

# TREK-773

## 7" All-in-One Mobile Data Terminal



### Features

- Intel® Atom™ E3827 SOC
- Supports WES8, Win7 & ubuntu
- 7" WVGA wide-angle LCD resistive touchscreen
- Vehicle diagnostics interface with CAN (J1939, OBD-II/ISO 15765) and J1708 (J1587) protocols
- Built-in GNSS, WLAN, Bluetooth, NFC, and LTE WWAN modules
- Intelligent vehicle power management system supports ignition on/off/delay functions, wake-up event control, and system health monitoring and diagnostics
- Wide working temperature (-30° C ~ 60° C), supports 12/24 V vehicle power (ISO 7637-2), and certified for shock and vibration tolerance (MIL-STD-810G and 5M3)



### Introduction

TREK-773 is a new generation all-in-one 7" mobile data terminal. With an Intel® Atom™ E3826 SOC processor, the system provides high performance with wired connections such as Gigabit Ethernet, CAN2.0B (J1939, OBD-II/ISO 15765) and J1708 (J1587). Users can also connect to network services via LTE (backward compatible to CDMA/HSDPA), GPS, WLAN and Bluetooth options. Focused on the automotive market, TREK-773 is designed for vehicle power which is compliant with ISO7637-2 & SAE J1113, ensuring the system is stable during engine starts. The ruggedized chassis provides more capabilities not only in a wide range of temperatures (-30 ~ 60 °C), but also in harsh environments subject to shock (100G, 6ms) and vibration.

### Specifications

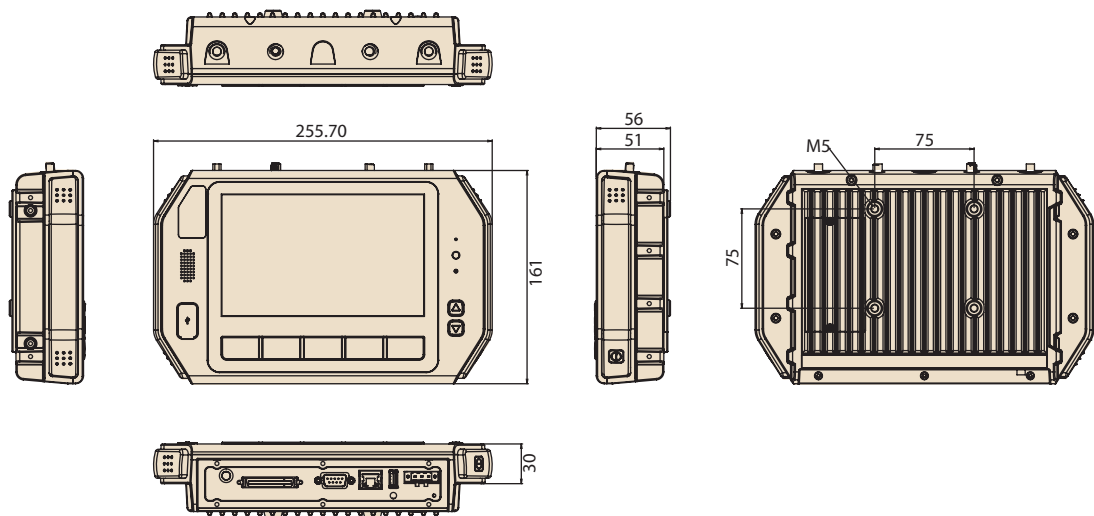
|             |                                                              |                                                                                                                                 |
|-------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Core        | Processor                                                    | Intel Atom E3827(Dual Core, 1.75GHz)                                                                                            |
|             | Memory                                                       | Support up to 4GB DDR3L-1066 memory module (Default configuration: 2GB)                                                         |
|             | Graphic                                                      | Integrated 2D/3D Graphic Engine                                                                                                 |
|             | O.S                                                          | Windows Embedded 8 Standard (32-bit); Windows 7 by project-based<br>ubuntu 14.04 (32-bit)                                       |
| Storage     | CFast                                                        | 1 x external accessible CFast slot with cover, support system boot up<br>Default configuration: 16GB                            |
|             | SD Card                                                      | 1 x external accessible push-push type SD card slot with cover for extra capacity expansion                                     |
| Display     | Type                                                         | 7" industrial grade TFT LCD                                                                                                     |
|             | Resolution                                                   | WVGA (800 x 480)                                                                                                                |
|             | Brightness (cd/m²)                                           | 500 cd/m² (typical)                                                                                                             |
|             | View Angle (H/V)                                             | 170/170 Full Viewing Angle                                                                                                      |
|             | Contrast Ratio                                               | 900                                                                                                                             |
| Touchscreen | Type                                                         | 4-wire analog resistive, with 3H and IK06 (drop ball 510g @300mm) supported; optional support for sunlight readable touchscreen |
|             | Transparency                                                 | 84% ±3%                                                                                                                         |
| Sensor      | Sensor                                                       | Light sensor, G-sensor                                                                                                          |
| I/O         | Function Key                                                 | 5 x programmable function keys with green LED                                                                                   |
|             | Standard I/O Port                                            | 1 x SIM Card Slot (Left side)                                                                                                   |
|             |                                                              | 1 x High Speed Full RS-232 (Bottom side) (RS232 RI pin is able to config. into 12VDC output.)                                   |
|             |                                                              | 1 x USB 3.0 Host Type A (Bottom side)                                                                                           |
|             |                                                              | 1 x Giga LAN, RJ45 connector (Bottom side)                                                                                      |
|             | Extended I/O Port <sup>(*)</sup><br>(High Density Connector) | 1 x MIC In                                                                                                                      |
|             |                                                              | 1 x Stereo Line In                                                                                                              |
|             |                                                              | 1 x Stereo Line Out                                                                                                             |
|             |                                                              | 1 x CVBS Input                                                                                                                  |
|             |                                                              | 1 x USB 2.0 Host                                                                                                                |
|             |                                                              | 1 x High Speed Full RS-232                                                                                                      |
|             |                                                              | 1 x RS-485 with auto flow control                                                                                               |
|             |                                                              | 4 x Isolated DI (Dry contact)                                                                                                   |
|             |                                                              | 4 x Isolated DO (Open collector output, driving by replay)                                                                      |
|             |                                                              | 1 x CAN Bus (Support Raw CAN, J1939, OBD-II/ISO 15765)                                                                          |
|             |                                                              | 1 x J1708 (Support J1587)                                                                                                       |
|             |                                                              | 1 x 12VDC/1.5A continuous current output (shared with standard I/O Full RS-232 DB9) <sup>(**)</sup>                             |

\*1 The total power output is 12 VDC/1.5A, shared with Std. RS232 DB9.

\*2 High density cable is an optional item for ordering.

Dimensions

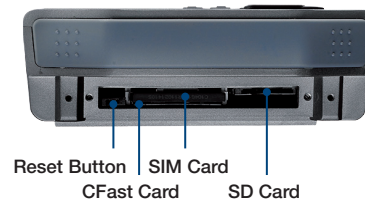
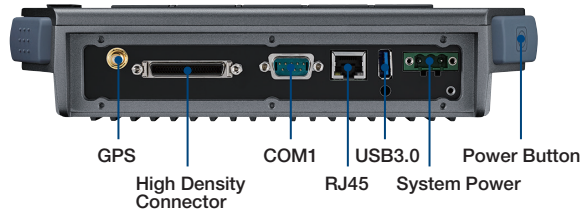
Unit: mm



Specifications Cont.

|             |                                                 |                                                                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I/O         | Power Button                                    | 1 x Power Button                                                                                                                                                                                                                                                              |
|             | LED                                             | 1 x LED (Yellow for Power)                                                                                                                                                                                                                                                    |
| RF          | WLAN + Bluetooth                                | IEEE 802.11a/b/g/n + Bluetooth (V4.0 LE, V3.0+HS, V2.1+EDR) combo module via Full Size Mini-PCIe Slot (Optional: High power WLAN for Roaming by project-based)                                                                                                                |
|             | WWAN                                            | 4G (LTE / HSPA+ / CDMA EV-DO Rev.A): Sierra Wireless MC73xx                                                                                                                                                                                                                   |
|             | GNSS                                            | Built-in u-blox MAX-M8 module, supports AGPS, Glonass, and BeiDou                                                                                                                                                                                                             |
|             | Antenna                                         | 1 x GPS, 2 x WWAN (LTE), 2 x WLAN/Bluetooth                                                                                                                                                                                                                                   |
|             | NFC                                             | ISO/IEC 14443A, 14443B, 15693; MIFARE 1K/4K, Ultralight; NFC-IP2 protocol                                                                                                                                                                                                     |
| Power       | Voltage Input                                   | Supports 12/24V car power system. (9 ~ 32V wide DC input, ISO 7637-2 & SAE J1113 compliant.)<br>48V option: 18~58V input by project-based                                                                                                                                     |
|             | Intelligent Vehicle Power Management (iVPM 2.0) | System power on/off/hibernate management (e.g. Programmable Ignition On/Off Time delay)<br>Support Wake up Events:<br>- Alarm (RTC) Wake up<br>- Wake up by Call/SMS<br>System power protection (e.g. Car Battery Low Voltage Protection)<br>System monitoring and diagnostic |
| Mechanical  | Dimensions (W x H x D)                          | 255.7 x 161 x 56 mm                                                                                                                                                                                                                                                           |
|             | Weight                                          | 2.2 kg                                                                                                                                                                                                                                                                        |
| Environment | IP Rating                                       | IP54 (except I/O plate). Option to support entire system IP54 with additional I/O cover                                                                                                                                                                                       |
|             | Vibration/Shock                                 | MIL-STD-810G, EN60721-3(5M3)                                                                                                                                                                                                                                                  |
|             | EMC                                             | CE, FCC, CCC                                                                                                                                                                                                                                                                  |
|             | Safety                                          | UL/cUL, CB                                                                                                                                                                                                                                                                    |
|             | Vehicle Regulation                              | E-Mark (E13) for 12/24V System, SAE J1455 class C, ISO 7637-2, SAE J1113                                                                                                                                                                                                      |
|             | Railway                                         | EN50155                                                                                                                                                                                                                                                                       |
|             | RF Regulation                                   | CE (R&TTE), FCC ID                                                                                                                                                                                                                                                            |
|             | Operating Temperature                           | -30 to 60° C                                                                                                                                                                                                                                                                  |
|             | Storage Temperature                             | -40° C ~ 80° C                                                                                                                                                                                                                                                                |

## I/O Connectors



## Ordering Information

| Part Number       | Description                                            |
|-------------------|--------------------------------------------------------|
| TREK-773R-00A0E   | TREK-773R Intel BYT E3827 (2C, 1.75GHz) Barebone w/NFC |
| TREK-773R-LWB8A0E | TREK-773R w/LTE (WW)/GPS/WLAN/BT/NFC/CFast/WES8        |
| TREK-773R-LWB8B0E | TREK-773R w/LTE (US)/GPS/WLAN/BT/NFC/CFast/WES8        |

## Option items

| Part Number   | Description                                     |
|---------------|-------------------------------------------------|
| 1700020128    | A Cable 1*3P-5.08+G-TEM/32V FUSE 500cm          |
| 1700019908    | A Cable 1*3P-5.08+G-TEM/58V FUSE 500cm          |
| 1700019307    | A Cable MDR 50P/BNC+Audio Jack*3+USB-A+D-SUB 9P |
| RAM-MOUNT-01  | VESA RAM mount w/clamp base, 1.5" ball          |
| RAM-MOUNT-06E | VESA RAM mount w/VESA base, 1.5" ball           |
| 9668TREK35E   | TREK-753R RevA0 AC/DC power kit                 |
| 9668TREK37E   | IP54 I/O housing cover for TREK-753             |

## TREK-773 CTOS KIT

| Part Number | Description                                     |
|-------------|-------------------------------------------------|
| 9668T77300E | TREK-773 WLAN kit (802.11a/b/g/n BT combo)      |
| 9668T77301E | TREK-773 LTE module kit for USA market (MC7354) |
| 9668T77302E | TREK-773 LTE module kit (MC7304)                |
| 9668T77303E | TREK-773 GPS KIT                                |