TREK-773

features
- Intel® Atom™ E3827 SOC with support for WES8, WES7, Win10, and Ubuntu operating systems
- 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, LTE WWAN modules and optional NFC
- Intelligent vehicle power management system supports ignition on/off/ delay functions, wake-up event control, and system health monitoring and diagnostics
- Wide operating temperature range (-30 – 60 °C/-22 – 140 °F)
- Supports 12/24 V vehicle power (ISO 7637-2)
- MIL-STD-810G and 5M3 certified for shock and vibration tolerance
- Supports voice recognition and intelligent video analytics

introduction
TREK-773 is a next-generation, all-in-one 7" mobile data terminal. Equipped with an Intel® Atom™ E3827 SOC, TREK-773 offers high-performance computing with wired connections such as Gigabit Ethernet, CAN2.0B (J1939, OBD-II/ISO 15765), and J1708 (J1587). The integrated LTE (backwards compatible with CDMA/HSDPA), GPS, WLAN, and Bluetooth communication interfaces ensure connectivity and real-time data transmissions. Aimed at the automotive market, TREK-773 is compatible with 12/24 V vehicle power and compliant with ISO7637-2 & SAE J1113, ensuring system operation during engine starts. Moreover, the system’s ruggedized chassis, wide operating temperature range (-30 – 60 °C/-22 – 140 °F), and shock (100G, 6ms) and vibration tolerance support operation in harsh industrial environments.

specifications

Core
- Processor: Intel® Atom™ E3827 dual-core, 1.75 GHz
- Memory: Up to 4 GB DDR3L-1333 memory (2 GB default)
- Graphics: Integrated 2D/3D graphics engine
- Operating System: Windows Embedded 8 Standard (32-bit) and Win10 IoT LTSB (32-bit) default, with Windows Embedded 7 Standard and Linux available upon request

Storage
- CFast SD Card: 1 x externally accessible CFast slot with cover and supports system boot up (16GB default for WES8, 32GB default for Win10 IoT LTSB)

Display
- Type: 7" automotive-grade TFT LCD
- Resolution: WVGA (800 x 480)
- Brightness (cd/m²): 1000nits (typical)
- Viewing Angle (H/V): 170°/170°
- Contrast Ratio: 1000:1 (typical)
- Backlight Type: LED
- Backlight Life (Hrs): 30K

Touchscreen
- Type: 4-wire analog resistive touchscreen with 3H surface hardness and IK06 (510 g steel ball drop @300 mm) support (Optional sunlight readable touchscreen available upon request)
- Transparency: 84% ±3%

Sensor
- Sensor: Light sensor, G-sensor

I/O
- Function Keys: 5 x programmable function keys with green LED indicators
- Standard I/O:
  - 1 x SIM card slot (left)
  - 1 x High-speed full RS-232 (rear) (RS232 III pin can be configured to 12 Vc output)
  - 1 x USB 3.0 host Type A (rear)
  - 1 x GigE LAN with RJ45 connector (rear)
- Extended I/O:
  - 1 x Mic-in 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, driven by replay)
  - 1 x CAN bus (supports raw CAN, J1939, OBD-II/ISO 15765)
  - 1 x J1708 (supports J1587)

RF
- WLAN + Bluetooth: IEEE 802.11a/b/g/n + Bluetooth (V4.0 LE, V3.0+HS, V2.1+EDR+EBR) combo module via full-size mini PCIe slot (Optional high-power WLAN for roaming available upon request)
- WWAN:
  - 4G (LTE, HSUPA, HSDPA/EDGE, EV-DO Rev a, 1xTTI) Sierra Wireless MC73x via full mini-PCIe (MC7354 for US/MC7304 for EU default)
- GNSS:
  - Built-in u-blox MAX-M8Q GPS/Glonass/BeiDou module and A-GPS support
- Antenna: 1 x GPS, 2 x WWAN (LTE), 2 x WLH/Bluetooth
- NFC (Optional): ISO/IEC 14443A, 14443B, 15693, MiFARE 1K/4K, Ultralight, NFC-P2 protocol

Power
- Input Voltage: Supports 12/24 V vehicle power, 9 – 32 Vc input (ISO 7637-2 and SAE J1113 compliant) (Optional support for 16 – 56 Vc input upon request)
- Intelligent Vehicle Power Management (IVPM 2.0):
  - System power on/off management (e.g., programmable ignition On/Off/Delay, system monitoring and diagnostics, system power protection (vehicle battery low voltage protection), and wake-on-alarm (RTC), wake-on-call/SMS, and wake-on-g-sensor events

Mechanical
- Dimensions (W x H x D): 255.7 x 161 x 56 mm (10.06 x 6.33 x 2.20 in)
- Weight: 2.2 kg (4.8 lb)
### Specifications Cont.

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<tr>
<td>Dimensions</td>
<td>Unit: mm</td>
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<td></td>
<td></td>
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<tr>
<td><strong>Part Number</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>TREK-773R-00A0E</td>
<td>TREK-773R Intel BYT E3827 (2C, 1.75GHz) barebone unit w/NFC</td>
</tr>
<tr>
<td>TREK-773R-01A0E</td>
<td>TREK-773R Intel BYT E3827 (2C, 1.75GHz) barebone unit</td>
</tr>
<tr>
<td>TREK-773R-LWB8A0E</td>
<td>TREK-773R w/LTE(EU)/GPS/WLAN/BT/NFC/CFast/WES8</td>
</tr>
<tr>
<td>TREK-773R-LWB8B0E</td>
<td>TREK-773R w/LTE(US)/GPS/WLAN/BT/NFC/CFast/WES8</td>
</tr>
<tr>
<td>TREK-773R-LWXXA0E</td>
<td>TREK-773R w/LTE(EU)/GPS/WLAN/BT/CFast/W10</td>
</tr>
<tr>
<td>TREK-773R-LWXXB0E</td>
<td>TREK-773R w/LTE(EU)/GPS/WLAN/BT/CFast/W10</td>
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</table>

Note: WES7, and Linux operating system is available upon request.

### I/O Connectors

- WWAN antenna main
- WWAN antenna auxiliary
- Wi-Fi antenna main
- Wi-Fi antenna auxiliary
- NFC
- 2w speaker
- Front USB
- 5 programmable hot keys
- Mic-In
- Light sensor
- Power LED
- Brightness control
- COM1
- USB 3.0
- CFast card
- RJ45
- Power button
- Reset button
- SD card
- SIM card

### Packing List

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>1700091903</td>
<td>1 x 12/24V 2M power cable</td>
</tr>
<tr>
<td>1750007909-01</td>
<td>2 x Outdoor dipole Wi-Fi antennas</td>
</tr>
<tr>
<td>1750007924-01</td>
<td>1 x Outdoor LTE/GPS combo antenna, 3M</td>
</tr>
<tr>
<td>1750007926-01</td>
<td>1 x Outdoor LTE antenna, 3M</td>
</tr>
<tr>
<td>1990018491000</td>
<td>2 x USB/LAN cable clips</td>
</tr>
</tbody>
</table>

Note: The TREK-773 barebone unit (TREK-773R-00A0E/TREK-773R-01A0E) includes 1 x 2M power cable.

### Option Items

<table>
<thead>
<tr>
<th>Part Number</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2070051375</td>
<td>Image WES7 TREK-773 v1.00 X86 ENG 32bit</td>
</tr>
<tr>
<td>2070051377</td>
<td>Image WES7 TREK-773 v1.02 X86 ENG 32bit</td>
</tr>
<tr>
<td>2070051385</td>
<td>Image WES7 TREK-773 v1.02 X86 ENG 64bit</td>
</tr>
<tr>
<td>2070051387</td>
<td>Image WES7 TREK-773 v1.02 X86 ENG 64bit</td>
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### Embedded OS

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<tr>
<td>2070051385</td>
<td>Image WES7 TREK-773 v1.02 X86 ENG 32bit</td>
</tr>
<tr>
<td>2070051387</td>
<td>Image WES7 TREK-773 v1.02 X86 ENG 64bit</td>
</tr>
<tr>
<td>2070051386</td>
<td>Image WES7 TREK-773 v1.02 X86 ENG 64bit</td>
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### Ordering Information

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<tr>
<th>Part Number</th>
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<tbody>
<tr>
<td>1700091903</td>
<td>1200V 3M power cable</td>
</tr>
<tr>
<td>1700091907</td>
<td>High-density cable (MSR 50P/BNC/audio jack*3+USB-A-D-sub 9P)</td>
</tr>
<tr>
<td>RAM-MOUNT-01</td>
<td>VESA mount w/clamp base, 1.5&quot; tall</td>
</tr>
<tr>
<td>RAM-MOUNT-06E</td>
<td>VESA mount w/VESA base, 1.5&quot; tall</td>
</tr>
<tr>
<td>9668TREK35E</td>
<td>A/C/D power kit</td>
</tr>
<tr>
<td>9668TREK37E</td>
<td>IP54-rated I/O cover</td>
</tr>
</tbody>
</table>

### TREK-773 CTOS KIT

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<tr>
<th>Part Number</th>
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<tbody>
<tr>
<td>9668T77300E</td>
<td>TREK-773 WLAN kit (802.11a/b/g/n BT combo)</td>
</tr>
<tr>
<td>9668T77301E</td>
<td>TREK-773 LTE module kit for US (MC7354)</td>
</tr>
<tr>
<td>9668T77302E</td>
<td>TREK-773 LTE module kit (MC7304)</td>
</tr>
<tr>
<td>9668T77303E</td>
<td>TREK-773 GPS kit</td>
</tr>
</tbody>
</table>

### Environment

- **IP Rating**: IP4 (excluding I/O); optional IP54 protection for entire system with additional I/O cover
- **Vibration/Shock**: MIL-STD-810G, EN60721-3(5/93)
- **EMC/Safety**: CE, FCC, CCC, UL(UL61010), 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 ~ 60 °C (-22 ~ 140 °F)
- **Storage Temperature**: -40 ~ 60 °C (-40 ~ 176 °F)

### Environment

- **IP Rating**: IP54 (excluding I/O); optional IP54 protection for entire system with additional I/O cover
- **Vibration/Shock**: MIL-STD-810G, EN60721-3(5/93)
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