58 V input for specific applications  |
|               | 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)   |

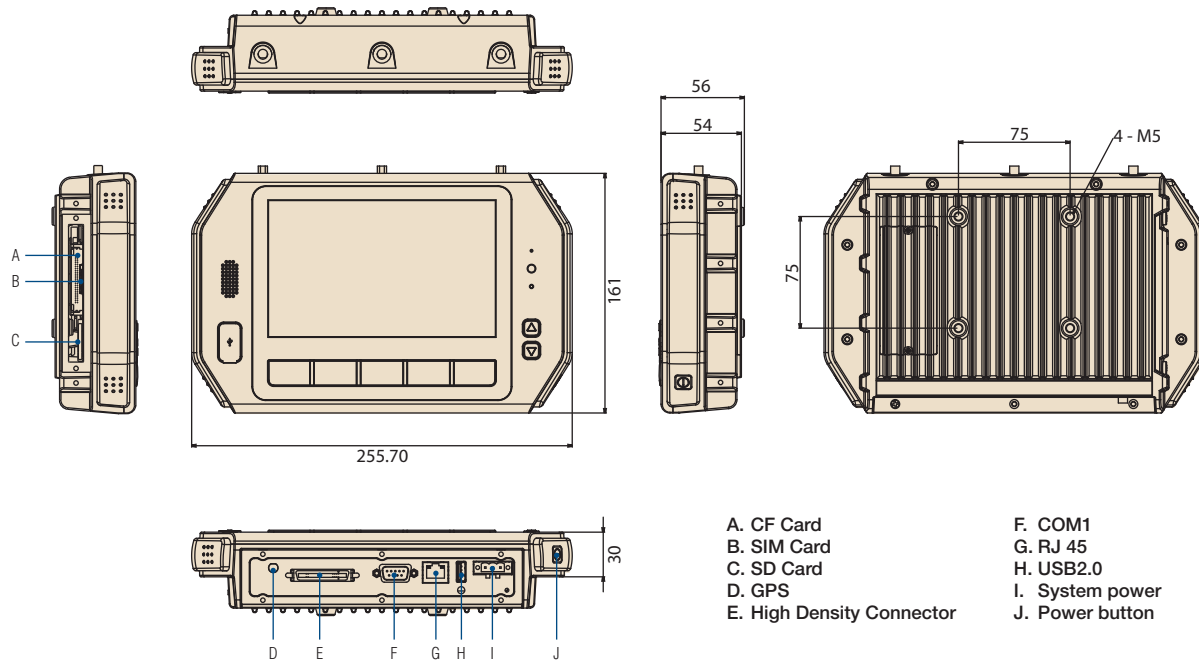
\*1. High density cable is an optional item for ordering.

# TREK-753

|                              |                        |   |
|------------------------------|------------------------|---|
| 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  |

## Dimensions

Unit: mm



## 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.

## 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                |

## 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        |