

TANK-101B-D525-N455

Fanless Embedded Controller with Dual-Core Intel® Atom™ D525 Processor



Features

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



The TANK-101B is designed with all the functions and protections compliant with targeting transport market. It not only provides dual-core computing power delivered by the Intel® Atom™ D525, its onboard memory with CompactFlash®/SATA DOM solid-state storage can withstand severe operating environments on board. With typical voltage at 24VDC, the 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. The TANK-101B supports all these versatile functions in a compact enclosure in addition to 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-422/485
Default RS-422 with isolation
1. On-board 15KV ESD Protection
2. Isolated 3000 VDC Protection

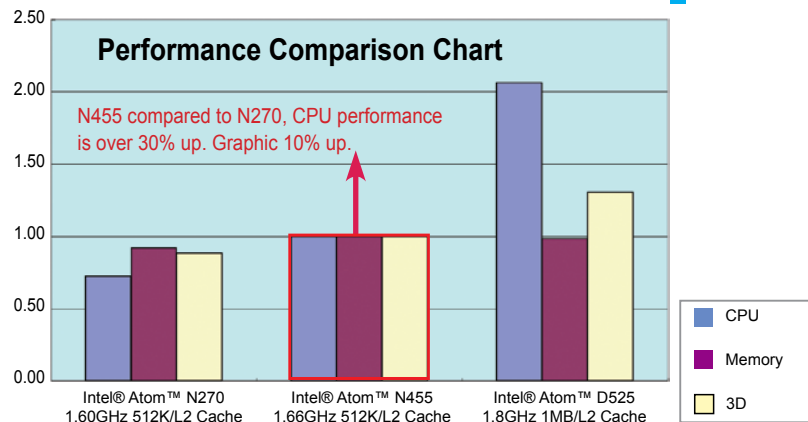
LAN1 with ASF 2.0 support

Wide Range Power Input: 9~36 VDC

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.

VGA, Dual USB 2.0, Power Jack, Reset, CompactFlash®, Mic-in, SPK-Out, Dual USB 2.0, Isolated CAN, Power adapter, 12V/24V DC power supply

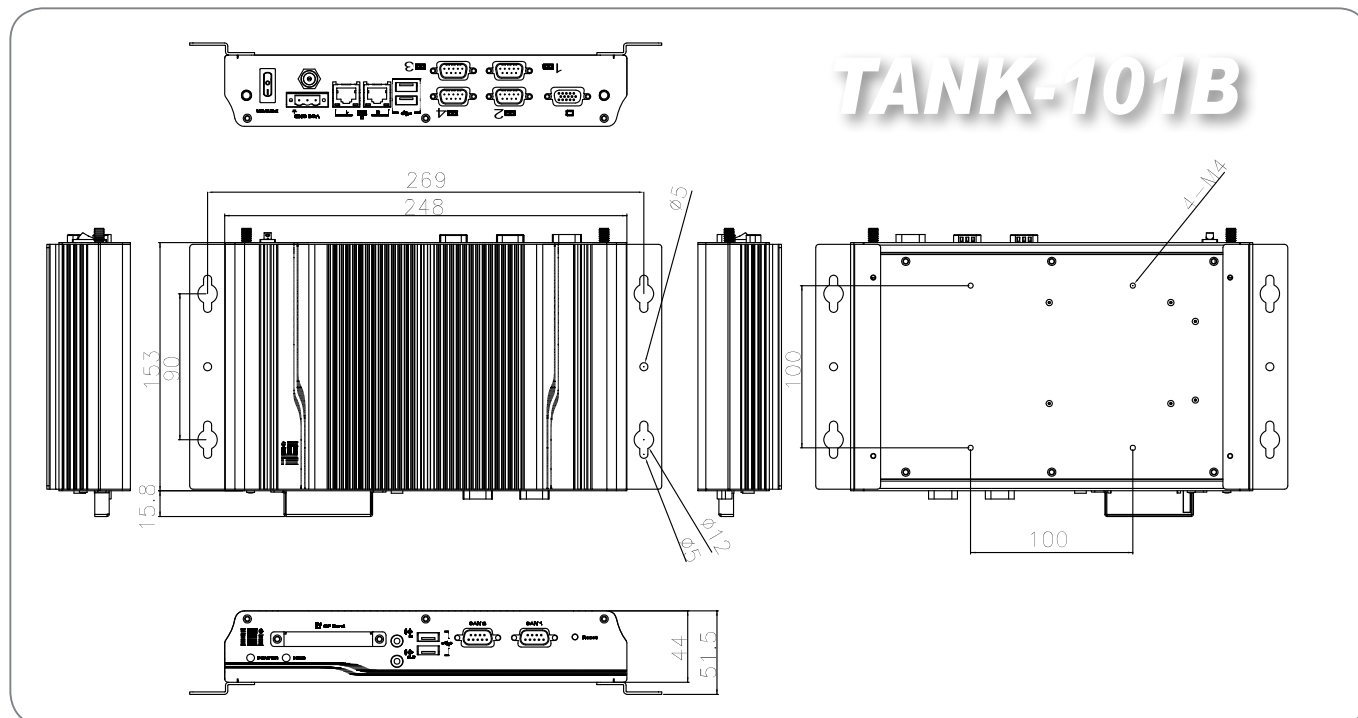
Dual-core Intel® Atom™ D525



Isolated CAN :
The Control Area Network (CAN) is a serial bus system originally developed by Bosch for use in automobiles, and is now increasingly used in industrial automation. IEI TANK-101B has built-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, ensures system reliability and is suitable for networking intelligent I/O devices such as sensors or actuator of machines or plants. On-board optical isolators along with additional protection design protect your system and equipment against damage from ground loops and electrostatic discharge (ESD), which increases system reliability in harsh environments.

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| 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 |
|-----------------|-----------------------|--|
| Chassis | Color | Cool Gray+Blue |
| | Dimensions (WxDxH) | 248 x 138 x 44 mm |
| | System Fan | Fanless |
| | Chassis Construction | Aluminum alloy with heavy duty metal |
| Motherboard | CPU | Intel® Dual Core D525 1.8 GHz Intel® Dual Core N455 1.66 GHz |
| | Chipset | Intel® ICH8M |
| | System Memory | On-board DDR3 1GB memory 1 x 204-pin DDR3 SDRAM SO-DIMM (System Max : 3GB) |
| Storage | Hard Drive | 1 x 2.5" SATA HDD Bay |
| | CompactFlash® | 1 x CF Type II |
| System Function | USB 2.0 | 4 |
| | Ethernet | 2 x RJ-45 Realtek 8111E PCIe GbE |
| | RS-232 | 3 x DB-9 |
| | RS-422/485 | 1 x DB-9 Default RS-422 w/isolation |
| | CAN Bus | 2 x DB-9 CAN w/isolation |
| | Display | 1 x VGA |
| | Resolution | VGA: Up to 2048 x 1536 @ 60Hz |
| | Audio | 1 x Line-out, 1 x Mic-in |
| | Wireless | 1 x 802.11b/g/n (optional) |
| Expansions | PCIe Mini | 1 x Full size (reserved for Wi-Fi module) |
| Power | Power Input | DC Jack: 9~36V DC |
| | Power Consumption | 12@1.85A (Intel® Atom™ D525 with DDR3 1GB) |
| Reliability | Mounting | Din-rail, wall mount |
| | Operating Temperature | -20°C ~ 60°C (D525 with air flow CF/SSD), 5% ~ 95%, non-condensing -20°C ~ 70°C (N455 with air flow CF/SSD), 5% ~ 95%, non-condensing |
| | Operating Shock | Half-sine wave shock 3G, 11ms, 3 shocks per axis |
| | Operating Vibration | MIL-STD-810F 514.5C-1 with SATA HDD MIL-STD-810F 514.5C-2 with CompactFlash® / SSD |
| | Weight (Net/Gross) | 2.1 kg/3.9 kg |
| | Safety / EMC | CE/FCC |
| OS | Supported OS | Microsoft® Windows® XP Embedded |

Packing List

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|---|-------------------------|
| 1 x SATA HDD drive cable (Part No. : 32801-004900-100-RS) | |
| 1 x 60W 12V power adapter (Part No.: 63000-FSP060DBAB1552-RS) | |
| 2 x Wireless antenna (For wireless model only) | |
| 1 x Power cord | 1 x One Key Recovery CD |
| 2 x Wall mount brackets | 1 x Driver CD |
| 1 x Screw set | 1 x QIG |



Wall mount Bracket

Ordering Information

| Part No. | Description |
|-------------------------|--|
| TANK-101B-R10/D525/1GB | Extended 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 | Extended 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-R11/D525/1GB | Fanless embedded system with dual core Intel® Atom™ Processor D525 1.8G CPU with two isolated CAN, One isolated Serial Port, built-in 802.11 b/g/n wireless, 1GB DDR3 memory onboard, 9~36V DC in, -10°C ~ 50°C, R11, RoHS |

Embedded OS support

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| 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 IEI for customization options.