TREK-60N

Intel® & NVIDIA® Jetson Orin™ NX Dual-System AI Computing Solution

Features

- Intel® & NVIDIA® dual-system to provide excellent vehicle edge AI computing performance
- 4ch PoE support video streams for AI capacity
- In-vehicle specialized design: 12/24V certified car power (E-Mark, ISO-7637-2), dual CANbus
- Rugged platform with IP65, 5M3 shock and vibration tolerance, -20 ~ 60°C wide temperature w/o airflow
- Modular design supports the latest RF communication technologies
- ONE cable connection with TREK displays

DeviceOn/iService

Introduction

Aimed at AI for harsh environments, TREK-60N features a dual system integrating Intel® Core™ i7/Atom™ E3940 quad-core processor for high-performance computing, and NVIDIA® Jetson Orin™ NX AI capabilities up to 4x POE camera input channels for AI graphic computing. 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. Moreover, inheriting the TREK products' excellent rugged design, it supports a wide operating temperature range, and is compliant with MIL-STD-810G and 5M3 specifications. for vibration/shock resistance, ensuring stable operation in harsh industrial environments.

TREK-60N is also equipped with Advantech's DeviceOn/iService software, which is a next-generation unified device management solution based on the WISE-DeviceOn platform.

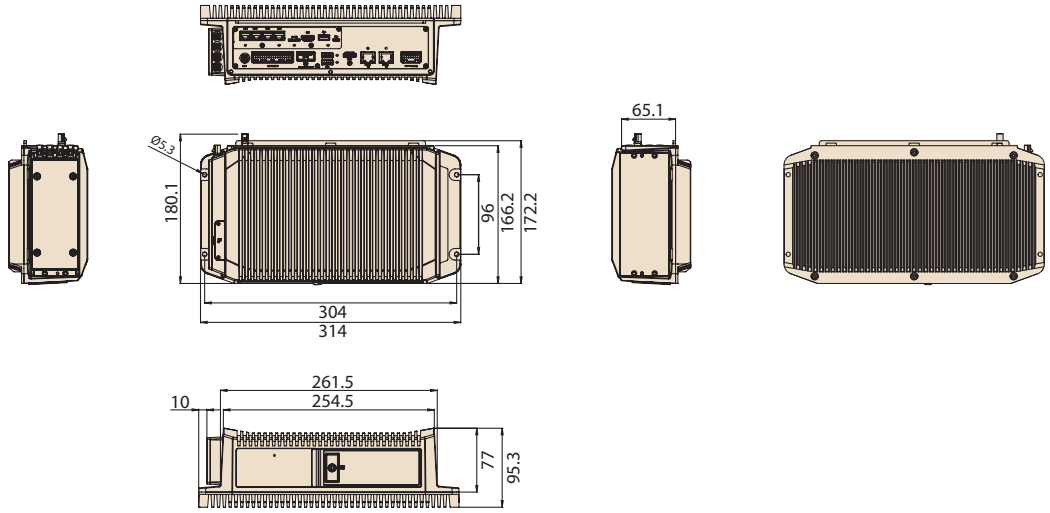
Specifications

Core	Processor	Intel® Atom™ X5-E3940 quad-core, 1.8 GHz	Intel® Core™ i7-1365URE multi-core, 4.9 GHz
	Memory	1 x SODIMM, up to 8 GB DDR3L 1866 non-ECC memory	2 x SODIMM, up to 64GB DDR5
	Graphics	Integrated 2D/3D graphics engine	
	Operating System	Windows 10 IoT Enterprise 2019 LTSC (64 bit), Linux (available upon request)	Windows 11 IoT LTSC (64 bit), Ubuntu 24.04 LTS
Storage	mSATA (OS Disc)	1 x internal mSATA, up to 128 GB (supports UMLC/MLC/TLC industrial-grade storage and system bootup)	Default: 1x M.2 M-key 2242 NVMe, up to 512 GB
	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	1 x HDMI 2.0
Sensors		1 x G-sensor and gyroscope	
I/O	VIO2.0 (via VIO cable)	1 x ignition and power input 1 x J1708 (supports J1587) 2 x CAN bus (CANFD compliant by Core i 13th version); 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 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)	1x USB 2.0 Type A (Front) 2x USB 3.2 Type A (Rear) 2x 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)	
	PoE	4 x RJ-45 for 10/100 Base-T(X) PoE, 802.3af/at compliant Power output shared by all cameras/devices is limited to 30W Supports PoE power control and Ethernet management1 (via MRM SDK)	
	Display	HDMI (Max. resolution 3840 x 2160 @ 60Hz)	
	USB	1 x USB 3.0 Type A	
	OTG USB	1 x Micro USB	
Develop Tools (Via Orin NX)	SDK	iVS DevStack	iVS DevStack
Operating System (Via Orin NX)	Linux	Ubuntu 20.04/ JetPack 5.1	Ubuntu 22.04/ JetPack 6.2.1

Last updated: 24-Feb-2026

Dimensions

Unit: mm



Specifications Cont.

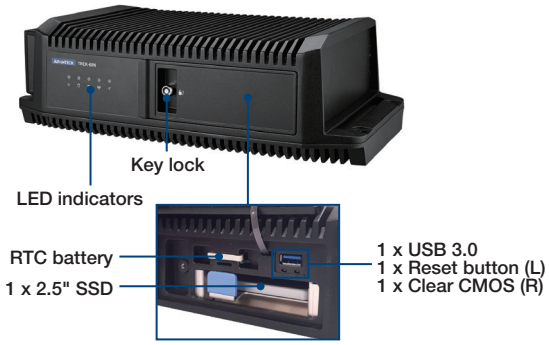
Processor (Via Orin NX)	CPU	NVIDIA® Jetson Orin™ NX 8GB : 6-core Arm® Cortex®-A78AE	
	GPU	1,024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores	
	Memory	NVIDIA® Jetson Orin™ NX 8GB: 8GB 128-bit LPDDR5102.4GB/s	
	Storage	1 x internal M.2 NVMe 128G 3D TLC (industrial-grade storage)	
RF (WLAN/WWAN 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[1]	
	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	Built-in u-blox NEO-M9L (DR available)
	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 Vehicle power (ISO 7637-2 and SAE J1113 compliant)	
	Intelligent Vehicle Power Management (iVPM 2.0)	System power on/off/hibernate management (programmable ignition on/off/delay) 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 172.2 x 95.3 mm/12.36 x 12.36 x 3.75 in	
	Weight	5.8 kg/12.79 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	-20 ~ 60 °C/-4 ~ 140 °F (Atom™ X5-E3940) w/o airflow; -20 ~ 50 °C/-4 ~ 122 °F (Core™ i7/i5) (-20 ~ 55 °C/-4 ~ 131 °F available upon request)[2,3] w/o airflow	
	Storage Temperature	-40 ~ 80 °C/-40 ~ 176 °F	
DeviceOn iService		Compatible with DeviceOn iService remote device management, supporting but not limited to the following features: OTA software installation, remote SSH, device anomaly monitoring, and device control	

[1] Wi-Fi 6 and 5G module expansion available upon request

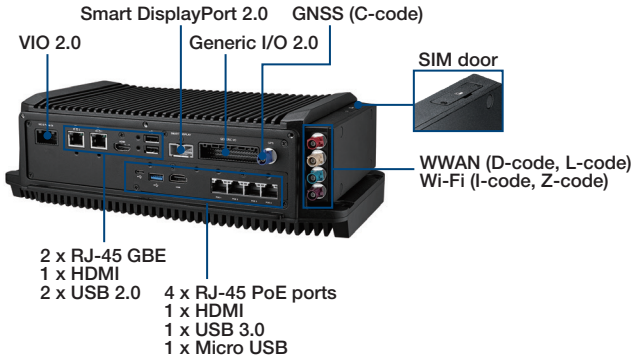
[2] This product is qualified for operation from -25°C to 65°C (Atom™ X5-E3940)/ -25°C to 55°C (Core™ i7/i5) as 5°C Guard Band. The product also pass test for ±10°C thermal shock.

[3] The operating temperature range depends on total System power consumption and Orin NX usage scenario

Easy-Access Front Door



Flexible Rear I/O



Ordering Information

Part Number	Description
TREK-60N-A1A0MN00E	X5-E3940, 8/64GB, Orin 8G/NVMe 128G, GPS
TREK-60N-K3A0MA00E	Ci7-1365URE/16GB/128GB/Orin 8G/128G/GPS/VIO/WIN
TREK-60N-K3A0NA00E	Ci7-1365URE/16GB/128GB/Orin8G/128G/GPS/VIO/Linux

Packing List

Part Number	Description	QTY
1700030201-21	VIO cable, supports power cable (100cm) and 2 x CAN/J1708 cable (30 cm)	1
1750008765-01	Outdoor FAKRA LTE/GPS (GLONASS) combo ntenna, 5 m	1

Optional Accessories

Part Number	Description
TREK-303R-H2A0E	7" WVGA resistive touch smart display (SDP 2.0)
TREK-306P-H2A0E	10.4" XVGA P-CAP touch smart display (SDP2.0)
1700030181-01	Smart display 2.0 cable, 10 m
1700030183-01	Smart display 2.0 cable, 5 m
RAM-MOUNT-06E	VESA RAM mount w/VESA base (3.625") & 5.625" double socket arm for 1.5" ball base
1700030387-11	Power cable (20 cm) with 30 cm vehicle I/O (use with adapter)
96PSA-A150W12W7-4	ADP A/D 100-240V 150W 12V LOCKABLE DC JACK (indoor use with AC power adapter)
1700030180-11*	Generic I/O cable, supports RS-232/Line-Out/Line-In/DI/DO (60 cm)
1750008764-01*	Outdoor FAKRA LTE antenna, 5 m
1751000818-01*	External Ant. WIFI FAKRA-I/F LLC195 BLK L5M IP67

*The actual accessories are subject to the order model

RF Extension

Part Number	Description
TREK-60-EXTRF1A0	RF extension for Wi-Fi/LTE, 4 x FAKRA connectors (EU)
TREK-60-EXTRF1C0	RF extension for Wi-Fi/LTE, 4 x FAKRA connectors (AU)

IO Extension

Part Number	Description
TREK-60-IP651A0	TREK-60 IP65 rated M12 system I/O cover
TREK-60-EXTIOA00	TREK-60 I/O extension with 4CH analog capture
TREK-60-EXTIOA10	TREK-60 I/O extension with 8CH analog capture

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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ODMĚNA ZA VĚRNOST
Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obratu.

SERVIS ON-SITE A IN-TIME
K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.