

TANK-101B-D525/N455

Fanless Embedded Controller with Dual Core Intel® Atom™ D525



Features


- ◆ Dual core Intel® Atom™ D525 inside
- ◆ Wide range 9~36VDC power input
- ◆ Isolation protected COM and CAN communication
- ◆ Extended temperature fanless design support -20°C ~ 70°C (N455)



TANK-101B is designed with all the functions and protections compliant with targeting transport market. TANK-101B provides not only the dual core computing power delivered by Intel® Atom™ D525, its onboard memory with CompactFlash/SATA DOM solid-state storage can withstand the severe operating environment on board. With typical voltage at 24VDC, TANK-101B can take wide range DC input from 9V to 36V as power source. It also has COM port and CANBus with isolation protection for device control, dual Realtek GbE LAN and 802.11b/g/n for high speed communication. TANK-101B supports all these versatile functions in a compact enclosure yet support fanless operation.


Isolation Protection

An integrated circuit (IC) connected to external ports is susceptible to damaging electrostatic discharge (ESD) pulses from the operating environment and peripherals. Additional protection can violate stringent signaling requirements, leaving design engineers with the need to balance performance and reliability.




COM3 : RS-232/422/485
Default RS422 with isolation
1. On-board 15KV ESD Protection
2. Isolated 3000 VDC Protection


Alert standard Format (ASF 2.0) is also supported to provide system manageability in OS-absent environments. The ASF defines remote control and alerting interface that serve managed PCs in OS-absent states. The ASF capability can minimize on-site IT maintenance, improve system availability, and allow remote control of power management.




LAN1 with ASF 2.0 support




Wide Range Power Input: 9~36 VDC




VGA




Dual USB 2.0




Power Jack




Compact Flash




Reset



12V/24V DC power supply



Mic In
SPK-Out

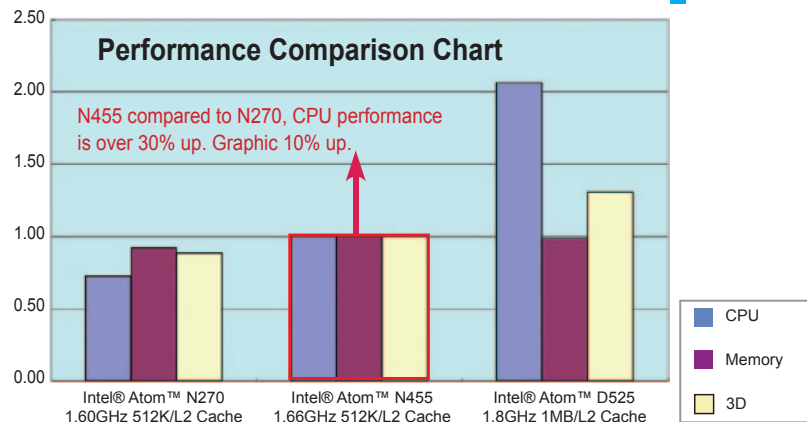


Dual USB 2.0

Isolated CAN :

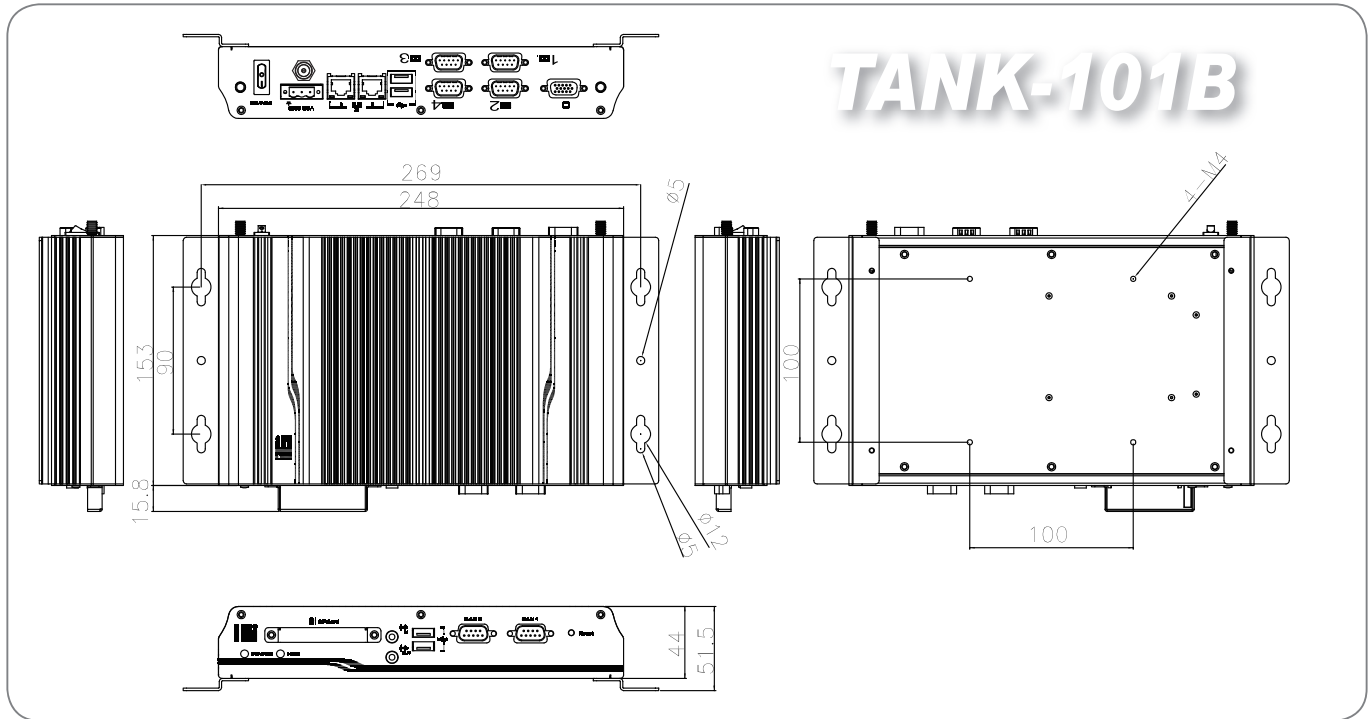
The Control Area Network (CAN) is a serial bus system, originally developed by Bosch for use in automobiles, and now is increasingly being used in industrial automation. IEI TANK-101B build in on board CAN controllers, the IEI CAN provides bus arbitration and error detection with an automatic transmission repeat function. This drastically reduces the chance of data loss and ensures system reliability and are suitable for networking intelligent I/O devices such as sensors or actuator of machines or plants, and on-board optical isolators along with additional protection design protect your system and equipment against damage from ground loops and electrostatic discharge (ESD) pulsed, which increase system reliability in harsh environments.

New Dual Core Intel® Atom™ D525



CAN Controller	Philips SJA1000T
CAN Transceiver	TI ISO1050DUBR
Signal Support	CAN_H, CAN_L
Speed (bps)	1Mbps
Connectors	Two DB-9 Connectors
Isolated Protection	2500Vrms on CAN side

Dimensions (Unit: mm)



Specifications

Model Name		TANK-101B
Platform		Intel®
Chassis	Color	Cool Gray+Blue
	Dimensions	248 x 153 x 44 mm
	Chassis Construction	Aluminum Alloy with heavy duty metal
Motherboard	Processor CPU	Intel® Atom™ D525 processor 1.8 GHz / 1 MB L2 cache Intel® Atom™ N455 processor 1.66 GHz / 512 KB L2 cache
	Chipset	ICH8M
	System Memory	1 GB DDR3 memory on board One expansion 204-pin DDR3 slot (Support up to 2GB)
Storage	Hard Drive	1 x 2.5" SATA HDD space
	Compact Flash	1
System Function	USB 2.0	4
	Ethernet	2 x Realtek 8111E PCIe GbE
	RS-232	3
	RS-232/422/485	RS-232/422/485 Default RS422 with isolation
	Display	1 x VGA
	Resoluiton	Up to 2048 x 1536@60 Hz (D525), 1400 x 1050@60Mhz (N455)
	Audio	1 x Mic in, 1 x Speaker out
	Other	2 x CAN with isolation
	Wireless	1 x 802.11 b/g/n
	Expansions	1 x PCIe mini card slot (reserve for wifi module, optional for IEI mini DOM)
Power	Power Input	9~36 V DC
	Power consumption	12@1.85A (Intel® D525 1.8G GHz with 1MB L2 Cache, DDR3 1GB)
Reliability	Mounting	DIN mount (optional), wall-mount
	Operating Temperature	-20°C ~ 60°C (D525 model with CompactFlash®/SSD) -20°C ~ 70°C (N455 model with CompactFlash®/SSD) *Ambient air speed pre IEC-68-2-2 standard -10°C ~ 50°C with WI-FI
	Operating Shock	Half sine wave 3G; 11ms 3axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-1 with SATA HDD MIL-STD-810F 514.5C-2 with SATA SSD/CF
	Weight (Net/Gross)	2.1 kg / 3.9 kg

Packing List

1 x SATA HDD drive cable (P/N: 32801-004900-100-RS)	
1 x 60W 12V power adaptor (P/N: 63000-FSP060DBAB1552-RS)	
1 x Power cord	2 x Wireless antenna (For wireless model only)
1 x QIG	2 x Wall mount brackets
1 x Driver CD	1 x Screw set



DK-84MB (optional)



Wall Mount bracket

Ordering Information

Part No.	Description
TANK-101B-R10/D525/1GB	Extend temperture fanless embedded system with dual core Intel® Atom™ Processor D525 1.8GHz CPU with two isolated CAN, one isolated Serial Port, 1GB DDR3 memory onboard, 9~36V DC in, Pantone 287C + Cool Gray 2C, -20°C ~ 60°C, RoHS
TANK-101B-R10/N455/1GB	Extend temperture fanless embedded system with Intel® Atom™ Processor N455 1.66GHz CPU with two isolated CAN, one isolated Serial Port, 1GB DDR3 memory onboard, 9~36V DC in, Pantone 287C + Cool Gray 2C, -20°C ~ 70°C, RoHS
TANK-101BW-R10/D525/1GB	Fanless embedded system with dual core Intel® Atom™ Processor D525 1.8GHz CPU with two isolated CAN, one isolated Serial Port, built-in 802.11b/g/n wireless, 1GB DDR3 memory onboard, 9~36V DC in, Pantone 287C + Cool Gray -10°C ~ 50°C, RoHS
DK-84MB	DIN mount kit for embedded system, black, RoHS

Embedded OS support

TANKCF-101B-XPE-1GB	Windows® XP Embedded OS image, for TANK-101B, with 1GB CompactFlash memory card, RoHS
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* For other CompactFlash® capacity, please contact with IEI for customization.