

Mobile Data Terminal

MDT 600



AI-ready design

ITxPT-compliant

5G & Wi-Fi 6

10.1" rugged IP65

Android & Linux OS

ADAS Capable

The InHand MDT600 is a rugged, ITxPT-compliant Multi-Application Driver Terminal designed for connected public transport and commercial vehicles. It serves as the central Human-Machine Interface (HMI) between drivers and multiple ITS or fleet management systems.

Powered by a high-performance ARM processor and a 6 TOPS NPU, the MDT600 supports advanced driver applications, multi-camera analytics, dispatch, ticketing, and fleet operations all on one device. With 5G, Wi-Fi 6, GNSS, and extensive vehicle I/O, it delivers robust edge-computing capability in a compact 10.1" IP65 design. Supporting both Android and Linux, the MDT600 provides an open, future-proof platform for integrators and operators seeking reliable in-vehicle HMI and intelligent mobility solutions.

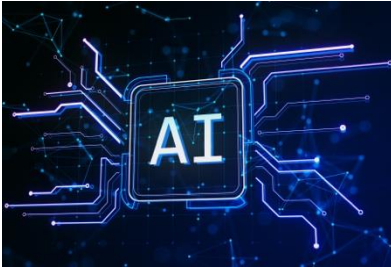


Solution



AI-Powered Performance

Equipped with a built-in **6 TOPS NPU**, the MADT600 delivers high-efficiency edge AI processing for advanced ITS applications. It supports ADAS, driver monitoring (DMS), pedestrian/vehicle detection, and real-time multi-camera analytics without relying on cloud processing. This ensures faster response times, improved safety, and reduced bandwidth consumption.



High-Speed 5G & Wi-Fi 6 Connectivity

Integrated **5G, 4G, and Wi-Fi 6** deliver highly reliable, low-latency connectivity for mission-critical operations. The MADT600 ensures uninterrupted communication for real-time tracking, control center communication, OTA updates, CCTV streaming, and cloud analytics—essential for connected public transport and commercial vehicles.



Comprehensive Vehicle Interfaces

Designed for maximum compatibility, the MADT600 offers a rich interface set including **CAN, RS232/485, M12 Ethernet, DI/DO, USB**, and support for up to **8 external AHD cameras**. This allows seamless integration with onboard sensors, ticketing machines, telematics devices, and safety systems—making it a central hub for the connected vehicle.



Rugged Vehicle-Grade Design

Engineered for demanding mobility environments, the MADT600 features a **10.1" IP65-rated** touch display, wide voltage input (**9–48 V**), and a broad operating temperature range (**-30°C to +70°C**). It meets key transport standards—including EN 50155, EN 45545, ECE R118, and UN ECE R10—ensuring long-term reliability in buses, trams, trucks, and heavy-duty vehicles.



ITxPT-Compliant & Open Platform

Built on open architecture and fully aligned with **ITxPT standards**, the MADT600 fits seamlessly into modern public transport infrastructures. With support for **Android and Linux**, it gives integrators maximum flexibility to deploy custom apps, third-party software, and future services—making it a future-proof platform for evolving mobility needs.

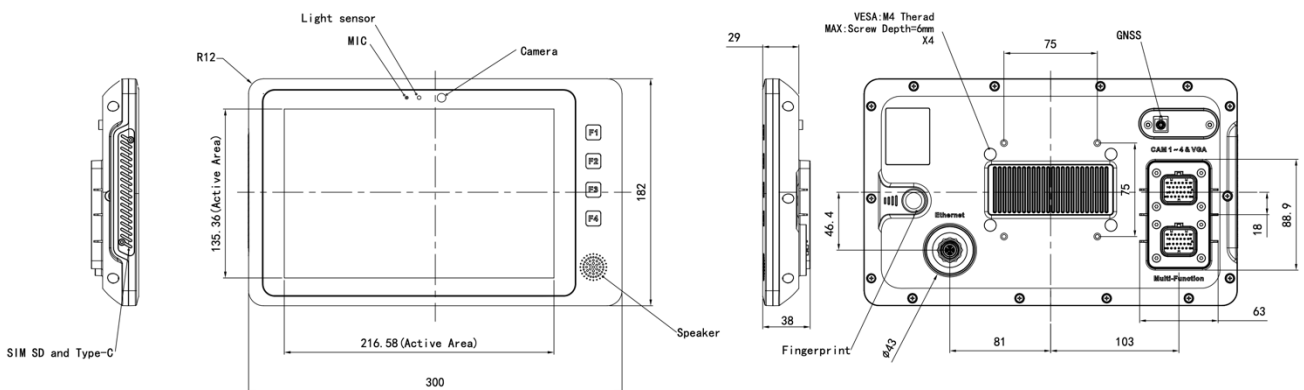


Multi-Application Driver Terminal

The MADT600 consolidates multiple in-vehicle devices into one powerful unit. It simultaneously runs dispatch, ticketing, navigation, driver assistance, and fleet management applications—creating a unified HMI that reduces cabin clutter, simplifies wiring, and lowers integration and maintenance cost for operators and system integrators.



Dimension



* Certification is still in progress

Product Specifications

MDT Specifications	
Hardware Platform	
CPU	Quad-Core Cortex-A72 + Quad-Core Cortex-A53 Up to 2.0 GHz
GPU & NPU	ARM Mali-G52 MC3 GPU, 6 TOPS INT8 NPU
RAM	8GB LPDDR4
Storage	256 GB UFS (default)
Speaker	Built-in 8 Ω / 1 W, waterproof
Mic phone	Built-in
Software	
OS	Android 14 or Linux OS
Networks	IPv4/IPv6, NAT, Routing, IPsec/L2TP VPN, OpenVPN etc.
Network Connections	
Cellular	5G / 4G FAKRA D-coded male or built-in antenna
Wi-Fi	Wi-Fi 6, AP/STA modes, built-in antenna
BLE	Bluetooth 5.0, built-in antenna
GNSS	GPS L1 C/A, L5; Galileo E1, E5a; BDS B1I, B2a; GLONASS L1 FAKRA C-coded male
IMU	6-axis gyroscope
System & Display	
LCD Resolution	1280 × 800 (16:9), 262K colors, ambient light sensor
View angles	30° to 150° (vertical and horizontal)
LCD Screen	10.1" display, 60 fps refresh rate
Touch Module	G+G Multi-Touch
Interface Configuration	
Ethernet	1 × M12 X-Coded 1000Mbps
SIM Card Slot	2 × 4FF Nano-SIM
Button	4 × buttons with backlight
NFC	ISO14443A/B, ISO15693, NFC Forum T1T, T2T, T4T, T5T
Fingerprint	Capacitive fingerprint recognition module
USB Interface	1 × USB Type-C
Camera	1 × built-in camera
ADH Camera and VAG	8 × external AHD camera inputs via 26-pin connector
Expand storage	1 × M.2 SATA SSD slot (up to 4 TB)
SD / TF Card reader	1 × Micro SD slot (up to 256 GB)
Audio/Mic	L, R, GND, Mic in 26-pin Multi-Function Interface
CAN Bus	1 × CAN 2.0 in 26-pin Multi-Function Interface
I/O & Serial	1 × RS232/RS485, 5 × DI, 4 × DO in 26-pin multi-function interface
Installation	
Mounting	VESA 75 x 75mm
Dimensions	300 x 182 x 38 mm

MDT Specifications	
Environment	
Operation Temperature	-30°C ~ +70°C
Storage Temperature	-40°C ~ +85°C
Humidity	95% RH @ 60°C, Non-condensing
Protection level	IP65
Impact Resistance (IK Rating)	IK08
Power	
Power Supply	9–48 VDC wide-range input
Power Connector	VIN+, VIN-, IGT in 26-pin Multi-Function Interface
Standards & Certifications	
Automotive & Transport Standards	EN 61373 – Shock & Vibration
	EN 45545-2 – Fire & Smoke Protection
	ISO 16750-1, ISO 16750-2 – Road Vehicle Environmental Conditions
	ECE R10 – Electromagnetic Compatibility
Certification*	ECE R118 – Fire Behavior of Interior Materials
	CE, E-Mark, UKCA, FCC

* Certification is still in progress

Ordering Guide

Model	Model code: MDT-<W> <W>: Type & Module
MDT600-NRQ5	5G NSA n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 5G SA n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 LTE-FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD B34/38/39/40/41/42/43/48 LAA 46 WCDMA B1/2/4/5/8/19
MDT600-NRQ5-ANT	5G NSA n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 5G SA n1/2/3/5/7/8/12/13/14/18/20/25/26/28/29/30/38/40/41/48/66/70/71/75/76/77/78/79 LTE-FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD B34/38/39/40/41/42/43/48 LAA 46 WCDMA B1/2/4/5/8/19
MDT600-FQ09	LTE-FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD B34/38/39/40/41/42/43/46(LAA)/48(CBRS) WCDMA B1/2/3/4/5/6/8/19
MDT600-FQ09-ANT	LTE-FDD B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/29/30/32/66/71 LTE-TDD B34/38/39/40/41/42/43/46(LAA)/48(CBRS) WCDMA B1/2/3/4/5/6/8/19
MDT600-EN00	No Cellular

-<M> For optional storage versions are available, which can be 256GB, 512GB or 1TB versions. Default version is 256GB.
Example: MDT600-FQ09-256GB it comes with a 256GB default UFS chip and additional 256GB M.2 SSD.
-ANT external antenna model, MDT600-FQ09-ATN is an **external antenna** model, while MDT600-FQ09 is **built-in antenna** model

Accessories

	Order Code	Specifications
GNSS FAKRA Antenna	AANT040013	GPS L1 1575.42MHz & BD 1561.098MHz & GLONASS 1602MHz. Cable length 2000mm.
Network Cable M12 X to RJ45	AETH050002	Network Cable M12 X to RJ45 , Cable length 1000mm
MDT600 Multi-Function Cable	SCAB000601	MDT600 Multi Function Cable, 26 Pin Waterproof Connector, Audio Connector, Wire Pull, 1000mm in Length
MADT600 Camera Test Cable	SCAB000600	MDT600 Camera Test Cable, 26 Pin Waterproof Connector, Wire Pull, 1000mm in Length
AHD Camera-IN-DSM-1080P	SMDM060045	DSM Camera, 1/3 "CMOS, AHD1080P,PAL,1920(H)×1080(V),Min. Illum. 0.01LUX,ES, SNR>52dB, AWB, Black and white mode, cable 500mm,lens 6.0MM, horizontal 50°,Infrared 2 lights, 4P M12(GX12), DC12V,150mA-250mA, -30~70 °C
AHD Camera-IN-ADAS-CM01	SMDM060044	ADAS Camera, FH8536H 1/2.9"GC2053, AHD1080P,PAL,1920(H)×1080(V),Min. Illum. 0.1LUX,ES 1/50-1/100000s, S NR >52dB, AWB, Color, cable 500mm,lens 2.1mm, horizontal 120°, 4P M12(GX12), DC12V, -20~70 °C
AHD Camera-IN-813-A200H	SMDM060043	IN-813-A200H, 360° Panoramic Camera, 1/2.9 CMOS, AHD1080P,PAL,1920(H) ×1080(V),Min. Illum. 0.01LUX,ES 1/50-1/100000s, S NR >52dB, AWB, Color, cable 600mm,lens 16mm, horizontal 210°, 4P M12(GX12), DC12V, -20~70 °C

About Us

InHand Networks is a leading IoT solutions provider founded in 2001, dedicated to driving digital transformation across industries and empowering customers to unlock their full potential and achieve accelerated growth.

We specialize in delivering industrial-grade connectivity solutions for diverse sectors, such as enterprise networks, industrial and building IoT, digital energy, smart commerce, and mobility. Our comprehensive product portfolio and services cater to various applications worldwide, including smart manufacturing, smart grid, intelligent transportation, smart retail, etc. With a global footprint spanning over 60 countries, we serve customers in China, the United States, France, Germany, the United Kingdom, Italy, and beyond.



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