TREK-733L

RISC-Based All-in-One Light-Duty Mobile Data Terminal

TAIWAN EXCELLENCE 2016

Features

- NXP (Freescale) Cortex™-A9 i.MX6DL dual-core, 1.0 GHz, SOC, 1GB DRAM, 4GB eMMC with Android 4.4.2
- 7" WSVGA (1024 x 600) LCD with P-CAP touchscreen
- Built-in 4G LTE, WLAN/Bluetooth, and GNSS modules (with optional BeiDou); supports external antennas via SMA to increase sensitivity for 4G LTE and GNSS
- Built-in battery pack (3.6 V, 2400 mAh) offers UPS for emergency notifications and data backups
- Compatible with 12/24 V vehicle power
- MIL-STD-810G certified for shock and vibration tolerance
- 1 x Analog video input to dedicated video processor for real-time display applications
- Multiple isolated DI/O interfaces that support vehicle speed data for distance measurements
- Noise suppression technology for built-in voice recognition applications
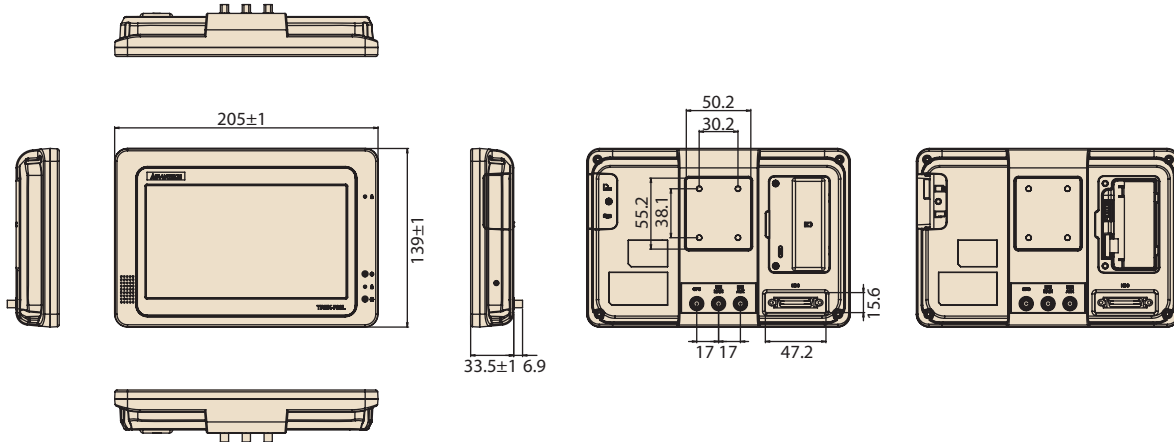
Introduction

TREK-733L is an ARM-based, all-in-one, light-duty mobile data terminal that features a 7" display with P-CAP touchscreen, NXP Freescale Cortex™-A9 i.MX6DL dual-core (1.0 GHz) SOC, 1 GB DRAM, and Android 4.4.2 operating system. The integrated GNSS, 4G LTE, and WLAN/Bluetooth wireless communication interfaces (with optional BeiDou) enable location tracking, route optimization, and high-speed data exchanges for convenient and effective fleet management. TREK-733L is also equipped with a built-in battery that provides an uninterruptible power source for emergency situations and data backups. MIL-STD-810G certified for shock and vibration tolerance, TREK-733L is ideal for most light-duty vehicle applications. Finally, the inclusion of three external antenna SMA ports supports critical outdoor applications by increasing connection sensitivity and performance.

Specifications

Core	Processor	NXP (Freescale) Cortex™-A9 i.MX6DL dual-core, 1.0 GHz, SOC
	Memory	1 GB DDR3 on board
	Graphics	OpenGL® ES 2.0 3D graphics accelerator with a shader and 2D graphics accelerator
	Operating System	Android KitKat 4.4.2
Storage	eMMC	4 GB on board
	SD Card	1 x externally accessible push-push-type micro SD slot with cover
Display	Type	7" TFT LCD
	Resolution	WSVGA (1024 x 600)
	Brightness	500 cd/m² (typical)
	Viewing Angle (H/V)	150°/145°
	Contrast Ratio	700:1
	Backlight Lifetime	15000 hours
Touchscreen	Type	P-CAP 2-point multi-touch (gesture)
	Construction	Glass-film-film
	Transparency	≥85%
Multimedia	Speaker	1 x Internal 2W speaker
	Microphone	2 x Internal microphones for noise suppression
Sensors	Ambient Light Sensor	Sensitive to visable and infrared light
	Motion Sensor	3-axis ±2/4/8 g accelerometer
I/O	Standard I/O	1 x MicroSD 1 x SIM
	Extended I/O	1 x System power input 2 x 2-wire RS-232 1 x USB 2.0 host 6 x ISO DI (DI1 ~ 5 dry contact; DI6 wet contact) 2 x ISO DO (open collector output, driven by relay) 1 x Analog video CVBS input
	LED Indicator	1 x Power LED
	Reset Button	1 x hardware reset switch (right side)
Wireless Communication	WLAN/Bluetooth	IEEE 802.11 b/g/n and Bluetooth V4.0 Class 1.5 (internal antenna)
	WWAN	Sierra Wireless MC7304 via mini PCIe for EU - LTE: B1, B3, B7, B8, B20/HSPA+ UMTS: B1, B2, B5, B6, B8 Sierra Wireless MC7354 via mini PCIe for US - LTE: B2, B4, B5, B13, B17, B25 / HSPA+ UMTS: B1, B2, B4. B5. B8/CDMA EVDO: BC0, BC1, BC10 (external antenna via SMA)
GNSS	Sensitivity	GPS (-161 dBm), GLONASS (-158dBm) with 56 channels and A-GPS support (BeiDou available upon request) (External antenna via SMA)
Power System	Input Voltage	Supports 12/24 V vehicle power, 9 ~ 32 V^DC input
	Intelligent Vehicle Power Management	System power on/off management, 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
	Backup Battery Pack (optional)	3.6V, 2400 mAh; supports 30 minutes operation under full load or 2 hours operation under low power consumption; 3 hours for full recharge

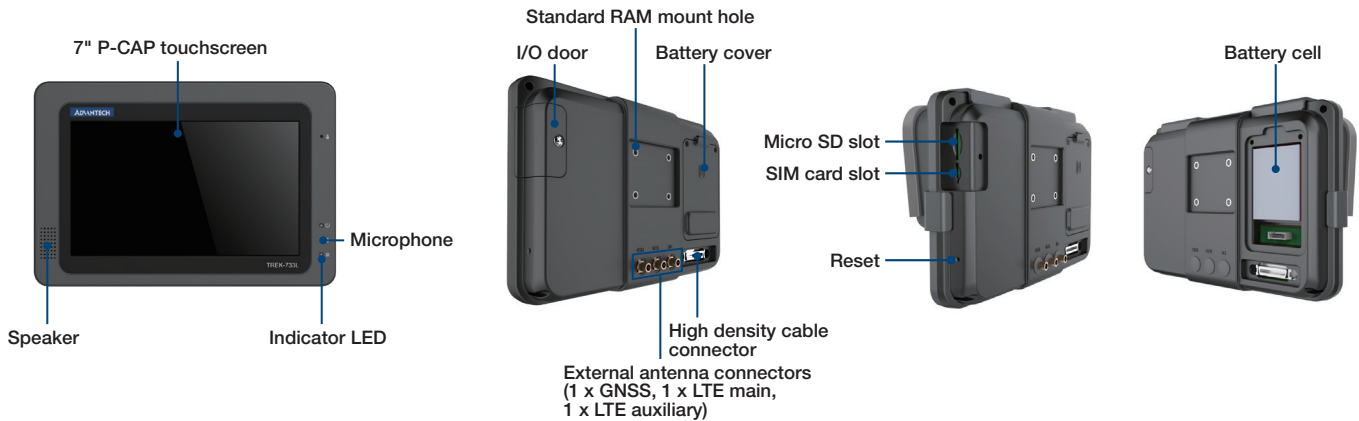**ADVANTECH**

Dimensions

Unit: mm

205±1

139±1

33.5±1 6.9

50.2
30.2
55.2
38.1
15.6
17 17
47.2

Specifications Cont.

Mechanical	Mounting	AMPS Mounting ARM Compatible
	Dimensions (W x D x H)	205 x 139 x 33.5 mm (8.07 x 5.47 x 1.31 in)
	Weight	820 g (1.8 lb) with battery
Environment	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Vibration/Shock	MIL-STD-810G
	Vehicle Regulation	E-mark (E13) (12/24 V system), ISO 7637-2, SAE J1455
	Safety	UL/cUL, CB
	Certifications	CE, FCC, CCC

I/O Connectors

7" P-CAP touchscreen

Microphone

Speaker

Indicator LED

Standard RAM mount hole

I/O door

Battery cover

Micro SD slot

SIM card slot

Reset

Battery cell

High density cable connector

External antenna connectors
(1 x GNSS, 1 x LTE main,
1 x LTE auxiliary)

Ordering Information

Part Number	Description
TREK-733L-LWBADA0E	TREK-733L NXP (Freescale) Cortex-A9 i.MX6DL dual-core, 1.0 GHz, 1 GB DRAM, 4 GB eMMC, Android 4.4.2, LTE MC7304 (external antenna), GNSS (external antenna), WLAN/BT (internal antenna), power and I/O cable
TREK-733L-LWBADB0E	TREK-733L NXP (Freescale) Cortex-A9 i.MX6DL dual-core, 1.0 GHz, 1 GB DRAM, 4 GB eMMC, Android 4.4.2, LTE MC7354 (external antenna), GNSS (external antenna), WLAN/BT (internal antenna), power and I/O cable

Optional Items

Part Number	Description
BB-HDV100A3	RS-232 to J1708 and J1939 converter
BB-D99Y	Y cable of DB15 and Deutsch 9-pin for RS-232 to J1708 and J1939 converter
TREK-MNT-301E	Double square plate with AMPS hole pattern
TREK-MNT-302E	Square plate with AMPS hole pattern and X-type base
TREK-MNT-303E	Square plate with AMPS hole pattern and suction cup base