

TREK-60

Modular AI Platform for Scalable Surveillance and Fleet Management



Features

- 8ch PoE support for commercial vehicles and heavy duty
- In-vehicle specialized design: 12V/24V certified car power (E-Mark, ISO-7637-2), dual CANbus
- Rugged platform with IP65, 5M3 shock and vibration tolerance, -30 ~ 70 °C wide temperature w/o airflow
- Modular design supports the latest RF communication technologies
- ONE cable connection with TREK displays
- Multiple AI accelerator options: Intel® OpenVINO™, Google Coral, Hailo for edge AI computing

DeviceOn/iService

Introduction

Aimed at fleet management and surveillance applications, TREK-60 features a 7th generation Intel® Core™ i7/i5/Atom™ E3900 quad-core processor for high-performance computing, as well as up to eight camera input channels and an integrated AI accelerator for scalable video stream edge inferencing. The RF extension module with automotive-grade FAKRA connector provides GNSS, WLAN, Bluetooth, and WWAN capabilities for real-time communication, vehicle tracking, and data collection. The embedded dual CAN bus supports diverse vehicle protocols, including raw CAN, J1939, and OBD-II, for vehicle monitoring and diagnostics, while the intelligent vehicle power management system supports ignition on/off/delay and wake-up event control. Moreover, the rugged design supports a wide operating temperature range (-30 ~ 70 °C/-22 ~ 158 °F), and is compliant with MIL-STD-810G and 5M3 specifications for vibration/shock resistance, ensuring stable operation in harsh industrial environments.

Moreover, TREK-60 is equipped with Advantech's DeviceOn/iService software, which is a next-generation unified device management solution based on the WISE-DeviceOn platform. With support for batch operations and multi-device control, DeviceOn/iService enables easy device configuration and deployment for convenient remote device management.

Specifications

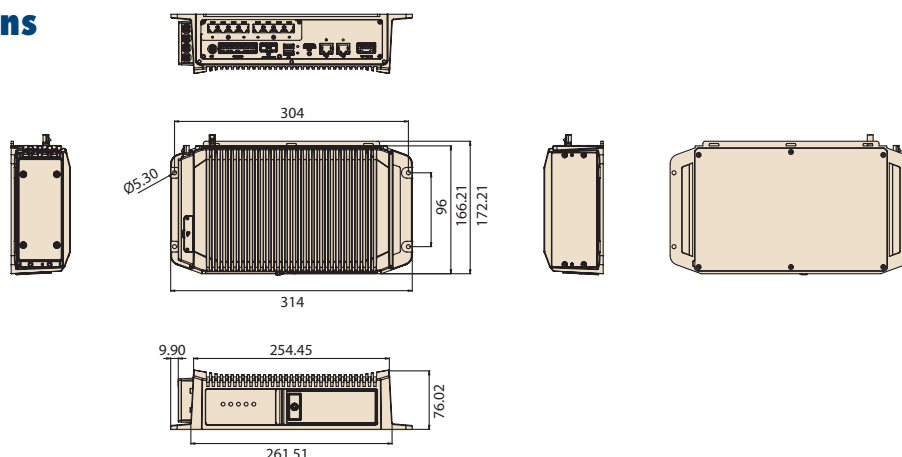
Core	Processor	Intel® Atom™ X5-E3940 quad-core, 1.8 GHz	Intel® Core™ i7-7600U dual-core, 3.9 GHz Intel® Core™ i5-7300U dual-core, 3.5 GHz
	Memory	1 x SODIMM, up to 8 GB DDR3L 1866 non-ECC memory	2 x SODIMM, up to 32 GB DDR4 2133 non-ECC memory (with dual channel support)
	Graphics	Integrated 2D/3D graphics engine	
	Operating System	Windows 10 IoT Enterprise 2019 LTSC (64 bit), Linux (available upon request)	
Storage	mSATA (OS Disc)	1 x internal mSATA, up to 128 GB (supports UMLC/MLC/TLC industrial-grade storage and system bootup)	
	SSD	1 x externally accessible 2.5" SSD tray with key-lock protection	
	Micro SD Card (upon request)	1 x externally accessible micro SD card reader with key-lock protection (supports system bootup)	
Display	Smart Display Port 2.0*	12V/2A power output for TREK displays 1 x high-resolution video, 1 x audio signal, 1 x USB 2.0 1 x power button and 1 x reset button (via the smart display) (the SDP settings are configurable via MRM SDK)	
	HDMI	1 x HDMI 1.3	
Sensors		1 x G-sensor and gyroscope	
Expansion	Edge AI (upon request)	1 x full-size mini PCIe (PCIe/USB 2.0) for edge AI; supports up to 2 x Intel® Movidius® Myriad™ X VPUs**	
I/O	VIO2.0 (via VIO cable)	1 x ignition and power input 1 x J1708 (supports J1587) 2 x CAN bus; compliant with J1939, OBD-II/ISO-15765 specifications; supports both 11-bit (CAN 2.0A) and 29-bit (CAN 2.0B) identifiers; high-speed CAN connection (compliant with ISO 11898-2), up to 1 Mbit/s; configurable via MRM SDK	
	Generic I/O 2.0 (via generic I/O cable)	2 x 4-wire RS-232 (default)/RS-485 2 x 2-wire RS-232 6 x isolated DI (dry/wet), 4 x isolated DO 2 x line-out, 2 x mic-in	
	Standard I/O	1 x USB 3.0 Type A (front accessible with key-lock protection) 2 x USB 2.0 Type A 2 x Giga LAN (with optional locking mechanism, or M12 connector)	
	LED Indicators	5 x LED, Power (red), Storage (yellow), WLAN (green), WWAN (green), and GPS (yellow)	
	Power Button	Via second-generation TREK display; system configured to wake-on-ignition as default	
	CCMOS Button	1 x Clear CMOS button (front accessible with key-lock protection)	
	Reset Button	1 x Reset button (front accessible with key-lock protection)	
	IP Camera	8 x RJ-45 for 10/100 Base-T(X) PoE, 802.3af/at compliant Power output shared by all cameras is limited to 60W* Supports PoE power control and Ethernet management ¹ (via MRM SDK)	
Expansion ² (via I/O extension)	V2X	1 x full-size mini PCIe (USB2.0) for V2X module	

*Supports pairing with a second-generation TREK-306 display via a single-cable connection.

**The operating temperature range depends on the edge AI module specifications or usage scenario.

Dimensions

Unit: mm



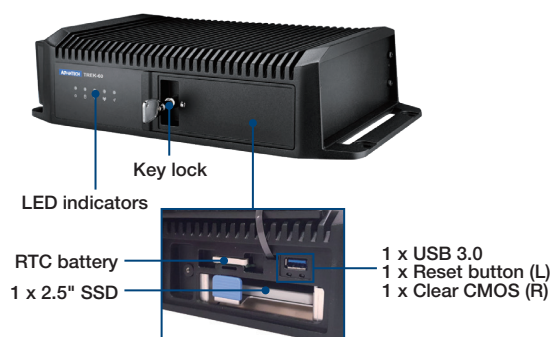
Specifications Cont.

RF (WLAN/WWAN via RF extension)	WLAN/Bluetooth	1 x full-size mini PCIe (PCIe/USB 2.0) for SparkLAN 802.11a/b/g/n/ac Wi-Fi 5 + Bluetooth V5.0 combo module; optional high-power Wi-Fi module 1 x M.2 2230 (A+E Key) for 802.11a/b/g/n/ac/ax Wi-Fi 6 + Bluetooth V5.0 combo module
	WWAN	1 x full-size mini PCIe (USB 2.0) for 4G module (LTE Cat-4, HSPA+, GSM/GPRS/EDGE) 1 x externally accessible mini SIM card socket with cover, 1 x embedded SIM (available upon request) 1 x M.2 3042/3052 (B key, USB 3.0) for 4G/5G module
	GPS	Built-in u-blox Neo-M8N supports concurrent reception of up to 3 GNSS (GPS, Galileo, GLONASS, BeiDou) 2.5-meter accuracy, GPS management (via MRM SDK) Optional NEO-M8U (dead reckoning) available upon request
	Antenna	5 x FAKRA connectors for 1 x GPS (C-code), 2 x Wi-Fi + Bluetooth (I/Z-code), 2 x WWAN/LTE(D/L-code) with Wi-Fi/WWAN MIMO support
Power Supply	Voltage Input	12/24 V power (ISO 7637-2 and SAE J1113 compliant) System power on/off/hibernate management (programmable ignition on/off/delay)
	Intelligent Vehicle Power Management (iVPM 2.0)	PoE power total/on/off management (via MRM SDK) Supports wake-up events: wake-on-alarm (RTC), wake-on-call/SMS, and wake-on-G-sensor System power protection (vehicle battery low-voltage protection) System monitoring and diagnostics
Mechanical	Dimensions (W x D x H)	314 x 165.5 x 75.1 mm/12.36 x 6.51 x 2.95 in
	Weight	4.2 kg/9.25 lb (excludes SSD)
Environmental	IP Rating	IP65 rating (excluding rear I/O); an optional IP65-rated M12 system I/O cover is available upon request
	Vibration/Shock	MIL-STD-810G, EN60721-3 (5M3)
	EMC	CE, FCC, RCM, CCC
	Safety	UL/cUL, CB, CCC
	Vehicle Regulation	E-Mark (E13), SAE J1455, ISO 7637-2, SAE J1113
	RF Regulation	CE (RED), FCC ID, IC ID
	Operating Temperature	-30 ~ 70 °C/-22 ~ 158 °F (Atom™ X5-E3940), -20 ~ 50 °C/-4 ~ 122 °F (Core™ i7/i5) ³ (-20 ~ 60 °C/-4 ~ 140 °F available upon request)
	Storage Temperature	-40 ~ 80 °C/-40 ~ 176 °F
DeviceOn/Service Remote Device Management ⁴	Operating System	Windows 10
	Common Controls (Reboot, Shutdown)	✓
	Remote desktop	✓ (VNC)
	Device-Specific Controls (Audio, Backlight)	✓*
	Connection Status	✓
	Hardware Status	✓*
	Hard Disk Status	✓*
	Batch Operation Support	✓
	OTA Storage Management	FTP
	OTA Software Updates	✓
	Software Watchlist	✓
	Peripherals Watchlist	✓*

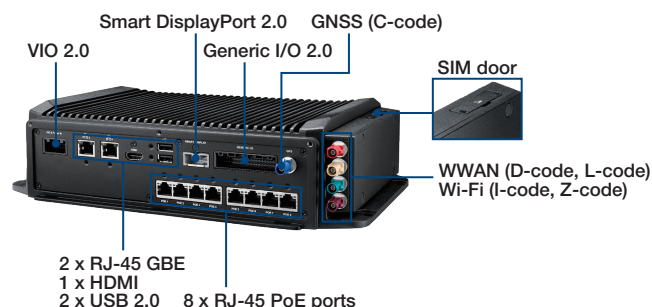
*Dependant on device model

¹ PoE power consumption depends on the system configuration and usage scenarios.² Expansion available upon request.³ The TREK-60 in-vehicle platform with Intel® Atom™ X5-E3940 processor supports a maximum operating temperature of 70 °C/158 °F. Moreover, with 24V input power, the maximum power consumption is 70W; and with 12V input power, the maximum power consumption is 60W.⁴ Advantech DeviceOn iService SupportFind user guides, developer guides, API references, tutorials, and more. <https://docs.deviceon-iservice.com/en>

Easy-Access Front Door



Flexible Rear I/O



Ordering Information

Part Number	Description
TREK-60-7KPXN0E	Ci7, 16/64GB, GPS/PoE/W10/GPS & LTE Ant
TREK-60-5EPXN0E	Ci5, 8/64GB, GPS/POE/W10/GPS & LTE Ant
TREK-60-5EPAXN0E	Ci5, 8/64GB, GPS/PoE/SSDKits, WIFI/LTE(EU), W10
TREK-60-5EPBXN0E	Ci5, 8/64GB, GPS/PoE/SSDKits, WIFI/LTE(US), W10
TREK-60-MBPAXN0E	Intel X5-E3940 CPU, 4GB RAM/32GB mSATA, GPS/Wi-Fi/LTE (EU), 8 PoE, Win 10 (64 bit)
TREK-60-MCPXN0E	X5-E3940, 8/64GB, GPS/POE/W10/GPS & LTE Ant

Packing List

Part Number	Description	QTY
1750008765-01	Outdoor FAKRA LTE/GPS (GLONASS) combo antenna, 5 m	1
1750008764-01	Outdoor FAKRA LTE antenna, 5 m	1
1750008763-01	Outdoor FAKRA Wi-Fi antenna, 5 m	2
1700030201-11	VIO cable, supports power cable (100cm) and 2 x CAN/J1708 cable (30 cm)	1
1700030180-01	Generic I/O cable, supports RS-232/Line-Out/Line-In/DI/DO (60 cm)	1

Optional Accessories

Part Number	Description
TREK-303R-H2A0E	7" WVGA resistive touch smart display (SDP 2.0)
TREK-306P-H2A0E	10.4" XWGA P-CAP touch smart display (SDP2.0)
1700030181-01	A cable 1x10P-1.5/1x10P-1.5 1000CM
1700030183-01	Smart display 2.0 cable, 5 m
1700030387-01	Power cable (20 cm) with 30 cm vehicle I/O (tested in-house)
96PSA-A150W12W7-4	ADP A/D 100-240V 150W 12V LOCKABLE DC JACK (indoor use with AC power adapter)

CTOS Ordering Information

Barebones Unit

Part Number	Description
TREK-60-73PN0E	Intel i7-7600U CPU, 16GB RAM, GPS/8 PoE, VIO, LTE/GPS antenna
TREK-60-52PN0E	Intel i5-7300U CPU, 8GB RAM, GPS/8 PoE, VIO, LTE/GPS antenna
TREK-60-M2PN0E	Intel X5-E3940 CPU, 8GB RAM, GPS/8 PoE, VIO, LTE/GPS antenna

RF Extension

Part Number	Description
TREK-60-EXTRF1A0	RF extension for Wi-Fi/LTE, 4 x FAKRA connectors (EU)
TREK-60-EXTRF1B0	RF extension for Wi-Fi/LTE, 4 x FAKRA connectors (US)
TREK-60-EXTRF1C0	RF extension for Wi-Fi/LTE, 4 x FAKRA connectors (AU)
TREK-60-EXTRF000	RF extension barebones unit (requires RF CTOS kit)

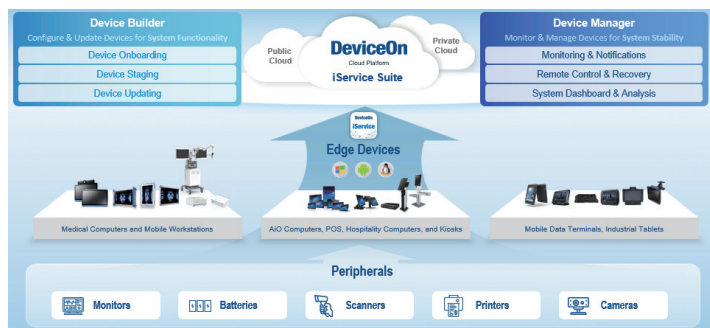
RF CTOS Kits

Part Number	Description
98R8T676R00	WLAN module kit (802.11ac/BT combo), 2 x FAKRA connectors
98R8T676R01	LTE module kit (US, B2/B4/B5/B13) Cat-4, 2 x FAKRA connectors
98R8T676R02	LTE module kit (EU, B1/3/7/8/20/28) Cat-4, 2 x FAKRA connectors

Embedded OS

Part Number	Description
20708WX9HS0006	OS image Win 10 IoT Enterprise 2019 LTSC-H (i7) (64 bit) EN/TC/SC
20708WX9VS0013	OS image Win 10 IoT Enterprise 2019 LTSC-V (i5) (64 bit) EN/TC/SC
20708WX9ES0061	Img WIN10 LTSC-ELE TREK-60A V1.00aD x64 3MUI

DeviceOn - iService Suite



Introduction

Advantech's DeviceOn - iService Suite is an advanced remote device management solution that enables you to centrally manage your devices, minimizing the need for expensive on-site visits and saving your valuable time and resources. Device Builder ensures that your devices are always up-to-date with the latest configuration and software updates, reducing the risk of data breaches and other security threats. Meanwhile, Device Manager helps to ensure that your devices are functioning correctly, reducing downtime and enhancing productivity.

Key Functions

Device Builder



Device Onboarding

- Support Windows, Linux, Android devices
- Quick enrollment process



Device Staging

- OS configuration
- Software/peripheral watchlist
- Device label, alarm rules



Device Updating

- Cloud software storage
- Installation package for multiple software updating

Device Manager



Monitoring & Notifications

- Connection/hardware status
- Software/peripheral status
- Failure notifications



Remote Control & Recovery

- Reboot & power controls
- Audio & backlight settings
- Screenshots & remote desktop



System Dashboard

- Devices working status
- Software version sync status
- Results of scheduled tasks

Services & Specifications

Functions List	OS Platform			Service Type	
	Windows	Android	Linux (Ubuntu)	Builder	Manager
	10, 11	8, 10, 12	TBD		
Device Onboarding - Enrollment, Locations and Labels	✓	✓		✓	✓
Profile - OS Settings (Kiosk Mode, ON/Off Schedule, others are OS dependent)	✓ (LTSC)	✓		✓	✓
Profile - Alarm Rules, Software Monitoring, Peripheral Monitoring	✓	✓			✓
OTA Update - Installation Packs, Software Cloud Storage	✓	✓		✓	✓
Monitoring - Device Hardware (CPU/RAM/Storage/Battery)	✓	✓			✓
Monitoring - Advanced Battery Management	✓ (Dependant on device model)				✓
Monitoring - Device Software (Running Status/CPU & Memory Usage)	✓	✓			✓
Monitoring - Peripherals & Display (Connect Status)	✓				✓
Control - Audio volume & Backlight	✓	✓			✓
Control - Screenshot, Reboot, Shutdown	✓	✓			✓
Control - Schedule Tasks	✓	✓			✓
Control - Remote Desktop	VNC				✓

Ordering Information

Ordering P/N	Cloud Type	Description
36CSDOISSASP01	SaaS subscription	DeviceOn - iService Suite device annual fee (365 days)
36CSDOISPSRP01	On-premise server	DeviceOn - iService Suite device license (perpetual)
36CSDOISPSRP02	On-premise server	Software and installation fee for new server deployment
36CSDOISPSRP03	On-premise server	Annual maintenance fee after warranty

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.