

Embedded System Platform Solutions

As the leading Embedded SBC provider, IEI continues to extend the product footprint from component level to system integration service. Our strong knowledge of market and technology innovation offers reliability, flexibility and interoperability for all of our embedded products with choices of size, performance and features.

NEW for 2012



1. Wide Temperature Ruggedize System (TANK and WStrider series)

Model Name	Processor CPU	Features
TANK-700-QM67	Intel® 2nd Gen Core™ Mobile Processor	- On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 8GB) - Dual combo (10/100/1000 baseT(X) or 1000 baseSFP slot) Gigabit LAN ports, supporting Intel® AMT 7.0
TANK-720-Q67	Intel® 2nd Gen Core™ Desktop Processor	- Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0 - On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 8GB)
TANK-800-D525	D525 3-Slot Fanless Embedded System	- On-board 1GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 3GB) - Redundant dual 9V~36V DC input
TANK-GM45A	Intel® Core™ Duo processor P8600 Intel® Celeron™ M processor 575	- Extended Temperature Fanless design support -20°C~70°C - High Performance MPEG-2 Decoding, WMV9(VC-1) and H.264(AVC) supported
TANK-101B	Intel® Atom™ D525 processor	- Isolation protected COM and CAN communication - Extended temperature fanless design support -20°C ~ 70°C (N455)
Wstrider-200A	Intel® Atom™ Z510PT 1.1GHz	- IP67 compliant rugged design - Fanless operation under -30°C~70°C extreme temperature

2. OPS Compliant Digital Signage Pluggable Module PC (IOPS series)



Model Name	Processor	Description
IOPS-Q67/2GB-R10	Intel® Core™ i5-2390T	Designed for pin compliance with Intel® OPS (Open Pluggable Standard), Intel® Q67 platform supports iAMT 7.0
IOPS-H61/2GB-R10	Intel® Core™ i3-2100T Intel® Celeron® G530T	Designed for pin compliance with Intel® OPS (Open Pluggable Standard), Intel® H61 platform

3. Compact Size Embedded System (IBX series)



Model Name	Processor
uIBX-200 Series	VIA® Eden™ ULV 500MHz Intel® Atom™ Z510P 1.1GHz
IBX-300B/BC	Intel® Atom™ D510 8 channels real time video capture with D1 resolution
IBX-500B	AMD® Geode™ LX 800 500 MHz
IBX-530-945GSE	Intel® Atom™ N270 1.6GHz

4. SBC Embedded System (ECK/ECN/ECW series embedded system)



Model Name	MB Model No.	Processor
ECN-780-Q67	ECNMB-780-Q6	Intel® Core™ i7/i5/i3 Quad/Dual Core
ECN-680A-H61	ECNMB-680-H61	Intel® Core™ i7/i5/i3 Celeron® and Pentium®
ECN-581A-QM57	NANO-QM57A	Intel® Core™ i5-520M
ECN-381B	NANO-GM45A2	Intel® Core™ Duo P8400/Intel® Celeron™ M 575
ECW-281B/B2-D525	WAFER-PV-D5252	Intel® Atom™ D525
ECW-281B-R21/N270 (ECW-281B2-R21/N270)	WAFER-945GSE	Intel® Atom™ N270

5. Embedded Chassis Series

Model Name	Motherboard Model	Dimensions
EBC-2100	NANO-LX	262 x 134 x 56 mm
EBC-2101	NANO-945GSE	262 x 134 x 56 mm
EBC-3000	KINO-G45A, KINO-9652, KINO-780AM2, KINO-G410	230 x 280 x 88 mm
EBC-3100 (PCI/PCIe Expansion)	KINO-G45A, KINO-9652, KINO-780AM2, KINO-G410	250 x 260 x 156 mm
EBC-3200	KINO-QM57A, KINO-HM551, KINO-PVN-D5251, KINO-PV-D5252, KINO-GM45A, eKINO-945GSE, KINO-780EB, KINO-945GSE2	260 x 180 x 55 mm
EBC-3680	KINO-AQ670, KINO-AH61, KINO-AH612, KINO-G45A, KINO-G410, KINO-CVR-D2700, KINO-780AM2, KINO-PV-D4253/ D5253, KINO-945GSE	310 x 220 x 270 mm
ECN-581A	NANO-PV-D5251, NANO-HM551	180 x 138 x 50 mm



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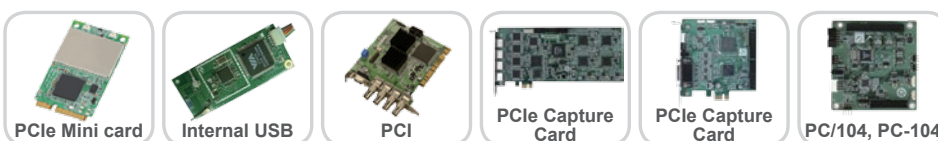
Power Supply/ Peripherals

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Panel Solutions Introduction

Versatile Expansion Interface

IEI embedded system provides various kinds of expansion interfaces inside a compact enclosure, providing the flexibility of function enhancement and the ease of system integration.

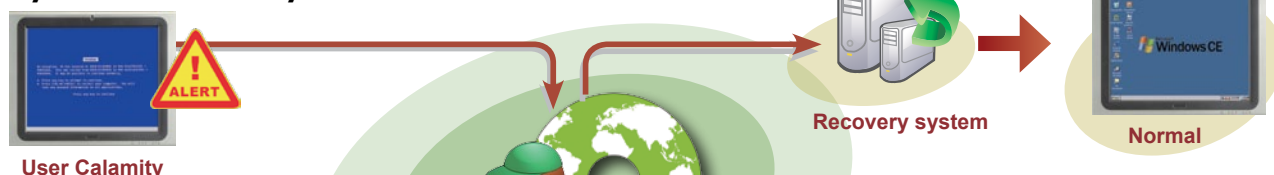


IEI One Key Recovery Solution



The IEI recovery CD includes a system recovery software developed by IEI with Windows® PE 2.0. The recovery CD allows you to create full system backup and restore from system failures. Users don't need to buy other system backup and recovery tools.

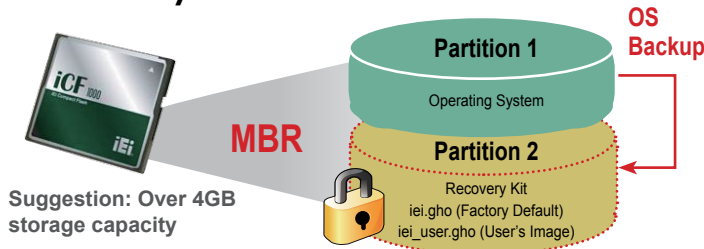
System Recovery



System Backup



Recovery Partition



IEI Products Only



Supported OS List	
Windows® XP	Linux OS
Windows® XP Embedded	1. RedHat 9
Windows® Vista	2. RedHat RHEL- 5.4
Windows® 7	3. Fedora Core 7, 8, 10, 11, 12
Windows® CE 5.0	4. Ubuntu 6.10, 7.10, 8.10
Windows® CE 6.0	5. Debian 4.0, 5.0
	6. SuSe 10.3, 11.2

Redundant dual DC power input

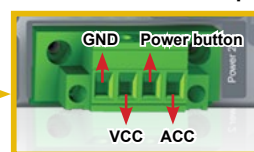
The redundant dual DC power input design increases the reliability of the system while preventing data loss and system corruption from sudden power failure. When main power is unavailable or low voltage capacity is present, the system can switch to the second power input instantly and without interruption.

There are two power connectors on the bottom panel. The Power 1 connector is a terminal block that supports ACC On signal. The Power 2 connector is a DIN connector that directly connects to a power adapter.

When the system is in ACC On mode, the main power input is from the Power 1 connector. When the system is in ACC Off mode, the main power input is from the Power 2 connector. The ACC on/off mode is selected by the ACC on/off switch on the bottom panel.

The TANK-700/720 series adopts redundant dual DC power input design, which ensures uninterrupted power supply to the system and eliminates the risk of sudden shutdown and data loss, even if one power is unavailable or low voltage capacity is present.

Power1: 9 ~ 36V DC input



Power2: 10.5 ~ 36V DC input



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Wide Temperature Ruggedize System



Model Name	TANK-700-QM67	TANK-720-Q67	TANK-800-D525	TANK-GM45A	TANK-101B	WStrider-200A
Platform	Intel®	Intel®	Intel®	Intel®	Intel®	Intel®
Chassis	Color	Black C + Silver C	Blue C + Silver C	Black C + Silver	Silver	Cool Gray + Blue
	Dimensions	310 x 200 x 62 mm	310 x 200 x 70 mm	136 x 219 x 188 mm	310 x 200 x 55mm	248 x 138 x 44mm
	Chassis Construction	Extruded aluminum alloy Heavy duty steel sheet		Extruded aluminum alloy	Aluminum alloy with heavy duty metal	
Motherboard	Processor CPU	2nd Generation Intel® mobile Core™ i7/i5/i3 and Celeron® processor	2nd Generation Intel® Core™ i7/i5/i3 Celeron® and pentium® desktop processor	Intel® Atom™ D525 1.8GHz dual-core processor	Intel® Core™ Duo 2.4GHz, 3MB L2 cache, processor P8600 Intel® Celeron™ M 2.0GHz 1MB L2 cache, processor 575	Intel® Atom™ D525 Processor 1.8GHz/1MB L2 cache
	Chipset	Intel® QM67	Intel® Q67	Intel® ICH8M	Intel® GM45 + ICH9M	ICH8M
	System Memory	1 x 204-pin 1066/1333 MHz dual-channel DDR3 SDRAM DIMM slot (system max. 8GB) On-board 2GB DDR3 memory	1 x 204-pin 800MHz DDR3 SDRAM SO-DIMM Slot (system max. 3GB) On-board 1GB DDR3 memory	2 GB DDR2 SODIMM Memory Pre-installed (System Max. 2GB)	1GB DDR3 Memory On board One Expansion 204-pin DDR3 Slot (System Max. 2GB)	Intel® Atom™ Z510PT 1.1GHz
Storage	Hard Drive	SATA 6Gb/s with 2.5" HDD/SSD support		1 x 2.5" SATA HDD Space		N/A
	CompactFlash®	N/A		N/A		Pre-installed 4GB CF
System Function	PS2 (KB/MS)	N/A		N/A		N/A
	USB 3.0	2		N/A		N/A
	USB 2.0	4		4		4
	Ethernet	2 x Combo (SFP Fiber/RJ-45) Realtek 8111E PCIe GbE Gigabit LAN		2 x Realtek 8111E PCIe GbE	2 x Intel® GbE One Intel® 82574L Ethernet Controller One Intel® WG82567LM Ethernet PHY	2 x Realtek 8111E PCIe GbE
	RS-232	4 and 2 w/isolation		4	1 w/isolation	3
	RS-232/422/485	2 x RS422/RS485 with isolation		2	One RS422/RS485 Default RS422 with isolation	One RS-232/422/485 Default RS422 with isolation
	Digital I/O	8-bit Digital IO, 4-bit input/4-bit output		8-bit Digital IO, 4-bit input/4-bit output	DIO signal for Remote on/off Control	N/A
	Display	1 x VGA, 1 X HDMI		1 x VGA	1 x VGA	1 x VGA
	Resolution	2048 x 1536 @ 75Hz (VGA), 1920 X 1200 @ 60Hz (HDMI)		2048 x 1536 @ 75Hz (VGA), 1920 x 1080 @ 60Hz (DVI)	2048 x 1536 @ 75 Hz	2048 x 1536 @ 60 Hz
	Audio	1 x Mic-in, 1 x Line-out		1 x Mic-in, 1 x Line-out	N/A	1 x Mic-in 1 x Speaker-out
	CAN Bus	1 x CAN w/isolation		N/A	N/A	2 x CAN w/isolation
	Wireless	1 x 802.11 a/b/g/n (Optional)		N/A	N/A	1 x 802.11 b/g/n
Power	Video Capturing	4-channel audio/video input PCIe Mini card (up to two cards) (Optional)		N/A	N/A	N/A
	Expansions	3 x PCIe Mini slot		2P1E: One PCIe x4 (physical one PCIe x16 slot) and two PCI slots 1P2E: One PCIe x1 (physical one PCIe x4 slot) and one PCIe x2 (physical PCIe x16 slot) and one PCI	N/A	One PCIe Mini Card Slot (reserve for Wi-Fi module)
	Power Input	Redundant dual DC input Power 1 (Terminal Block): 9V(+/-0.3V)~36V Power 2 (DC Jack): 10.5V(+/-0.3V)~36V		Redundant dual DC input Terminal Block: 9 (+/-0.3) ~ 36V DC Jack: 10.5 (+/-0.3) ~36V	Terminal / DC Jack: 12V	DC Jack: 9~36V DC
Reliability	Max. Power Consumption	19V@3.3A (Intel® Core™ i5-2540M processor with 4G DDR3 Memory)	19V@3.1A (Intel® Core™ i3-2100T processor with 4G DDR3 Memory)	19V@1.7A (Intel® Atom™ D525 1.8GHz processor with 1G DDR3 Memory) without add-on card	12@3.85A (Intel® Core2 Duo P8600 2.4GHz with 3MB L2 Cache, DDR2 2GB)	12@1.85A (Intel® D525 1.8G GHz with 1MB L2 Cache, DDR3 1GB)
	Mounting	Desktop, Wall mount		Desktop, Wall mount	Desktop	DIN mount, wall mount
	Operating Temperature	-20°C ~ 70°C, 5% ~ 95%, non-condensing	-20°C ~ 50°C, 5% ~ 95%, non-condensing	-20°C ~ 70°C, 5% ~ 95%, non-condensing	-20°C ~ 70°C with SSD	-20°C ~ 70°C with CompactFlash®/SSD (N455)
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis		Half sine wave 3G; 11ms 3 shocks per axis		
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)		MIL-STD-810F 514.5C-1	* MIL-STD-810F 514.5C-1 MIL-STD-810F 514.5C-2	MIL-STD-810F 514.5C-2
Weight (Net/Gross)	3.8Kg/6.5Kg		4.2Kg/6.9Kg	2.6Kg/4.1Kg	3.5Kg/4.2Kg	2.1Kg/3.9Kg
						1.3Kg/2.9Kg

*Systems with hard drive meet MIL-STD-810F 514.5C-1 specifications. SSD/CF systems meet MIL-STD-810F 514.5C-2 specifications.

TANK-700-QM67 720-Q67

- Intel® 2nd Gen Core™ Mobile Processor
- Intel® 2nd Gen Core™ Desktop Processor

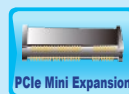
High Performance Fanless Embedded System with 2nd Generation Intel® Core™ i7/i5/i3 Processors

Combo Gigabit LAN (SFP Fiber/RJ-45)



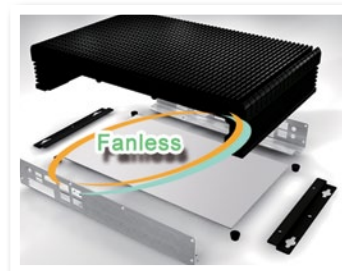
Features

- ◆ 2nd Gen Intel® Core™ i7/i5/i3 or Celeron® mobile processors for TANK-700
- ◆ 2nd Gen Intel® Core™ i7/i5/i3 Pentium® and Celeron® desktop processors for TANK-720
- ◆ Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0
- ◆ On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10GB)
- ◆ Dual combo (10/100/1000 baseT(X) or 1000 baseSFP slot RJ-45 port) Gigabit LAN ports, supporting Intel® AMT 7.0
- ◆ Supports 8-channel audio/video capture and dual display by VGA/HDMI
- ◆ Supports two USB 3.0 ports, four USB 2.0 ports, one SATA 6Gb/s port, one CAN-bus port and eight COM ports (four with isolation)
- ◆ Dual-band 2.4/5GHz 802.11a/b/g/n 3T3R MIMO Wi-Fi for high speed wireless transmission
- ◆ Redundant dual DC power input (9V ~ 36V)
- ◆ CAN-bus interface with isolation



1 Fanless Solution

The TANK-700/720 series focus on the best components that generate less heat, but maintain high system performance. With the fanless design, the TANK-700/720 series reduces system failure caused by fans and extends the lifetime of the device.



3 Intel® Virtualization Technology

Intel® Virtualization Technology (Intel® VT) allows multiple, independent operating systems to run simultaneously on a single system. This entire "package" of virtual hardware - CPU, memory, NIC, OS and applications--is turned into a single software file that can be utilized as easily as using file copy and paste. Intel® VT brings an entirely new level of efficiency and flexibility to IT environments.

Auto Distribution of Resources

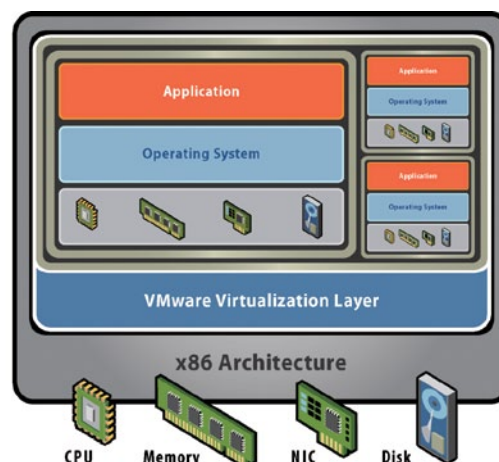
- Dynamic Balancing
- Continuous Optimization

Various Applications

- Automated
- Cross Applications

Dynamic Adjustment of Resources

- Non-disruptive Scaling
- Flexible and Reconfigurable



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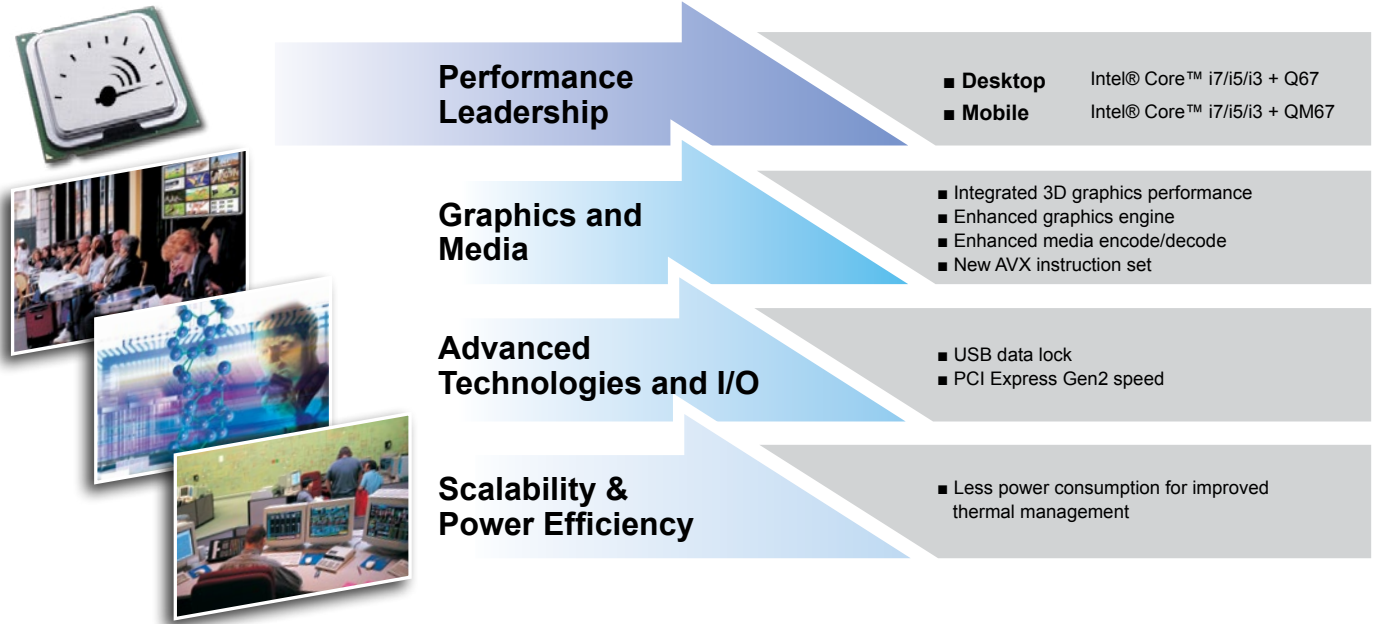
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High Performance

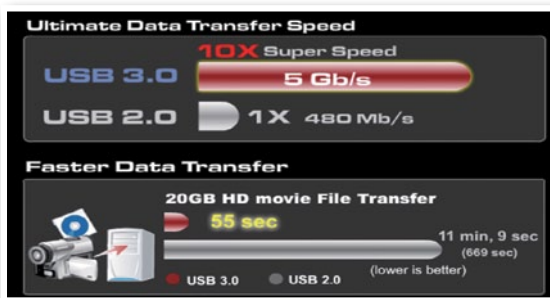


Super Speed USB 3.0 & SATA 6Gb/s



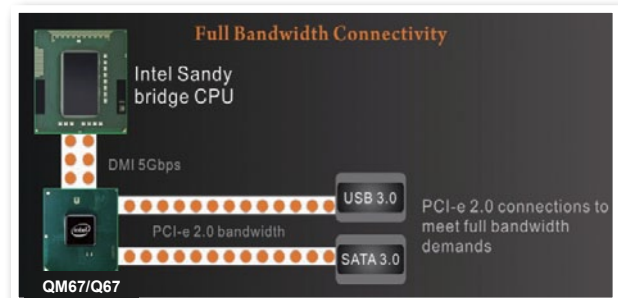
USB 3.0

- The SuperSpeed USB 3.0 supports a data transfer rate that is up to 10 times faster than USB 2.0 with optimized power efficiency.
- USB 3.0 is backwards compatible with the USB 2.0 components.



SATA 6Gb/s

- SATA 6Gb/s is suitable for tasks that require high performance memory capability, such as video editing.
- SATA 6Gb/s provides an easy upgrade path for high-bandwidth applications, such as RAID.



Fast Network Communication

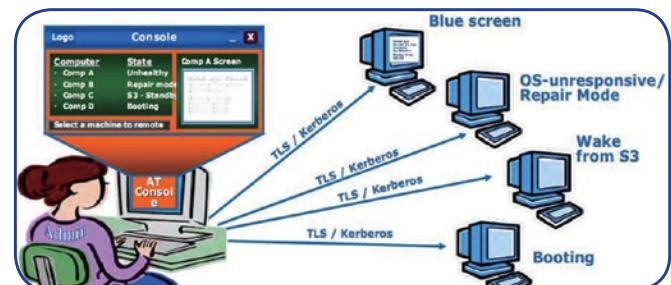
Dual Combo (SFP Fiber/RJ-45) Gigabit LAN

The TANK-700/720 series adopts dual combo (SFP Fiber/RJ-45) Gigabit LAN designed for long-distance networking. It is used in long distance network environments where an Ethernet cable would be unable to provide adequate coverage.



Intel® 82579 PHY with Intel® AMT 7.0 Supported

On the Intel® Core™ i7/i5/i3 hardware architecture, Intel® 82579 PHY Gigabit chipset and Intel® Active Management Technology 7.0 (AMT 7.0), IEI developed the iEZman program, which allows users to remotely control devices and perform administrative tasks such as wake-on LAN, access, diagnostics and power on/off.



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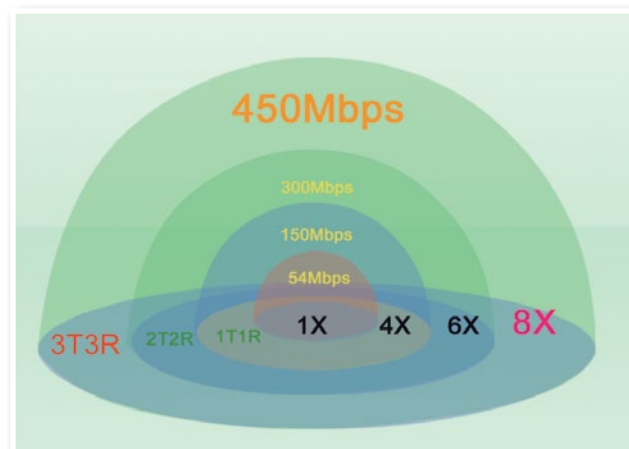
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Dual-Band 2.4/5 GHz Wi-Fi 802.11 a/b/g/n 3T3R MIMO Design

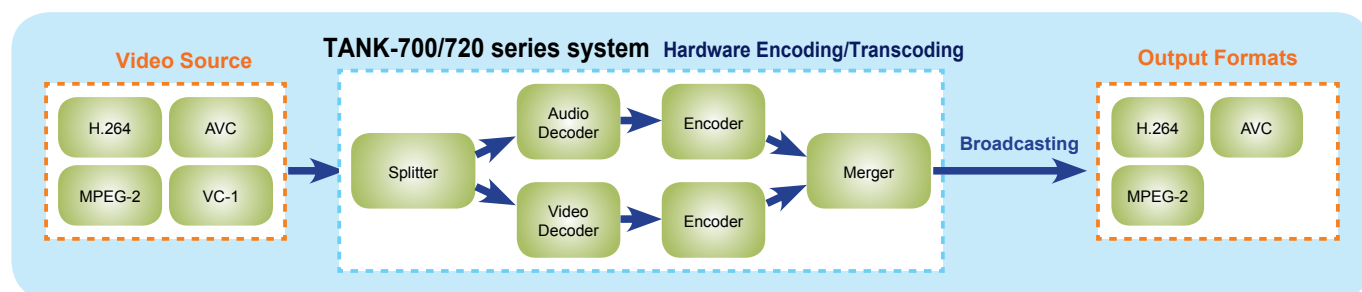
The TANK-700/720 series is equipped with a Wi-Fi module supporting dual-band 2.4/5GHz 802.11a/b/g/n 3T3R MIMO technology which ensures an uninterrupted wireless connection and provides up to 450Mbps wide bandwidth operation.



Intel® Sandy Bridge CPU with Integrated GPU

With the DirectX 10.1/OpenGL 3.0/Full MPEG-2/WMV (VC-1)/H.264 (AVC) Hardware Encoding/Transcoding Technology, the TANK-700/720 series makes the media transcoding process more efficient and allows for easier broadcasting.

Transcoding Progress Flow



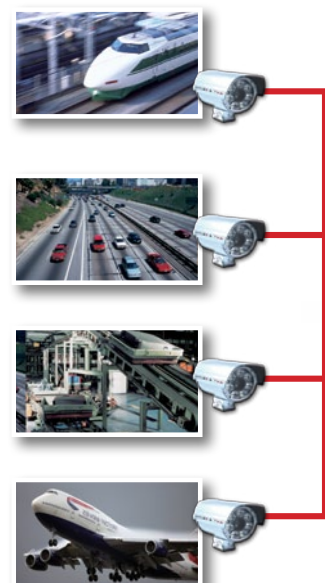
Dual Display Connection via VGA/HDMI

Allows second display connection to expand or duplicate your content.

- VGA supports resolution up to 2048x1536@75Hz, 32 bit
- HDMI supports resolution up to 1920x1200@60Hz.



8-Channel Audio/Video Capture Solution



With a H.264 codec, the TANK-700/720 series is capable of compressing and decompressing Full HD (1920x1080) video in real-time without increasing CPU loadings. By supporting real-time recording, previewing, and HD video transmission through surveillance devices, the TANK-700/720 series is suitable as an intelligent monitoring system and transportation intelligent scheduling system solution.



2 x 4-channel audio/video capture (Optional)

Besides audio/video capture cards, the TANK-700/720 series can support other PCIe Mini cards by demand, such as 3G and GPS modules.



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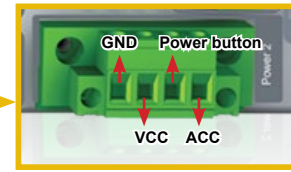
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Redundant Dual DC Power Input

The TANK-700/720 series adopts redundant dual DC power input design, which ensures an uninterrupted power supply to the system and eliminates the risk of sudden shutdown and data loss, even if one power is unavailable or low voltage capacity is present.

Power1: 9 ~ 36V DC input



Car lead-acid battery pack

Power2: 10.5 ~ 36V DC input



Adapter

Isolation Protection

4 COM Ports with Isolation

COM with isolation

1. Isolated protection voltage: 2500V/min DC protection
2. Common-mode transient immunity >25 kV/μs ESD protection



2 x RS-232

2 x RS-422/485



CAN-bus Interface with Isolation

Controller Area Network (CAN or CAN-bus) is a vehicle bus standard designed to communicate or detect errors with each other within a vehicle, industrial automation and medical equipment. This drastically reduces the chance of data loss and ensures system reliability and is suitable for intelligent networking I/O devices such as sensors or actuator of machines or plants.



CAN-bus with isolation

1. Isolated protection voltage 2500V/min DC protection
2. Typical transient immunity 50 kV/ms ESD protection

Fully Integrated I/O

Power switch and LED

1. Long-press 3 sec. to power on
2. Long-press 6 sec. to power off



ATX power mode Power 2 SFP-1 SFP-2 HDD CPU temperature alert

2 x 4-channel audio/video capture (Optional)



2 x RS-232



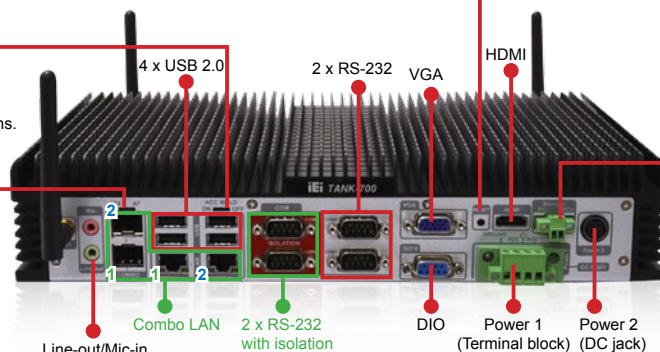
ACC on/off

ACC on mode is designed for vehicle applications. Use the ACC signal to control power on/off.



AT/ATX mode

Users can select a suitable mode according to the application.



Line-out/Mic-in

Combo LAN 2 x RS-232 with isolation

DIO

Power 1 (Terminal block)

Power 2 (DC jack)



Reset

The reset button forces the system to be reset when system hangs up.



Remote control

Users can power on/off the system by inputting low or high voltage into the terminal block.
High (2V ~ 5V): Power off
Low (< 0.4V): Power on

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Specifications

Model Name		TANK-700-QM67	TANK-720-Q67
Chassis	Color	Black C + Silver C	Blue C + Silver C
	Dimensions	310 x 200 x 62 mm	310 x 200 x 70 mm
	Chassis Construction	Extruded aluminum alloy Heavy duty steel sheet	
Motherboard	CPU	2nd Generation Intel® mobile Core™ i7/i5/i3 and Celeron® processor	2nd Generation Intel® Core™ i7/i5/i3 Pentium® and Celeron® desktop processor
	Chipset	Intel® QM67	Intel® Q67
	Ethernet	Intel® 82579 PHY with Intel® AMT 7.0 supported Intel® 82583V Ethernet controller	
	Memory	1 x 204-pin 1066/1333 MHz dual-channel DDR3 SDRAM DIMM slot (system max. 10GB) On-board 2GB DDR3 memory	
Storage	SATA	SATA 6Gb/s with 2.5" HDD/SSD support	
System Function	USB	2 x USB 3.0 on front 4 x USB 2.0 on rear	
	Ethernet	2 x Combo (SFP Fiber/RJ-45) Gigabit LAN	
	RS-232	4 x DB-9 on rear 2 x RJ-45 with isolation on front	
	RS-422/485	2 x RJ-45 with isolation on front	
	Display	1 x VGA 1 x HDMI	
	Resolution	Up to 2048 x 1536 @ 75Hz (VGA), 1920 x 1200 @ 60Hz (HDMI)	
	Audio	1 x Mic-in, 1 x Line-out	
	CAN-Bus	1 x Phoenix terminal block on front	
	Video/Audio Capture	Optional 4-channel audio/video input PCIe Mini card (up to two cards)	
	Internal Expansions	3 x PCIe Mini slot	
Power	Power Supply	Redundant dual DC input Power 1 (Terminal Block) : 9V(+/-0.3V) ~ 36V Power 2 (DC Jack) : 10.5V(+/-0.3V) ~ 36V	
	Max. Power Consumption	19V@3.3A (Intel® Core™ i5-2540M processor with 4G DDR3 Memory)	19V@3.1A (Intel® Core™ i3-2100T processor with 4G DDR3 Memory)
	Mounting	Desktop, Wall mount	
Reliability	Operating Temperature	-20°C ~ 70°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C ~ 50°C with air flow, 5% ~ 95%, non-condensing
	Storage Temperature	-30°C ~ 80°C	
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 axis	
	Operating Vibration	Meet MIL-STD-810F 514.5C-2 (with SSD)	
	Weight (Net/Gross)	3.8Kg/6.5Kg	4.2Kg/6.9Kg
	Safety & EMC	CE/FCC	CE/FCC

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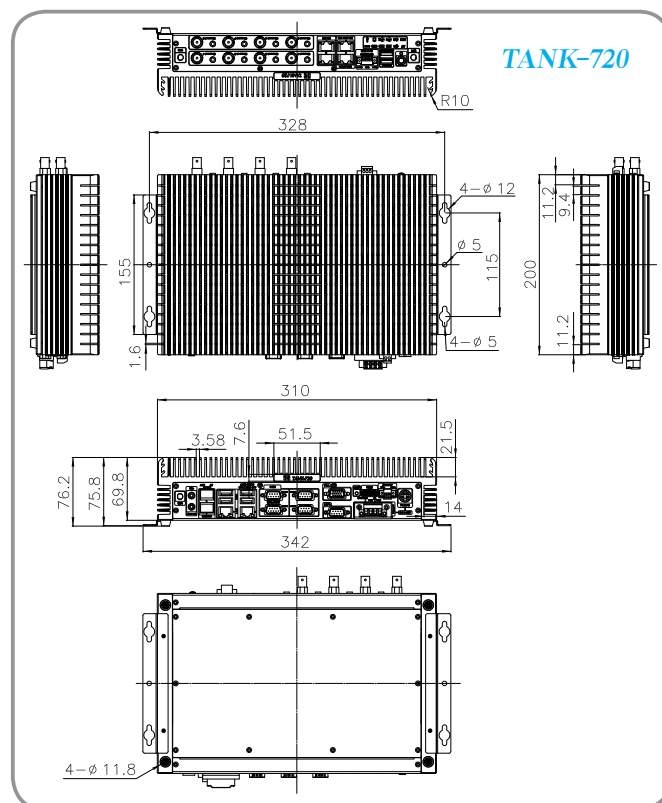
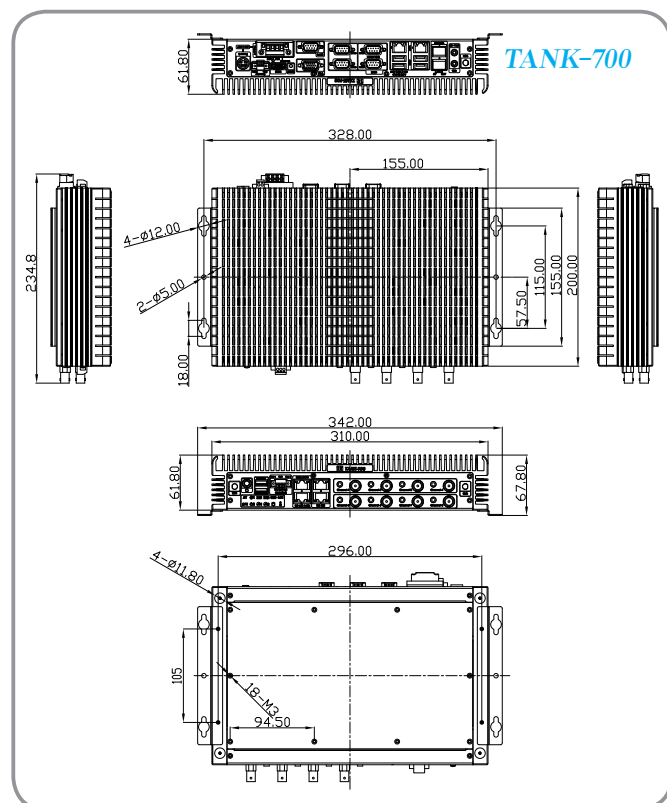
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Dimensions (Unit: mm)



Ordering Information

TANK-700 series

Part No.	Description
TANK-700-QM67/C/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, 8-channel capture card, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, Isolated CAN, Audio, 9-36V DC input, -20 ~ 70°C, R10
TANK-700-QM67/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, Isolated CAN, Audio, 9-36V DC input, -20 ~ 70°C, R10
TANK-700-QM67W/C/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, 8-channel capture card, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, 3T3R 802.11a/b/g/n wireless, Isolated CAN, Audio, 9-36V DC input, -20 ~ 70°C, R10
TANK-700-QM67W/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, 3T3R 802.11a/b/g/n wireless, Isolated CAN, Audio, 9-36V DC input, -20 ~ 70°C, R10
CPU Selection	CPU-MB-I7-2640M 2nd Generation Intel® Core™ i7 Processor [Mobile], PPGA-988, dual-core 2.8GHz, 35W, Intel® AMT
	CPU-MB-I5-2510E 2nd Generation Intel® Core™ i5 Processor [Mobile], PPGA-988, dual-core 2.5GHz, 35W, Intel® AMT
	CPU-MB-I3-2310M 2nd Generation Intel® Core™ i3 Processor [Mobile], PPGA-988, dual-core 2.1GHz, 35W
	CPU-MB-CM-B810 Intel® Celeron® Mobile Processor, PPGA-988, dual-core 1.6GHz, 35W
	CPU-MB-CM-B710 Intel® Celeron® Mobile Processor, PPGA-988, single core 1.6GHz, 35W
Memory Selection	DDR3-SO-1333-2GB SO-DIMM DDR3 1333MHz 2GB
	DDR3-SO-1333-4GB SO-DIMM DDR3 1333MHz 4GB

TANK-720 series

Part No.	Description
TANK-720-Q67/C/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, 8-channel capture card, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, Isolated CAN, Audio, 9-36V DC input, -20 ~ 50°C, R10
TANK-720-Q67/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, Isolated CAN, Audio, 9-36V DC input, -20 ~ 50°C, R10
TANK-720-Q67W/C/2G-R10	Fanless embedded system, 2GB DDR3 on board memory, 8-channel capture card, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, 3T3R 802.11a/b/g/n wireless, Isolated CAN, Audio, 9-36V DC input, -20 ~ 50°C, R10
TANK-720-Q67W/2G-R10	Fanless embedded system, 2GB DDR3 on-board memory, VGA/HDMI, USB 3.0, SATA 6Gb/s, SFP Fiber, 3T3R 802.11a/b/g/n wireless, Isolated CAN, Audio, 9-36V DC input, -20 ~ 50°C, R10
CPU Selection	CPU-DT-I7-2600S 2nd Generation Intel® Core™ i7 Processor [Desktop], LGA1155, dual-core 2.8GHz, 65W, Intel® AMT
	CPU-DT-I5-2390T 2nd Generation Intel® Core™ i5 Processor [Desktop], LGA1155, dual-core 2.7GHz, 35W, Intel® AMT
	CPU-DT-I3-2100T 2nd Generation Intel® Core™ i3 Processor [Desktop], LGA1155, dual-core 2.5GHz, 35W
	CPU-DT-P-G630T Intel® Pentium® Desktop Processor, LGA1155, dual-core 2.3GHz, 35W
	CPU-DT-C-G530T Intel® Celeron® Desktop Processor, LGA1155, dual-core 2.0GHz, 35W
Memory Selection	DDR3-SO-1333-2GB SO-DIMM DDR3 1333MHz 2GB
	DDR3-SO-1333-4GB SO-DIMM DDR3 1333MHz 4GB

Options

Options	P/N	Description
Gigabit Ethernet SFP Module	SFP1G-SX-I	1Gbps SFP optical transceiver, multi-mode/550m, 850nm (0°C ~ 70°C)/industrial grade (-20°C ~ 85°C)
	SFP1G-MLX-I	1Gbps SFP optical transceiver, multi-mode/2Km, 1310nm (0°C ~ 70°C)/industrial grade (-40°C ~ 85°C)
	SFP1G-LX10-I	1Gbps SFP optical transceiver, single-mode/10Km, 1310nm (0°C ~ 70°C)/industrial grade (-40°C ~ 85°C)
	SFP1G-XD70-I	1Gbps SFP optical transceiver, single-mode/50Km, 1550nm (0°C ~ 70°C)/industrial grade (-40°C ~ 85°C)
Fiber Cord	FPC-LCLC-MM3M	Optical connector LC/LC, multi-mode, diameter 62.5/125 µm, length 3m
Fiber Cord	FPC-LCLC-SS3M	Optical connector LC/LC, single-mode, diameter 9/125 µm, length 3m
OS: Win CE 6.0 (CD-ROM)	TANK-700-QM67-CE060-R10	OS Image with WINCE 6.0, for TANK-700 QM67 Series, with CD-ROM, RoHS
	TANK-720-Q67-CE060-R10	OS Image with WINCE 6.0, for TANK-720 Q67 Series, with CDROM, R10
OS: Win XPE (CD-ROM)	TANK-700-QM67-XPE-R10	OS Image with XPE, for TANK-700 QM67 Series, with CD-ROM, RoHS
	TANK-720-Q67-XPE-R10	OS Image with XPE, for TANK-720 Q67 Series, with DVD-ROM, R10
OS: Linux (CD-ROM)	TANK-700-QM67-LNX-R10*	OS Image with Linux for TANK-700 QM67, Debian operating system, Kernel version 2.6.26, with CD-ROM, RoHS
	TANK-720-Q67-LNX-R10*	OS Image with Linux for TANK-720 Q67, Debian operation system, Kernel version 2.6.26, with CD-ROM, R10
OS: Win 7 Embedded (CD-ROM)	TANK-700-QM67-WES7E-R10	OS Image with Windows Embedded Standard 7 E, for TANK-700 QM67 Series, with CD-ROM, RoHS
	TANK-720-Q67-WES7E-R10	OS Image with Windows Embedded Standard 7 E, for TANK-720 Q67 Series, with DVD-ROM, R10

* it doesn't include video/audio capture card's driver

Packing List

Item	P/N	Q'ty	Description
Utility CD		1	Drivers and user manual
One Key Recovery CD	7B000-000724-RS	1	
Power Adapter	63040-010090-020-RS	1	FSP090-D2BA1; 90 ~ 264VAC input; 90W; 19VDC output; Din 4-pin
Power Cord	32702-000401-100-RS	1	1500 mm, European Standard
RJ-45 to DB-9 COM Port Cable	32005-000200-200-RS	4	Round cable; RS-232/422/485; RS-232 cable; 2;300mm; 26AWG; (A)D-SUB 9P male; (B)RJ-45 8P8C+SHELL; RoHS
Power Cord Convert Cable	32702-000300-100-RS	1	Convert normal type cord to triangle type cord cable
Chassis Screw	44013-030041-RS	8	M3*4 chassis screws for backup
Mounting Bracket	41020-0163J4-00-RS	2	
Mounting Bracket Screws	44003-030062-RS	8	M3*6 mounting bracket screws
Wi-Fi Antenna (for Wi-Fi module only)	32505-000900-100-RS	3	External antenna
Pluggable DC-in Terminal Block	33502-000055-RS	1	4-pin
Pluggable CAN-bus Terminal Block	33502-000007-RS	1	3-pin
Pluggable Remote Control Terminal Block	33101-000422-RS	1	2-pin

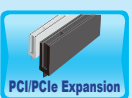
TANK-800-D525

■ D525 3-Slot Fanless Embedded System

New

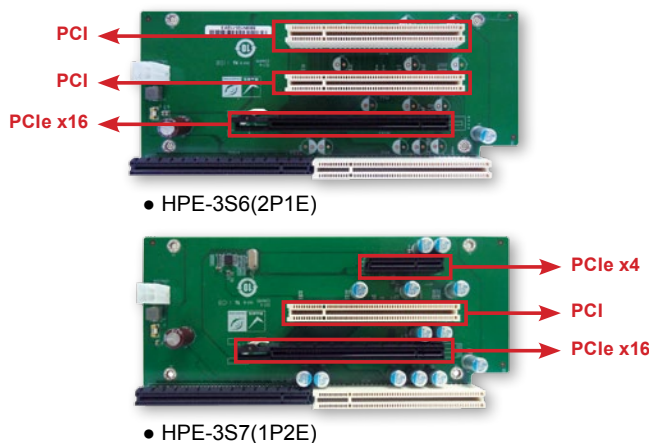
Features

- ◆ Intel® Atom™ D525 1.8GHz dual-core processor
- ◆ On-board 1GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 3GB)
- ◆ Redundant dual DC input
- ◆ Flexible PCI/PCIe expansion slots satisfy customized requirements
- ◆ Support four USB 2.0, one SATA 3Gb/s, two GbE LAN ports, six COM ports, one line-out and one mic-in
- ◆ Extended temperature fanless design supports -20°C ~ 70°C
- ◆ Dual PCIe GbE LAN for high speed network applications
- ◆ One CompactFlash® socket



Versatile Expansion Interface

The TANK-800 series has various kinds of expansion interfaces which allow you to connect additional circuits or expansion boards to the system via an I/EI riser cards. These expansion options provide flexible function enhancement and simplify system integration.



- Two types of backplane support come standard: PCI/PCIe cards with maximum Dimensions (WxHxD): 195mm x 170mm x 20mm
- The rated voltage and current of the backplane

Voltage	Current
+5V	7A
+12V	3.75A
-12V	0.1A
+3.3V	8A

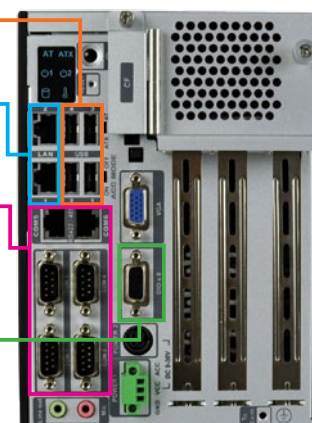
Max. power supported by the backplane: <45W

The system default power is 90 W. The maximum total power of the backplane to support expansion cards is 45 W. The power of the selected expansion cards cannot exceed the max. power (45 W), otherwise, the system may be unstable.

Backplane	Slot	Signal
HPE-3S6(2P1E)	PCI	PCI
	PCIe x16	PCIe x4
HPE-3S7(1P2E)	PCI	PCI
	PCIe x4	PCIe x1
	PCIe x16	PCIe x2

Rich I/O Function

- **Four USB Ports**
Four USB ports can completely satisfy other USB devices or access requirements.
- **Dual GbE Ethernet Ports**
Dual GbE Ethernet ports offer a diverse range of network communication options, helping users easily create an integrated industrial application that requires Ethernet protocols.
- **Serial Ports**
Serial ports help millions of serial devices connect to the network for industrial applications. Our RS-232/422/485 serial ports provide powerful communication performance for all industrial device connectivity.
- **8-bit Digital I/O, 4-bit input/4-bit output**
The DIO channels are quite useful for remote controlling, such as device power on/off, LEDs on/off, counter and cash drawer control.



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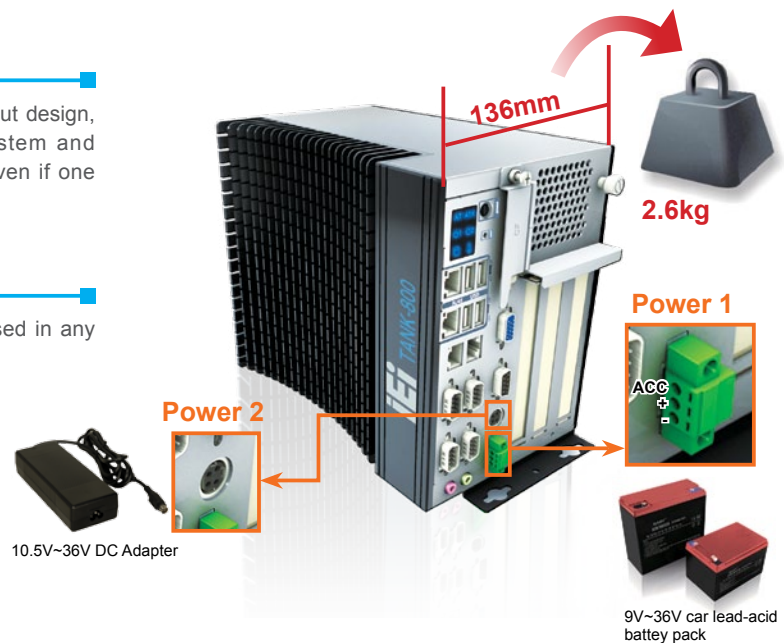
Panel
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Redundant Dual DC Power Input

The TANK-800-D525 adopts redundant dual DC power input design, which ensures uninterrupted power supply to the system and eliminates the risk of sudden shutdown and data loss, even if one power is unavailable or low voltage capacity is present.

Compact

Compact solution can sustain strong vibrations and be used in any industrial environment.



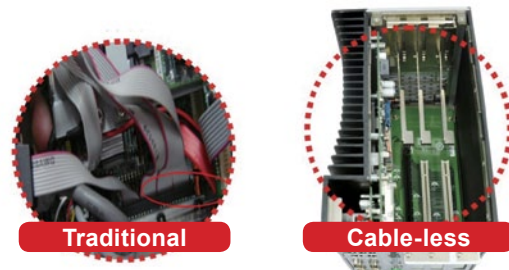
Anti-Vibration and Anti-Shock Design

Ruggedly designed, the TANK-800 series is reliable in industrial environments, able to resist strong vibrations and can be installed as a core computer on moving objects.



Cable-less

The cable-less concept revolves around strong hardware design and promises a reliable combination of embedded components. This design helps ensuring stable system operation and robust hardware. With all the components firmly attached, the TANK-800 series is ideal for installation on moving objects.



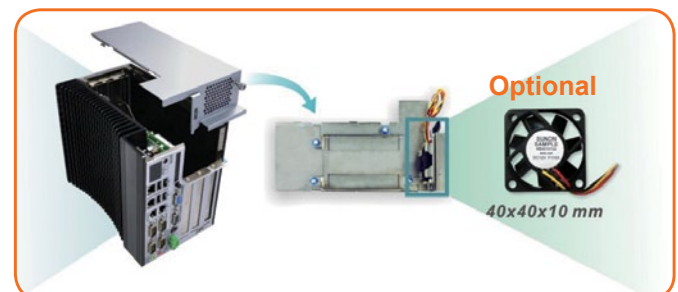
Wide Range DC Power Input

The TANK-800 series accepts a wide range DC power input, allowing it to be powered anywhere, no matter if a 12V, 24V or 19V power adapter is available.



Ingenious Fan Space Design

The TANK-800 series reserves an easy-to-install, hot-pluggable fan module space, ensuring the PCI/PCIe expansion cards with high power consumption are able to operate under high temperature environments.



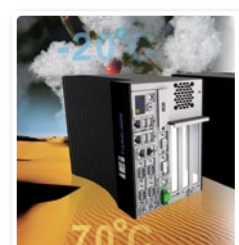
Fanless

The TANK-800 series provides the best components for generating less heat, while maintaining high system performance. With the fanless design, the TANK-800 reduces system failure caused by fans and extends the lifetime of the device.



Wide Range Temperature

The TANK-800 series is designed to withstand wide temperature ranges. With this design, the TANK-800 series can even be installed in a high-temperature roadside cabinet.



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Mounting Method

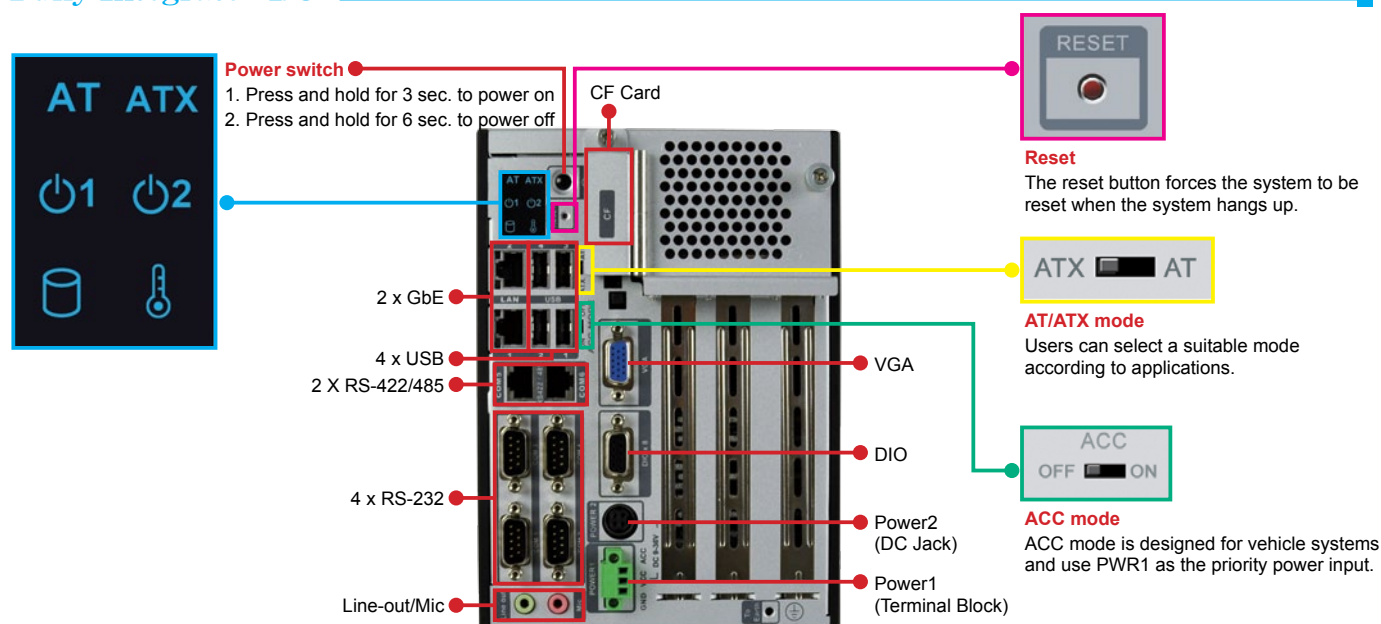
Mount the embedded system onto a wall or other surface using the two mounting brackets.



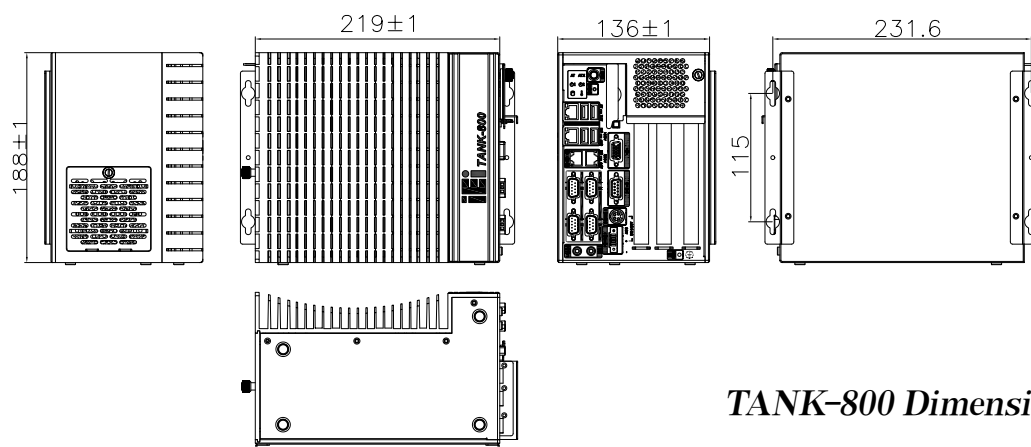
Console cabinet



Fully Integrated I/O



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
TANK-800-D525/1GB/2P1E-R10	Extended temperature fanless embedded system with one PCIe x4 and two PCI expansions, Intel® Atom™ D525 1.8GHz dual-core processor, dual 9V-36V DC-IN, on-board 1GB DDR3 memory, -20°C~70°C, RoHS
TANK-800-D525/1GB/1P2E-R10	Extended temperature fanless embedded system with one PCIe x1, one PCIe x2 and one PCI expansion, Intel® Atom™ D525 1.8GHz dual-core processor, dual 9V-36V DC-IN, on-board 1GB DDR3 memory, -20°C~70°C, RoHS

Specifications

Model Name		TANK-800-D525
Chassis	Color	Black C + Silver
	Dimensions (WxDxH)	136 x 219 x 188 mm
	Chassis Construction	Extruded aluminum alloy
Motherboard	CPU	Intel® Atom™ D525 1.8GHz dual-core processor
	Chipset	Intel® ICH8M
	Ethernet	Dual Realtek RTL8111E PCIe GbE controllers support ASF2.0
	Memory	1 x 204-pin 800MHz DDR3 SDRAM SO-DIMM Slot (system max. 3GB)* On-board 1GB DDR3 memory
Storage	SATA	2.5" SATA HDD Bay
System Function	USB	4 x USB 2.0
	Ethernet	2 x RJ-45
	RS-232	4 x DB-9
	RS-422/485	2 x RJ-45
	Display	1 x VGA
	Resolution	2048 x 1536 @ 75Hz (VGA)
	Audio	1 x Mic-in, 1 x Line-Out
	DIO	1 x DB-9
	CF Slot	1 x CF Type II
	Internal Expansions	2P1E: One PCIe x4 (physical one PCIe x16 slot) and two PCI slots 1P2E: One PCIe x1 (physical one PCIe x4 slot) and one PCIe x2 (physical PCIe x16 slot) and one PCI
Power	Power Supply	Redundant dual DC input Terminal Block: 9 (+/-0.3)~36V DC Jack: 10.5 (+/-0.3)~36V
	Max. Power Consumption	19V@1.7A (Intel® Atom™ D525 1.8GHz processor with 1G DDR3 Memory) without add-on card
Reliability	Mounting	Desktop, Wall mount
	Operating Temperature	-20°C ~ 70°C
	Storage Temperature	-30°C ~ 80°C
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	2.6Kg/4.1Kg
	Safety & EMC	CE/FCC

* Only support 1Rx8 SDRAM

Options

Item	P/N	Description
System Fan	31100-000272-RS	
OS: Win CE 6.0 (128MB CF Card)	TANKCF-800-D525-CE060-128M-R10	OS Image with WINCE 6.0, for TANK-800 D525 Series, W/Compact Flash Memory Card 128MB, RoHS
OS: Win XPE (2GB CF Card)	TANKCF-800-D525-XPE-2G-R10	OS Image with XPE, for TANK-800 D525 Series, W/Compact Flash Memory Card 2GB, RoHS
OS: Win XPE (4GB CF Card)	TANKCF-800-D525-XPE-4G-R10	OS Image with XPE, for TANK-800 D525 Series, W/Compact Flash Memory Card 4GB, RoHS
OS: Linux (2GB CF Card)	TANKCF-800-D525-LNX-2G-R10	OS Image with Linux for TANK-800 D525, Debian operation system, Kernel version 2.6.26, with Compact Flash Memory Card 2GB, RoHS
OS: Win 7 Embedded (4GB CF Card)	TANKCF-800-D525-WES7E-4G-R10	OS Image with Windows Embedded Standard 7 E, for TANK-800 D525 Series, W/Compact Flash Memory Card 4GB, RoHS

Packing List

Item	P/N	Q'ty	Description
Utility CD		1	Drivers and user manual
One Key Recovery CD		1	
Power Adapter	63040-010090-020-RSS	1	FSP090-D2BA1; 90~264VAC input; 90W; 19VDC output; Din 4-pin (for TANK-800)
Power Cord	32702-000401-100-RS	1	1500 mm, European Standard
Power Cord Convert Cable	32702-000300-100-RS	1	Convert normal type cord to triangle type cord cable
Mounting Bracket	41020-0308C2-00-RS	2	
Mounting Bracket Screw	44033-040062-RS	1	M4*6 mounting bracket screws
HDD Screw	44043-030051-RS	4	M030*05 for securing HDD
Rubber Foot Pad Screw	44005-030061-RS	8	M4*6 for securing rubber foot pads
RJ-45 to DB-9 COM Port Cable	32005-000200-200-RS	2	
Pluggable DC-in Terminal Block	33502-000007-RS	1	3-pin
Foot Pads	46007-001500-RS	4	

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Panel Solutions Introduction

TANK-GM45A

Extended Temperature Fanless Embedded System with Intel® Core™ 2 Duo Processor



Features

- ◆ Socket P Intel® 45nm Mobile Core™2 Duo Processor
- ◆ Extended Temperature Fanless design supports -20°C~70°C
- ◆ High Performance MPEG-2 Decoding, WMV9 (VC-1) and H.264 (AVC)
- ◆ Built-in DDR2 SO-DIMM 2G memory
- ◆ Supports 2 x COM, 4 x USB 2.0, 2 x Intel® GbE LAN
- ◆ IEI One Key Recovery solution allows you to create rapid OS backup and recovery



Extended Temperature System with Multi-Function

The TANK-GM45A supports an extended temperature range from -20°C up to 70°C with one industrial 2.5" SATA Flash Disk. IEI IFD 2.5" SSD supports SATA SLC solutions and features anti-vibration, low power consumption, high performance and perfect reliability. SSD not only performs much better IOPS than HDD, it also can be operated anytime without mobile components like a motor, bearing or rotating head. In addition, SSD can perform in any harsh environment.

Single 12V Power Input

4-pin Power Jack with Lock for 12V DC power input

12V DC power supply

Power adapter

Power cable

COM with Isolation

1. On board +15KV ESD protection
2. Isolated 1200VDC protection

An integrated circuit (IC) connected to external port 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.

COM1: Isolated RS-232
COM3: Isolated RS422 (optional for RS485)

DIO Signal

The GPIO terminal block connects to a remote control device. Users can control the system power on/off by inputting high or low voltage into the terminal block.

Turn off the system: more than 1 V input
Turn on the system: less than 0.5 V input

AT/ATX Mode by external switch

The TANK-GM45A supports AT and ATX power modes. The setting can be made through the AT/ATX switch on the external peripheral interface panel.

High Performance Intel® GbE

- Intel® 82574L

The 82574 provides one PCIe lane operating at 2.5 GHz with sufficient bandwidth to support 1000 Mb/s transfer rate. It supports 9018-byte jumbo packets, 40 KB of on-chip buffering mitigates instantaneous receive bandwidth demands and eliminates transmit under-runs by buffering the entire outgoing packet prior to transmission.

- Intel® WG82567LM

The 82567 is a single port GbE Physical Layer Transceiver (PHY) that connects to its Media Access Controller (MAC) through a dedicated interconnect and supports operation at data rate of 10/100/1000 Mb/s. Supports up to 9 kB jumbo frames (full duplex).

Digital Security Surveillance

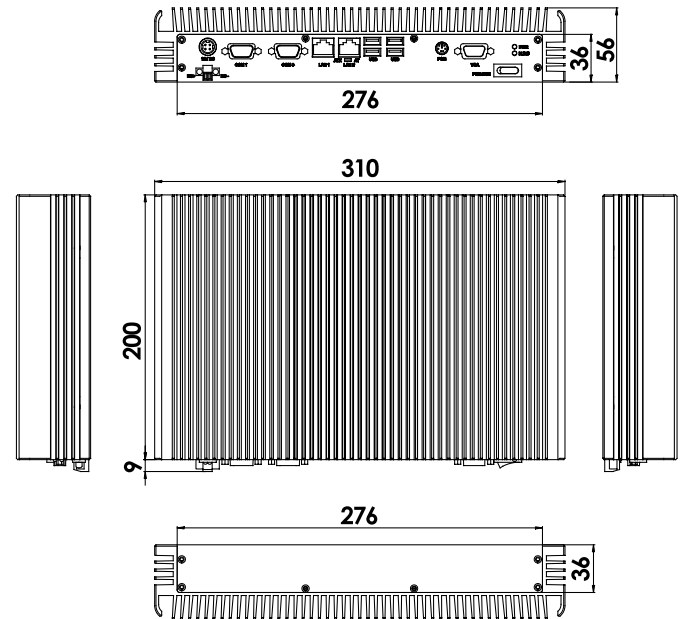
IP Video Surveillance

One 2.5" SATA HDD Space

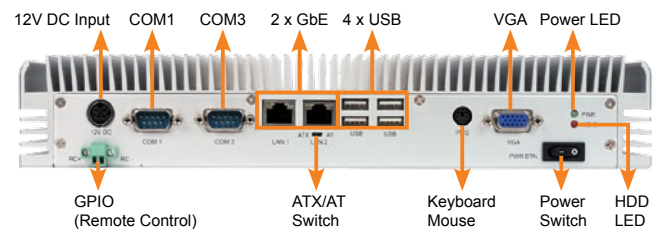
Specifications

Model Name		TANK-GM45A
Platform		Intel®
Chassis	Color	Sliver
	Dimensions	310 x 200 x 56mm
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	System Board
	M/B Size	System Board
	Processor CPU	Intel® Core™ Duo 2.4GHz, 3MB L2 cache, processor P8600 Intel® Celeron™ M 2.0GHz 1MB L2 cache, processor 575
	Chipset	Intel® GM45 + ICH9M
	System Memory	2 GB DDR2 SODIMM Memory Pre-installed
Storage	Hard Drive	1 x 2.5" SATA HDD Space
System Function	PS2 (KB/MS)	1
	USB 2.0	4
	Ethernet	2 x Intel® GbE One Intel® 82574L Ethernet Controller One Intel® WG82567LM Ethernet PHY
	RS-232	1 w/isolation
	RS-232/422/485	One RS422/RS485 Default RS422 with isolation
	Digital I/O	DIO signal for Remote on/off Control
	Display	1 x VGA
	Resolution	2048 x 1536 @ 75 Hz
	Power Input	12V DC in
	Power Consumption	12@3.85A (Intel® Core2 Duo P8600 2.4GHz with 3MB L2 Cache, DDR2 2GB)
Reliability	Mounting	Desktop, wall mount
	Operating Temperature	-20°C ~ 70°C with SSD
	Operating Vibration	Meets MIL-STD-810F 514.5C-1
	Weight (Net/Gross)	3.5kg/4.2kg

Dimensions (Unit: mm)



Integrated I/O



Packing List

1 x Power Cable (Terminal Block DC in Cable) (P/N: 32002-002000-100-RS)	
1 x Screw Set for Wall Mount Kit	
2 x Wall Mount Buckets	1 x QIG
1 x One Key Recovery CD	1 x CD



Power Cable



Wall Mount bracket

Ordering Information

Part No.	Description
TANK-GM45A-R10/P8600/2GB	Extended temperature fanless embedded system with Intel® Core™2 Duo P8600 2.4 GHz 3MB L2 cache and GM45 chipset, with 2GB DDR2 memory, 12VDC, -20°C~70°C,RoHS
TANK-GM45A-R10/CM575/2GB	Extended temperature fanless embedded system with Intel® Celeron® M 575 2.0 GHz 1MB L2 cache and GM45 chipset, with 2GB DDR2 memory, 12VDC, -20°C~70°C, RoHS
63000-FSP060DBAB1554-RS	Power adapter; FSP060-DBAB1554; input VAC: 90~264V; output: 12V/60W with ERP and PSE certificates
63000-FSP096AHB-RS	Power adapter; FSP096-AHB; input VAC: 90~264V; output: 12V/96W with ERP and PSE certificates
32000-000002-RS	17.5cm European Standard Power Cord
32000-000025-RS	18.3cm American Standard Power Cord
32006-00300-100-RS	PS2 KB/MS Y Cable
IFD-2510WT-XXXXX	iFD 2.5" SATA 3.0 2510WT SLC SSD Wide Temp. Grade -40°C~85°C (8GB~128GB)
IFD-2510RW-XXXXX	iFD 2.5" SATA 3.0 2510RW SLC SSD Wide Temp. Grade -40°C~85°C (1GB~32GB)
IFD-2000JW-XXXXX	iFD 2.5" SATA 3.0 2000JW SLC SSD Wide Temp. Grade -40°C~85°C (8GB~128GB)

XXXXX=Capacity

TANK-101B-D525 N455

Fanless Embedded Controller with dual-core Intel® Atom™ D525 processor

New



Features

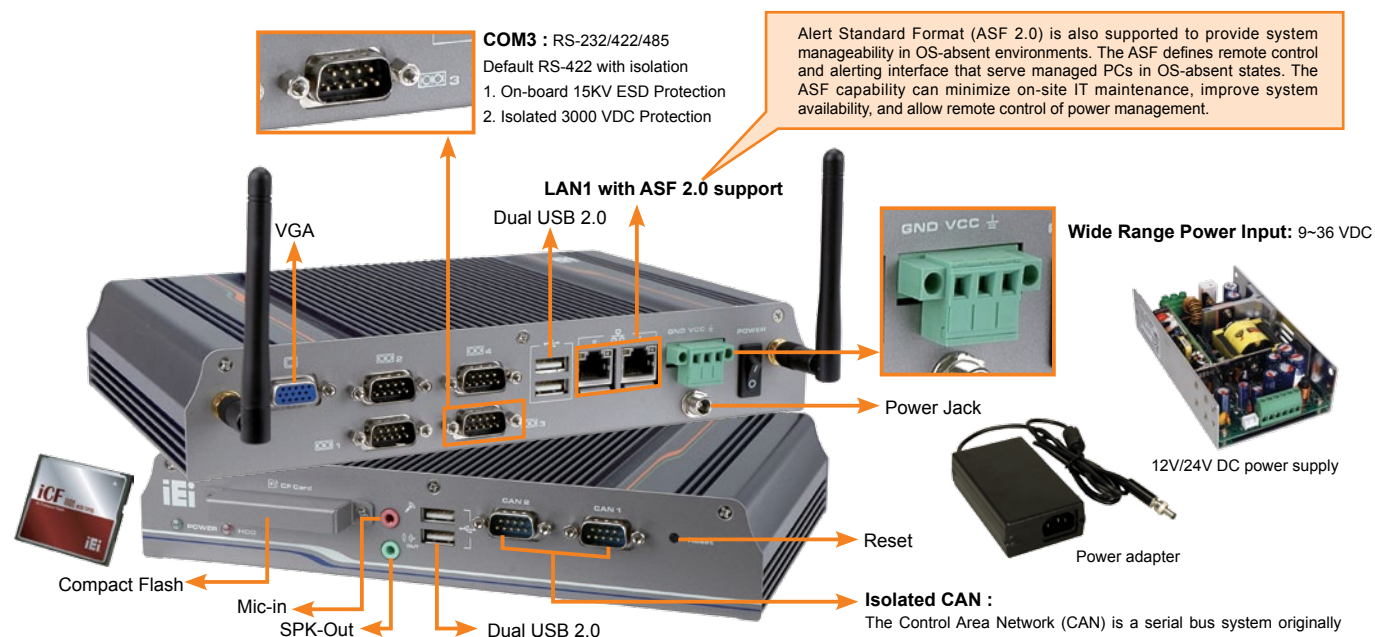
- ◆ Dual-core Intel® Atom™ D525 processor inside
- ◆ Wide range 9~36VDC power input
- ◆ Isolation protected COM and CAN communication
- ◆ Extended temperature fanless design supports -20°C ~ 70°C (N455)



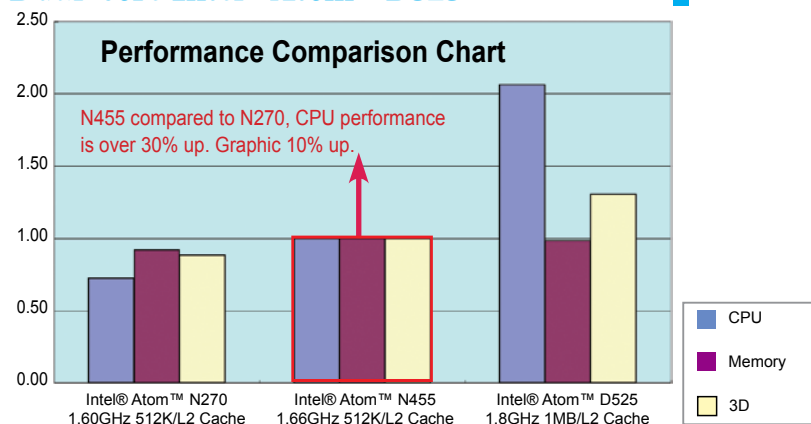
The TANK-101B is designed with all the functions and protections compliant with targeting transport market. It not only provides dual-core computing power delivered by the Intel® Atom™ D525, its onboard memory with CompactFlash/SATA DOM solid-state storage can withstand severe operating environments 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.

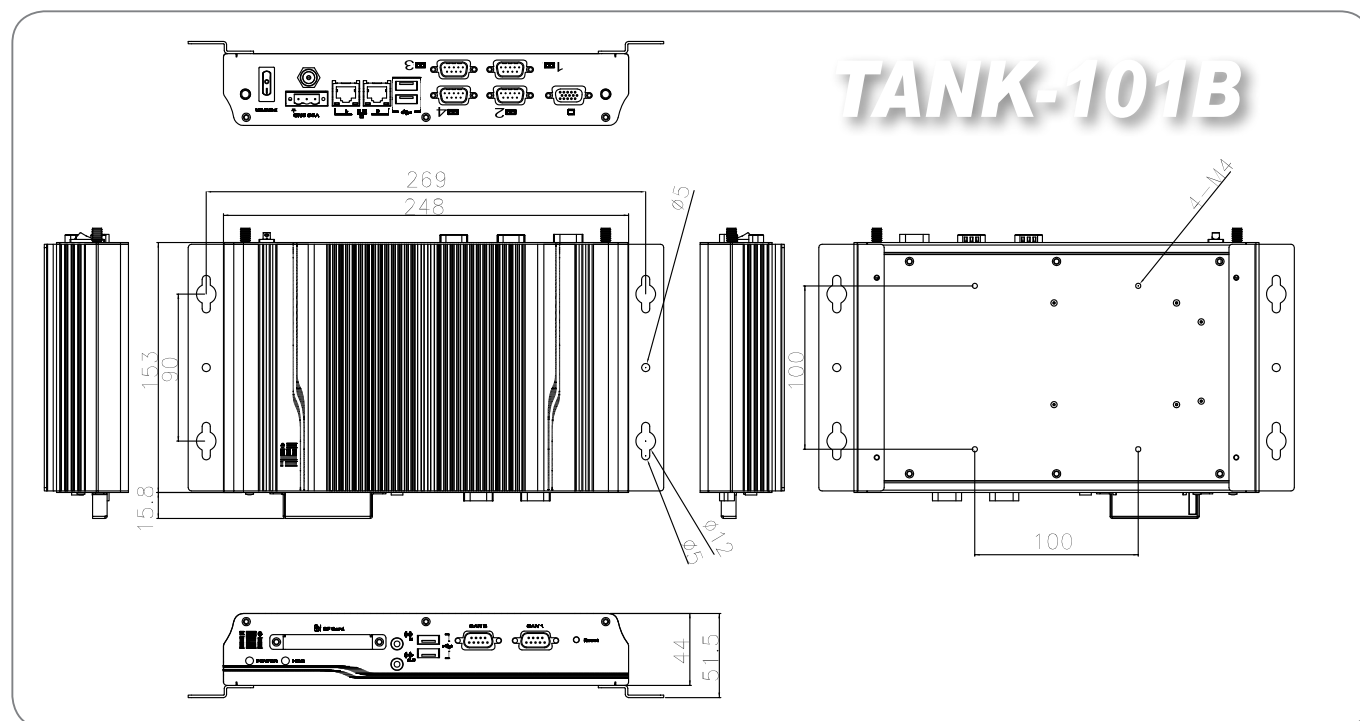


Dual-core Intel® Atom™ D525



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
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
	Resolution	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 Wi-Fi 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	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
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis
	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 adapter (P/N: 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-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

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 IEI for customization options.

WSTRIDER-200A-US15WP

IP 67 Extend-Temperature
Fanless Embedded Controller



Features

- ◆ Ultra low voltage Intel® Atom™ Z510PT solution
- ◆ IP 67 compliant rugged design
- ◆ Fanless operation under -30°C ~70°C extreme temperature
- ◆ Built-in 802.11b/g/n high speed wireless communication
- ◆ 9~28VDC power input
- ◆ Two channels analog video input
- ◆ Built-in 4G industrial grade high speed CompactFlash®
- ◆ IEI One Key Recovery solution allows you to create rapid OS backup and recovery



WStrider-200A is a rugged embedded controller designed to operate in harsh usage environments and conditions. Its aluminum die-casting enclosure and M12 watertight connector provide IP 67 grade protection against dust and water, allowing it to withstand high impact by vandal usage. Powered by an Intel® Atom™ Z510PT with US15WPT industrial grade processor and chipset, the WStrider-200A is able to operate under extreme temperatures ranging from -30°C to 70 °C. The built-in 802.11b/g/n module with IP 67 compliant external antenna provides reliable high speed wireless communication. Furthermore, the WStrider-200A is capable of taking video input or image from an analog camera using its built-in Techwell TW6805, which provides up to two channels for video capturing. For severe environments with an unstable power source, the WStrider-200A can receive power input from 9VDC to 28VDC.



Rugged IP 67 Protection

The IP Code (International Protection Rating) is defined in the international standard IEC 60529 and it classifies the degrees of protection provided against the intrusion of solid objects, dust, accidental contact, and water in electrical enclosures. The WStrider-200A is an IP 67 compliant controller and its dust-tight, water ingress resistant design has been thoroughly verified throughout the design process in IEI's in-house UL50 certified waterproof laboratory. The device has also been examined for air leaks during production to ensure every WStrider-200A meets our high standards of quality.

1

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Air Leak Examination



Immersion test



[IP 67] Dust-tight

Level	Effective Against
6	No ingress of dust; complete protection against contact

[IP 67] 30 minute immersion under one meter of water

Level	Effective Against
7	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1m of submersion)

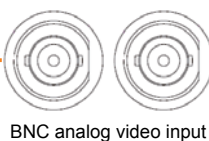
2

Video
Capture
Solutions

3

Embedded
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Analog Video Input



BNC analog video input



Water proof BNC cable



IP 67 analog camera



IP 67 external wireless antenna

The WStrider-200A offers two channels of analog video input via a BNC interface with IP 67 protection. Through a built-in Techwell TW6805 video engine, the WStrider-200A can support up to D1 resolution capturing. For crisis or rescue applications, live video imaging is necessary for quick decision making. The WStrider-200A can encode video and picture data then instantly transfer it to remote monitoring centers via GbE or 802.11b/g/n high speed wireless communication.

4

Power Supply/
Peripherals

5

Panel
Solutions
Introduction

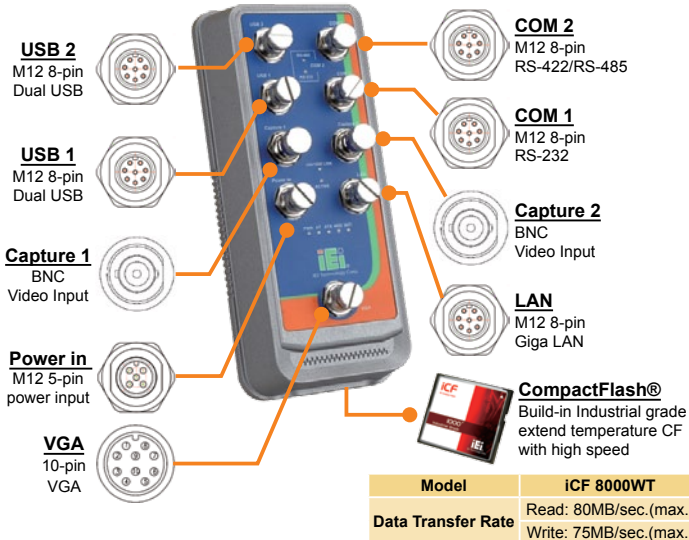
Wide Range DC Input

In severe environments with unstable power sources, the WStrider-200A can receive power input from 9VDC to 28VDC. The WStrider-200A uses a 5-pin M12 connector as power input interface. It has different pin numbers to avoid power from being mistakenly connected to the wrong IO as a safety measure. You may apply a DC power source directly to the WStrider-200A via the M12 5pin to terminal block cable in packing, or with an optional IP 67 60W power adapter using an AC source from the field.



IO Interface & Cabling

The WStrider-200A uses IP 67 compliant M12 and BNC connectors with a watertight cap in pair for each connector. With watertight-to-PC interface cables, the WStrider-200A can be easily connected to PC peripheral devices allowing it to operate just like common PC.



Optional Cables and Adapter

Item	Part Number
Water-proof power adapter (12V 60W)	63000-CLG6012IE-RS
Water-proof power cable 14AWG (200 cm)	32002-001300-100-RS
Water-proof COM port cable (300 cm)	32005-000100-100-RS
Water-proof USB cable (300 cm)	32001-001000-100-RS
Water-proof LAN cable (300 cm)	32013-000200-100-RS
Water-proof BNC male cable (300 cm)	32014-000100-100-RS
Water-proof VGA cable (320 cm)	32003-000100-100-RS

Specifications

Model Name		Wstrider-200
Chassis	Color	Cool Gray
	Dimensions	99 x 61.7 x 230mm
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Processor CPU	Intel® Atom™ Z510PT 1.1GHz
	Chipset	Intel® US15WPT
	System Memory	1GB DDR2 onboard memory
Storage	CompactFlash®	4GB pre-installed
System Function	USB 2.0	4
	Ethernet	1 x Intel® 82541PI PCI GbE
	RS-232	1
	RS-232/422/485	One RS-232/422/485 Default RS422 with isolation
	Display	1
	Resolution	1600 x 1200 @ 60Hz
	Wireless	1 x 802.11b/g/n
	Video Capturing	2
Power	Expansion	One PCIe Mini card slot (reserve for Wi-Fi module)
	Power Input	9 ~ 28V DC
	Power Consumption	12@1.10A (Intel® Z510PT 1.1G GHz, DDR2 1GB)
Reliability	Mounting	VESA 75/100 mount, wall mount
	Operating Temperature	-30°C ~ 70°C with CompactFlash®
	IP 67	Yes
	Operating Vibration	*MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	1.3kg/2.9kg
Certification	EMC/Safety	CE, FCC class A, UL, CB

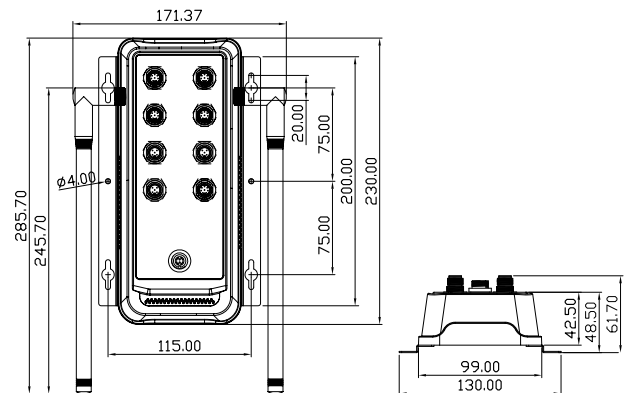
*Hard drive systems meet MIL-STD-810F 514.5C-1 specification. SSD/CF systems meet MIL-STD-810F 514.5C-2 specification.

Ordering Information

Part No.	Description
WSTRIDER-200A-R10/4G-XPE	IP 67 extend temperature fanless embedded system, US15WPT with Intel® Atom™ 1.1GHz Z510PT processor, 1GB DDR2 memory onboard, w/4GB CF card, built-in Windows XP embedded OS, w/o power adapter, -30°C ~ 70°C, RoHS
WSTRIDER-200AW-R10/4G-XPE	IP 67 extend temperature fanless embedded system, US15WPT with Intel® Atom™ 1.1GHz Z510PT processor, 1GB DDR2 memory onboard, 802.11b/g/n wireless, w/4GB CF card, built in Windows XP embedded OS, w/o power adapter, -30°C ~ 50°C, RoHS
WSTRIDER-200A-R10/4G	IP 67 extend temperature fanless embedded system, US15WPT with Intel® Atom™ 1.1GHz Z510PT processor, 1GB DDR2 memory onboard, w/4GB CF card, w/o OS, w/o power adapter, -30°C ~ 70°C, RoHS
WSTRIDER-200AW-R10/4G	IP 67 extend temperature fanless embedded system, US15WPT with Intel® Atom™ 1.1GHz Z510PT processor, 1GB DDR2 memory onboard, 802.11b/g/n wireless, w/4GB CF card, w/o OS, w/o power adapter, -30°C ~ 50°C, RoHS
VK-WSTRIDER-200A-R10	VESA mount kit for WStrider-200, silver, RoHS

* For other CompactFlash® capacity, please contact IEI for customization options.

Dimensions (Unit: mm)



Packing List

2 x IP67 wireless antenna* (*for wireless model only)	
2 x wall mount bracket	
1 x Screw set	1 x Driver CD
1 x One Key Recovery CD	1 x QIG

IOPS-Q67/H61

Intel® OPS Compliant Digital Signage Pluggable Module PC

Features

- ◆ Designed for pin compliance with Intel® OPS (Open Pluggable Specification)
- ◆ Supports DisplayPort, HDMI, UART, USB 2.0
- ◆ Intel® HD Graphics with Full HD video decoding capability
- ◆ Intel® Q67/H61 platform



Specifications

Model Name			IOPS-H61	IOPS-Q67
Dimensions (mm)			200 x 171 x 30	200 x 171 x 30
MB	CPU Support		Intel® LGA 1155 supports Intel® Core™ i5/i3/Celeron® (TDP 35W)	Intel® LGA 1155 supports Intel® Core™ i5/i3/Celeron® (TDP 35W)
	Chipset		Intel® H61 Express	Intel® Q67 Express
	Memory	Type	1333 MHz DDR3 SO-DIMM	1333 MHz DDR3 SO-DIMM
		Max. Support	8GB	8GB
	Storage	System Storage	1 x mSATA slot	1 x mSATA slot
		Removable Storage	1 x SDHC card slot	1 x SDHC card slot
	LAN	Ethernet	1 x Intel® 82579LM GbE controller	1 x Intel® 82579LM GbE controller with Intel® AMT 7.0 support
	Graphics	GPU	Intel® HD Graphics	Intel® HD Graphics
Audio			1 x 3.5mm Line-out	1 x 3.5mm Line-out
I/O Port	Display		1 x DisplayPort 1.1	1 x DisplayPort 1.1
	Resolution		OPS display panel up to 1920 x 1200 DisplayPort up to 2560 x 1600	OPS display panel up to 1920 x 1200 DisplayPort up to 2560 x 1600
	USB		2 x USB 2.0	2 x USB 2.0
	Serial		1 x RS-232 (RJ-45 to DB-9)	1 x RS-232 (RJ-45 to DB-9)
	Special Function	Intel® AMT	N/A	Support Intel® AMT 7.0 (with Intel® Core™ i5-2390T Processor)
		AC Loss Restart	On / Off / Last state	On / Off / Last state
Power	Power input		12 ~ 19VDC	12 ~ 19VDC
	Power Adapter		N/A	N/A
	Mounting Kit		N/A	N/A
Environment	Operating Temperature		0°C ~ 45°C	0°C ~ 45°C
	OS Support		Windows® 7 / Windows® 7 Embedded support	Windows® 7 / Windows® 7 Embedded support
	Safety & EMC		CE, FCC Class A, LVD	CE, FCC Class A, LVD

OPS (Open Pluggable Specification) module PC can be inserted into any OPS compatible display to satisfy customers' various requirements.

Compatible Display Model

Display Brand	Display Model
NEC	X461S (46")
TVS	DS-42 (42")
TPV	DS4210MC (42")
Philips	BDL-4245E (42")
Mitsubishi	MDT551S (55")
eJump	PX420CHN-OPS (42")



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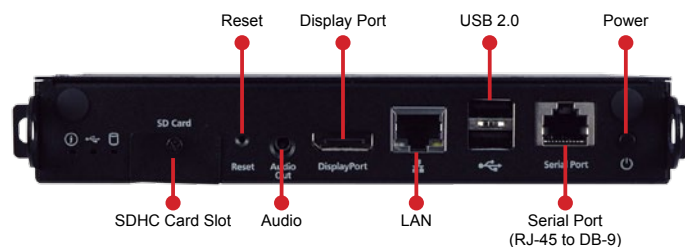
4

Power Supply/
Peripherals

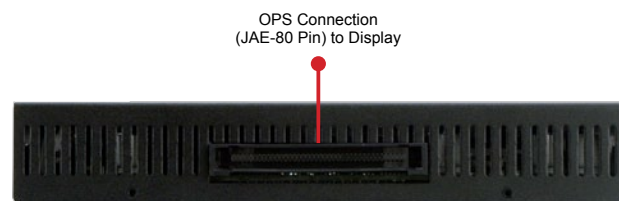
5

Panel
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Introduction

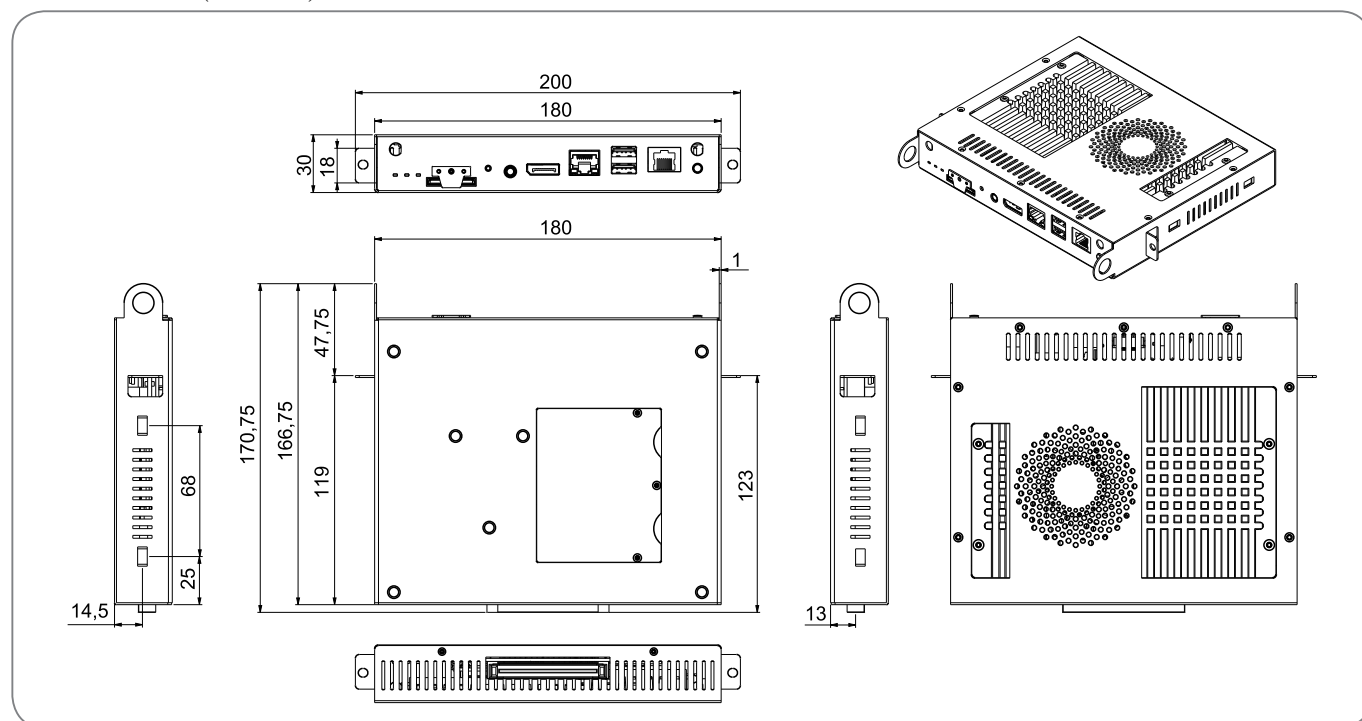
Front View



Rear View



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
IOPS-Q67-R10	OPS Module PC supports LGA1155 CPU with Intel® Q67 chipset, DDR3, DisplayPort, Intel® GbE, mSATA, JAE 80-pin connector, USB 2.0, serial port, SDHC card slot, HD Audio, 0°C ~ 45°C, Intel® AMT ready with Intel® i5 CPU, R10
IOPS-H61-R10	OPS Module PC supports LGA1155 CPU with Intel® H61 chipset, DDR3, DisplayPort, Intel® GbE, mSATA, JAE 80-pin connector, USB 2.0, serial port, SDHC card slot, HD Audio, 0°C ~ 45°C, R10
CPU Selection	CPU-DT-i5-2390T 2nd Generation Intel® Core™ i5 processor, LGA1155, 3M cache, dual-core 2.70GHz, 35W, Intel® AMT
	CPU-DT-i3-2100T 2nd Generation Intel® Core™ i3 processor, LGA1155, 3M cache, dual-core 2.50GHz, 35W
	CPU-DT-P-620T Intel® Pentium® G620T processor, LGA1155, dual core 2.2GHz, 3M cache, 35W
Memory Selection	DDR3-SO-1333-2GB SO-DIMM DDR3 1333 MHz 2GB
	DDR3-SO-1333-4GB SO-DIMM DDR3 1333 MHz 4GB
Storage Selection	IPE-5200IM-32G Flash disk; mSATA, SLC, 0°C ~ 70°C, R: 160MB/s W: 150MB/s, 32GB

Options

Item	P/N	Description
OS: Win 7 Embedded	IOPS-Q67-WES7E-R10	OS Image with Windows® Embedded Standard 7 E, for IOPS-Q67/H61 series

Packing List

Item	Qty	Description
Utility CD	1	Drivers and user manual
One Key Recovery CD	1	
RS-232 cable (RJ-45 to DB-9)	1	

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Introduction

Compact Size Embedded System



Model Name		uIBX-200-VX800A (uIBX-200-VX800B)	uIBX-200-Z510P	IBX-300B/IBX-300BC	IBX-500B	IBX-530-945GSE
Platform		VIA	Intel®	Intel®	AMD	Intel®
Chassis	Color	Metallic	Metallic	Black+Blue	Black	Black
	Dimensions	120 x 120 x 44.4mm	120 x 120 x 44.4mm	160 x 123.5 x 51.3mm	210 x 108.2 x 39mm	210 x 108.2 x 39mm
	Chassis Construction	Aluminum alloy casing, plastic front panel	Aluminum alloy casing, plastic front panel	Aluminum alloy with heavy duty metal	Aluminum alloy	Aluminum alloy
Motherboard	Processor CPU	VIA® Eden™ ULV 500MHz (1GHz)	Intel® Atom™ Z510P 1.1GHz	Intel® dual-core Atom™ D510 1.66GHz	AMD Geode™ LX 800 500 MHz	Intel® Atom™ N270 1.6GHz
	Chipset	VIA VX800	Intel® US15WP	ICH8M	AMD CS-5536	Intel® 945GSE + ICH7M
	System Memory	512MB (1GB) DDR2 onboard memory	1GB DDR2 onboard memory	1GB DDR2 SODIMM memory pre-installed	256MB/512MB DDR SODIMM memory pre-installed	1 GB DDR2 SODIMM memory pre-installed
Storage	Hard Drive	N/A	N/A	1 x 2.5" SATA HDD Space	N/A	N/A
	CompactFlash®	1	1	N/A	1	1
System Function	USB 2.0	4	4	4	2	4
	Ethernet	1 x Realtek 8111CP PCIe GbE	1 x Realtek 8111CP PCIe GbE	1 x Intel® 82567V PCIe PHY	2 x Realtek 8100C 10/100Mbps Ethernet	2 x Realtek 8111CP PCIe GbE
	RS-232	2	2	1	3	2
	Display	1 x VGA	1 x VGA	1 x VGA	1 x VGA	1 x VGA
	Resolution	1920 x 1440 @ 60Hz	1600 x 1200 @ 60Hz	2048 x 1536 @ 60 Hz	1920 x 1440 @ 60Hz	1920 x 1200 @ 60Hz
	Audio	1 x Mic-in, 1 x Speaker out	1 x Mic-in, 1 x Speaker out	1 x Mic-in, 1 x Speaker out	1 x Speaker out	1 x Speaker out
	eSATA	N/A	N/A	N/A	N/A	1
	Wireless	1 x 802.11 b/g/n	1 x 802.11 b/g/n	1 x 802.11 b/g	1 x 802.11 b/g	1 x 802.11 b/g/n
	Video Capturing	N/A	N/A	8 (IBX-300BC model)	N/A	N/A
Power	Expansions	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)	N/A	1 x Mini PCI slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)
	Power Consumption	5V@2.52A (VIA Eden 500MHz, DDR2 512MB) 5V@3.20A (VIA Eden 1GHz, DDR2 1GB)	5V@2.04A (Intel® Z510PT 1.1G GHz, DDR2 1GB)	12V@1.98A (Intel® D510 1.66GHz, DDR2 1GB)	12@1.15A (AMD LX800, DDR 512MB)	12@1.28A (Intel® Z510PT 1.1G GHz, DDR2 1GB)
Reliability	Mounting	VESA mount, double VESA mount w/VESA adapter	VESA mount, double VESA mount w/VESA adapter	Desktop, wall mount, VESA mount	DIN mount, VESA 75 mount, wall mount	DIN mount, VESA 75 mount, wall mount
	Operating Temperature	0°C ~ 50°C	0°C ~ 50°C	-10°C ~ 50°C -10°C ~ 40°C (BC model)	0°C ~ 50°C	-10°C ~ 50°C
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis				
	Operating Vibration	* MIL-STD-810F 514.5C-2	* MIL-STD-810F 514.5C-2	MIL-STD-810F 514.5C-1	* MIL-STD-810F 514.5C-2	* MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	480g/1.5kg	480g/1.5kg	1.0kg/2.8kg	645g/1.8kg	645g/1.8kg

*Systems with hard drive meet MIL-STD-810F 514.5C-1 specifications. SSD/CF systems meet MIL-STD-810F 514.5C-2 specifications.

uIBX-200 Series



uIBX-200-Z510P

- ◆ Internal dual SD card slot for storage expansion
- ◆ Ultra low power processor Intel® Atom™ Z510P
- ◆ Built-in H.264, MPEG1/2/4, VC1/WMV9 decoding



uIBX-200-VX800

- ◆ VIA® Eden™ ULV 1GHz/500 MHz processor
- ◆ Supports MPEG2, WMV9/VC1 decoding
- ◆ Internal SATA connector (SATA DOM)



On Board
Memory

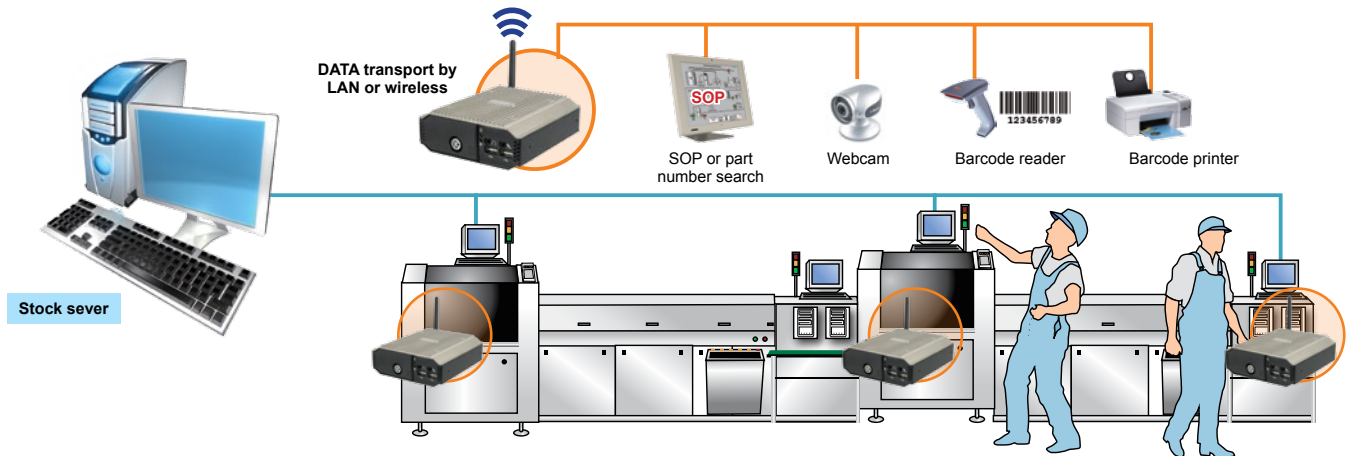


Ultra Compact Size



uIBX-200-VX800 at Production Line

The uIBX-200-VX800 has all the essential functions to work as a thin client on the production line. Operators can read the assembly SOP and search for part numbers online, get constant production schedule updates and other instructions from management. During production, the component barcode can be collected by the barcode scanner and updated to the production server either by batch or via LAN or Wi-Fi connection. Webcam can also be installed to collect image data during the production process.



Smart Mounting Design



A. Wall mount

VESA 75 support. Easy to mount TOP or BOTTOM side.



AFLWK-12

uIBX-200 can be mounted directly on the wall with VESA 75 mounting kit



B. VESA mount 75

Step.1



Install the mount kit on the back of the monitor.

Step.2



Assemble the uIBX-200, stand and panel.

Step.3



The direction of the installation can be adjusted for different applications.

C. VESA mount 100



Secure the VK-75100B and panel using screws.



Mount it on the back of an LCD monitor to save even more space and create an all-in-one PC at the same time.

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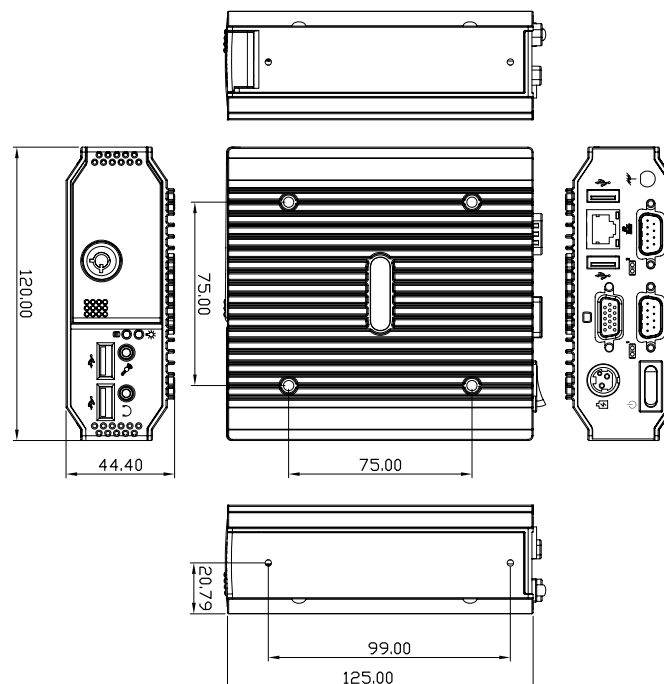
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Power Supply/
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Introduction

Specifications

Model Name		uIBX-200-VX800A (uIBX-200-VX800B)	uIBX-200-Z510
Platform		VIA	Intel®
Chassis	Color	Metallic	
	Dimensions	120 x 120 x 44.4mm	
	Chassis Construction	Aluminum alloy casing, plastic front panel	
Motherboard	Motherboard Model	System board	
	M/B Size	System board	
	Processor CPU	VIA® Eden™ ULV 500MHz (1GHz)	Intel® Atom™ Z510P 1.1GHz
	Chipset	VIA VX800	Intel® US15WP
	System Memory	512MB (1GB) DDR2 onboard memory	1GB DDR2 onboard memory
Storage	CompactFlash®	1	
	SD Card	N/A	2 x SD card slot (Internal)
System Function	USB 2.0	4	
	Ethernet	1 x Realtek 8111CP PCIe GbE	
	RS-232	2 x RS-232	
	Display	1 x VGA	
	Resolution	1920x1440@60Hz	1600x1200@60Hz
	Audio	1 x Mic-in, 1 x Speaker out	
	Wireless	1 x 802.11 b/g/n	
	Expansion	1 x PCIe Mini card slot (reserved for Wi-Fi)	
Power	Power Input	5VDC in, AT mode only	
	Power Consumption	uIBX-200-VX800: 5V@2.52A (VIA Eden 500MHz, DDR2 512MB) 5V@3.20A (VIA Eden 1GHz, DDR2 1GB) uIBX-200-Z510: 5V@2.04A (Intel® Z510PT 1.1G GHz, DDR2 1GB)	
Reliability	Mounting	VESA mount, dual VESA mount w/VESA adapter	
	Operating Temperature	0°C ~ 50°C	
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis	
	Operating Vibration	Meet MIL-STD-810F 514.5C-2	
	Weight (Net/Gross)	480g/1.5kg	

Dimensions (Unit: mm)



Packing List

1 x QIG
1 x Driver CD
2 x Keys (P/N: 457007-003103-00-RS)
1 x Screw set
1 x 5V 25W Power adapter (with ERP/PSE certificate) (P/N: 3000-FSP025DGAA1702-RS)
1 x 2dbi Wireless antenna (for wireless model only)
1 x One Key Recovery CD

Ordering Information

uIBX-200-Z510P

Part No.	Description
UIBX-200-R11/Z510P/1GB	Fanless embedded system with Intel® Atom™ Z510P 1.1GHz CPU, US15WP system chipset, onboard 1GB DDR2 memory, 5VDC in, 25W power adapter with ERP & PSE certificate, RoHS
UIBX-200W-R11/Z510P/1GB	Fanless embedded system with Intel® Atom™ Z510P 1.1GHz CPU, US15WP system chipset, onboard 1GB DDR2 memory, built-in 802.11b/g/n wireless, 5VDC in, 25W power adapter with ERP & PSE certificate, RoHS

uIBX-200-VX800

UIBX-200-R21/VX800A/512MB	Fanless embedded system with VIA Eden ULV 500Hz CPU, VX800 chipset, onboard 512MB DDR2 memory, 5VDC-In, 25W power adapter with ERP & PSE certificates, black, ROHS
UIBX-200W-R21/VX800A/512MB	Fanless embedded system with VIA Eden ULV 500Hz CPU, VX800 chipset, onboard 512MB DDR2 memory, built-in 802.11b/g/n wireless, 5VDC-In, 25W power adapter with ERP & PSE certificates, black, ROHS
UIBX-200-R21/VX800B/1GB	Fanless embedded system with VIA Eden ULV 1GHz CPU, VX800 chipset, onboard 1GB DDR2 memory, 5VDC-In, 25W power adapter with ERP & PSE certificates, black, ROHS
UIBX-200W-R21/VX800B/1GB	Fanless embedded system with VIA Eden ULV 1GHz CPU, VX800 chipset, onboard 1GB DDR2 memory, built-in 802.11b/g/n wireless, 5VDC-In, 25W power adapter with ERP & PSE certificates, black, ROHS

Embedded OS options

UIBXCF-200-US15WP-CE060	Windows® CE 6.0 OS image, for uIBX-200-US15WP, with 128 MB CompactFlash® memory card, RoHS
UIBXCF-200-US15WP-XPE	Windows® XP Embedded OS image, for uIBX-200-US15WP, with 1GB CompactFlash® memory card, RoHS
UIBXCF-200-VX800-CE060	Windows® CE 6.0 OS image, for uIBX-200-VX800, with 128 MB CompactFlash® memory card, RoHS
UIBXCF-200-VX800-XPE	Windows® XP Embedded OS image, for uIBX-200-VX800, with 1GB CompactFlash® memory card, RoHS

Mounting kit

UIBXVK-200B	VESA 75 mount kit for uIBX-200, black
VK-75100B	VESA mount 75 to100 adapter, black

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Embedded Computing Solutions

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Panel Solutions Introduction

IBX-300B/BC

Fanless dual-core Box for Digital Security and Surveillance



IBX-300B



IBX-300BC

Features

- ◆ Dual-core computing power in 1 liter compact box
- ◆ New generation Intel® Atom™ D510 1.66GHz processor inside
- ◆ 8 channels real time video capture with D1 resolution
- ◆ VGA display resolution up to 2048x1536
- ◆ Support one 2.5" SATA hard drive

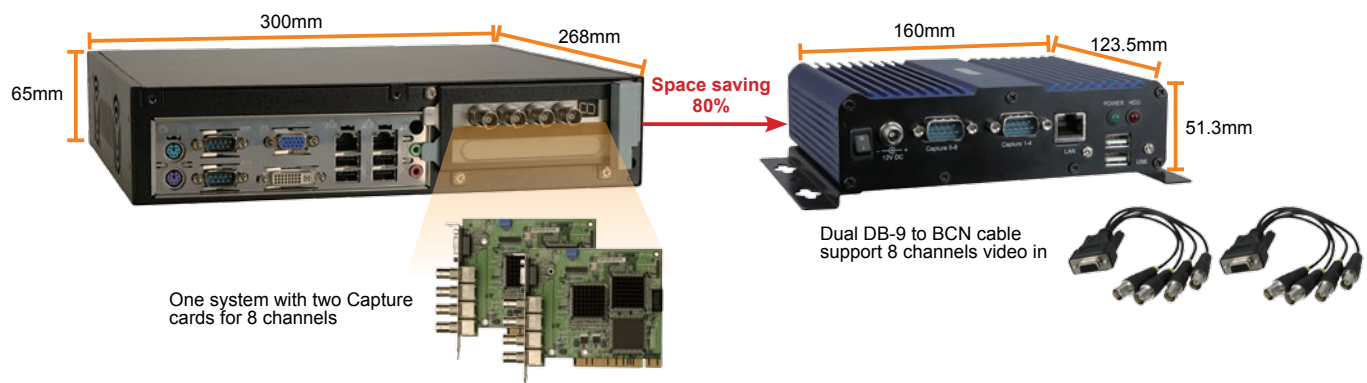


Specifications

Model	IBX-300B	IBX-300BC
Processor	Intel® Atom™ Processor D510 1.66GHz/1MB L2 Cache	
Chipset	ICH8M	
Video Capture Engine	N/A	Conexant CX25853 Multiport Composite Video Decoder Conexant CX25821 PCIe Media Bridge
System Memory	1GB DDR2 SODIMM memory pre-installed	
Ethernet	1 x Intel® 82567V PCIe PHY	
Display	VGA (2048 x 1536@60Hz)	
USB 2.0	4	
Serial Port	1 x RS-232	
Audio	1 x Mic-in, 1 x Line-out	
Storage	1 x 2.5" SATA HDD space	
Wireless	802.11 b/g for wireless model	
Power Input	12VDC in	
Operating Temperature	-10°C ~ 50°C (with HDD) with air flow*	-10°C ~ 40°C (with HDD) with air flow*
Operating Shock	Half-sine wave shock 3G; 11ms; 3 shocks per axis	
Operating Vibration	Meet MIL-STD-810F 514.5C-1	
Weight (Net/Gross)	1.0 kg/2.8 kg	
Dimensions (DxWxH)	160mm(W) x 123.5mm(D) x 51.3mm (H)	
Mounting	Desktop, wall mount, VESA mount (optional)	

* Ambient air speed pre IEC-68-2-2 standard

Space Saving



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Solutions

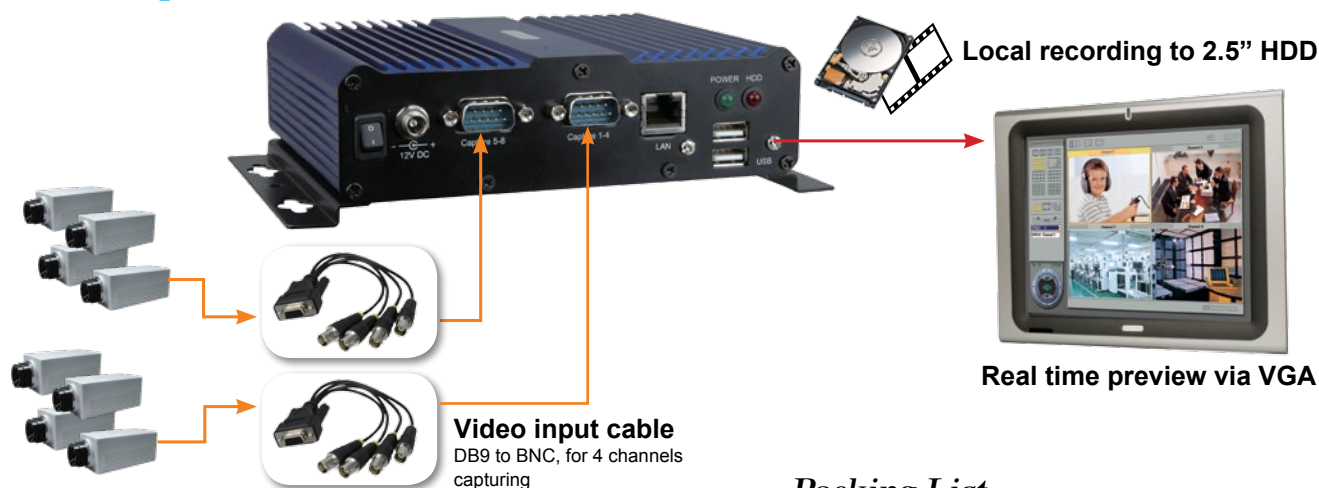
4

Power Supply/
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Panel
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Introduction

Video Capture



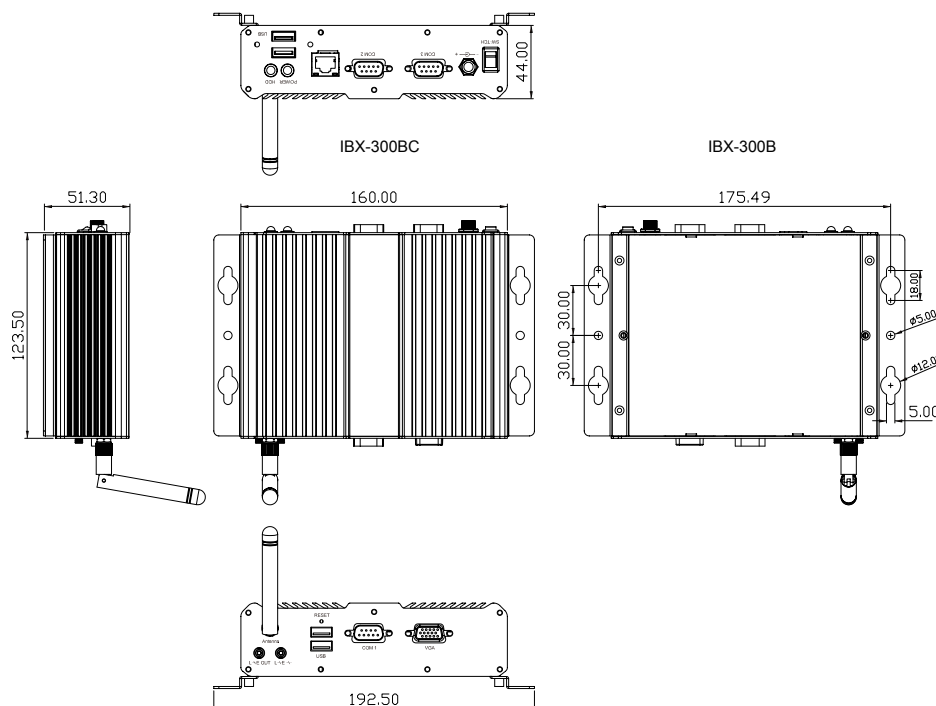
8 Channels Video Capturing

Video capture Engine	Conexant CX25853
Video Input	8 channels composite video (NTSC/PAL/SECAM)
Video ADC	10-bit
Max. resolution	720 x 480 (NTSC), 720 x 576 (PAL/SECAM)
Frame rate	NTSC: 4 channels with total 30 fps@D1 per channel PAL/SECAM: 4 channels with total 25 fps@D1 per channel
Driver support	Windows® XP, Vista, Windows® 7

Packing List

1 x Driver CD	1 x Power cord
1 x Screw set	1 x QIG
2 x Quad channel BNC cable (IBX-300BC series) (P/N: 32014-000200-100-RS)	
1 x SATA hard drive cable (P/N: 32801-003600-100-RS)	
1 x 40W 12V Power adapter (with ERP and PSE certificates) (P/N: 63000-FSP040DGAA1107-RS)	
1 x 2dbi Wireless antenna (for wireless model only)	
1 x One Key Recovery CD	

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
IBX-300BC-R10/D510/1GB	Fanless embedded system with Intel® Atom™ processor dual-core D510 1.66G CPU, with two DB9 for 8 channels video capture, with 1GB DDR2 memory, 40W power adapter with ERP and PSE certificates, Blue, RoHS
IBX-300BCW-R10/D510/1GB	Fanless embedded system with Intel® Atom™ processor dual-core D510 1.66G CPU, with two DB9 for 8 channels video capture, with 1GB DDR2 memory, built-in 802.11b/g wireless, 40W power adapter with ERP and PSE certificates, Blue, RoHS
IBX-300B-R10/D510/1GB	Fanless embedded system with Intel® Atom™ processor dual-core D510 1.66G CPU, with 1GB DDR2 memory, 40W power adapter with ERP and PSE certificates, Blue, RoHS
IBX-300BW-R10/D510/1GB	Fanless embedded system with Intel® Atom™ processor dual-core D510 1.66G CPU, with 1GB DDR2 memory, built-in 802.11b/g wireless, 40W power adapter with ERP and PSE certificates, Blue, RoHS

IBX-500B AMD® LX-800 Fanless Embedded System with 802.11b/g Wireless Support



Features

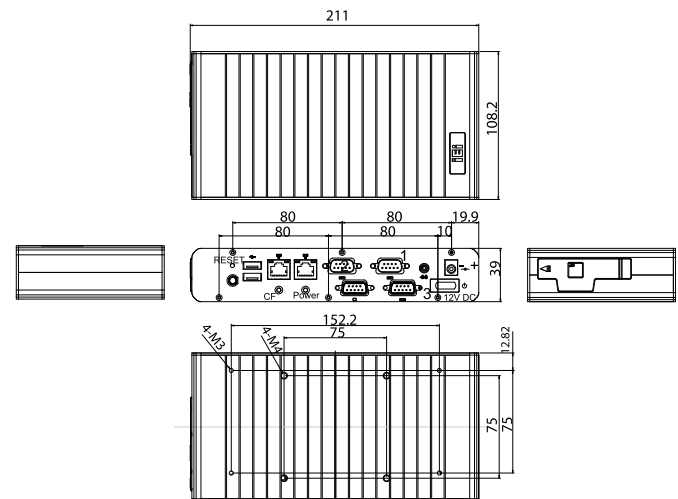
- ◆ AMD® LX 800 500 MHz fanless solution
- ◆ Dual 10/100 Mbps Ethernet and three RS-232 ports
- ◆ Built-in 802.11b/g wireless module
- ◆ Wall and VESA mounts for flexible installation



Specifications

Model Name		IBX-500B
Platform		AMD
Chassis	Color	Black
	Dimensions	210 x 108.2 x 39mm
	Chassis Construction	Aluminum alloy
Motherboard	Processor CPU	AMD Geode™ LX 800 500 MHz
	Chipset	CS-5536
	System Memory	256MB/512MB DDR SODIMM memory pre-installed
Storage	CompactFlash®	1
System Function	USB 2.0	2
	Ethernet	2 x Realtek 8100C 10/100Mbps Ethernet
	RS-232	3
	Display	1 x VGA
	Resolution	1920 x 1440 @ 60Hz
	Audio	1 x Speaker out
	Wireless	802.11 b/g
	Expansions	1 x Mini PCI slot (reserved for Wi-Fi)
Power	Power Input	12 VDC in
	Power Consumption	12@1.15A AMD LX800, DDR 512MB)
Reliability	Mounting	DIN mount, VESA 75 mount, wall mount
	Operating Temperature	0°C ~ 50°C
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	645g/1.8kg

Dimensions (Unit: mm)



Packing List

1 x 36W 12V power adapter (P/N: 63000-FSP036RAB608-RS)	
1 x VESA 75 Mounting Kit (P/N: AFLWK-12)	4 x Foot pad
1 x Screw set	1 x Wireless antenna
1 x Power cord	1 x Driver CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IBX-500BW-R20/LX800/256MB	Fanless embedded system with AMD LX 800 CPU, 802.11 b/g wireless module and 256MB DDR RAM, 12VDC in, 36W adapter with ERP and PSE certificates, black, RoHS
IBX-500BW-R20/LX800/512MB	Fanless embedded system with AMD LX 800 CPU, 802.11 b/g wireless module and 512MB DDR RAM, 12VDC in, 36W adapter with ERP and PSE certificates, black, RoHS
IBXCF-500B-CE050	Windows® CE 5.0 OS image for IBX-500B, with 128 MB CompactFlash® Memory Card, RoHS
IBXCF-500B-XPE	Windows® XP Embedded OS image for IBX-500B, with 1 GB CompactFlash® Memory Card, RoHS

IBX-530B-N270

Fanless Intel® Atom™ Embedded System



Features

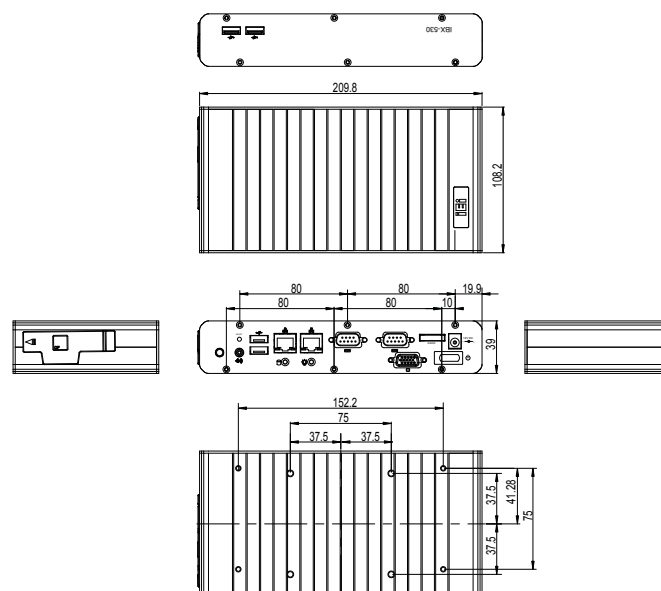
- ◆ Intel® Atom™ N270 1.6GHz solution
- ◆ Intel® Graphics Media Accelerator 950 for better graphic performance
- ◆ Supports Hyper-Threading Technology
- ◆ Fanless operation under -10°C to 50°C



Specifications

Model Name		IBX-530B-N270
Platform		Intel®
Chassis	Color	Black
	Dimensions	210 x 108.2 x 39mm
	Chassis Construction	Aluminum alloy
Motherboard	Processor CPU	Intel® Atom™ N270 1.6GHz
	Chipset	Intel® 945GSE + ICH7M
	System Memory	1 GB DDR2 SODIMM memory pre-installed
Storage	CompactFlash®	1
System Function	USB 2.0	4
	Ethernet	2 x Realtek 8111CP PCIe GbE
	RS-232	2
	Display	1 x VGA
	Resolution	1920 x 1200 @ 60Hz
	Audio	1 x Speaker out
	e-SATA	1 x External SATA
	Wireless	1 x 802.11 b/g/n
	Expansions	1 x Mini PCI slot (reserved for Wi-Fi)
	Power Model	12V DC in
Power	Power Input	12@1.28A (Intel® Z510PT 1.1G GHz, DDR2 1GB)
	Mounting	DIN mount, VESA 75 mount, wall mount
Reliability	Operating Temperature	-10°C ~ 50°C
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	645g/1.8kg

Dimensions (Unit: mm)



Packing List

1 x 36W 12V Power adapter (P/N: 63000-FSP036RAB608-RS)	
1 x Wall mount kit (P/N: AFLWK-12)	
1 x Screw set	1 x Power cord
4 x Foot pad with screws	1 x Driver & manual CD
1 x One Key Recovery CD	1 x 2dbi Wireless antenna



AFLWK-12

Ordering Information

Part No.	Description
IBX-530B-R21/N270/1GB	Fanless embedded system Intel® Atom™ Processor N270 1.6GHz CPU, Intel® 945GSE, built in 1GB DDR2 memory, 12VDC in, with 36W adapter, with ERP and PSE certificates, black, RoHS
IBX-530W-R21/N270/1GB	Fanless embedded system Intel® Atom™ Processor N270 1.6GHz CPU, Intel® 945GSE, built in 1GB DDR2 memory, built-in 802.11b/g/n wireless, 12VDC in, with 36W adapter, with ERP and PSE certificates, black, RoHS
IBXCF-530-945GSE-CE060	WINCE 6.0 OS Image for IBX-530-945GSE, with 128MB CompactFlash® memory card, RoHS
IBXCF-530-945GSE-XPE	Windows® XPE OS image, for IBX-530-945GSE, with 1GB CompactFlash® memory card, RoHS

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Panel Solutions Introduction

SBC Embedded System

New

New



Model Name		ECN-780-Q67	ECN-680A-H61	ECN-581A-QM57	ECN-381B	ECW-281B-D525 (ECW-281B2-D525)	ECW-281B-R21/N270 (ECW-281B2-R21/N270)
Platform		Intel®	Intel®	Intel®	Intel®	Intel®	Intel®
Chassis	Color	Black	Black	Cool Gray+Blue	Cool Gray+Blue	Black	Black
	Dimensions	230 x 60 x 173 mm	222 x 163 x 54.5 mm	180 x 138 x 50mm	252 x 186 x 64mm	229 x 132 x 64mm	229 x 132 x 64mm
	System Fan	1 x 8cm	1 x 8cm	2 x 4cm	N/A	N/A	N/A
	Chassis Construction	SECC	SECC + Plastic	Heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty meta	Aluminum alloy with heavy duty meta
Motherboard	Motherboard Model	ECNMB-780-Q67	ECNMB-680-H61	NANO-QM57A	NANO-GM45A2	WAFER-PV-D5252	WAFER-945GSE
	Processor CPU	2nd Generation Intel® Core™ i7/i5/i3 Celeron® and Pentium® desktop processor supported	2nd Generation Intel® Core™ i7/i5/i3 Celeron® and Pentium® desktop processor supported	Intel® Core™ i5-520M 2.4GHz/4MB L2 cache	Intel® Core™ Duo 2.26GHz, 3MB L2 cache, processor P8400 Intel® Celeron™ M 2.0GHz 1MB L2 cache, processor 575	Intel® Atom™ D525 Processor 1.8GHz/1MB L2 cache	Intel® Atom™ N270 1.6GHz/512KB L2 Cache
	Chipset	Intel® Q67	Intel® H61 (Co-lay Q67 chipset by MOQ limitation)	Intel® QM57	Intel® GM45 + ICH9M	ICH8M	Intel® 945GSE + ICH7M
	System Memory	1 x 204-pin 1066/1333 MHz dual-channel DDR3 SDRAM DIMM slot (system max. 8GB) On-board 2GB DDR3 memory	1 x 204-pin 1066/1333 MHz dual-channel DDR3 SDRAM DIMM slot (system max. 8GB)	2 GB DDR3 204-pin SODIMM memory pre-installed	1 GB DDR3 200-pin SODIMM memory pre-installed	1 GB DDR3 204-pin SODIMM memory pre-installed	1 GB DDR2 200-pin SODIMM memory pre-installed
Storage	Hard Drive	1 x 2.5" SATA HDD Space	1 x 2.5" SATA HDD Space	1 x 2.5" SATA HDD Space	1 x 2.5" SATA HDD Space	1 x 2.5" SATA HDD Space	1 x 2.5" SATA HDD Space
	CompactFlash®	N/A	N/A	N/A	1	1	1
System Function	PS2 (KB/MS)	N/A	N/A	N/A	N/A	N/A	N/A
	USB 3.0	2	2	N/A	N/A	N/A	N/A
	USB 2.0	2	4	4	4	4	4
	Ethernet	1 x Intel® 82579 PHY Ethernet with Intel® AMT 7.0 support 1 x Intel® 82583V Ethernet	1 x Intel® 82579 PHY Ethernet (support Intel® AMT 7.0 with Q67 chipset) 1 x Intel® 82583V Ethernet	1 x Intel® 82577LM PCIe PHY with AMT 6.0 support	2 x Realtek 8111CP PCIe GbE	2 x Realtek 8111E PCIe GbE	2 x Realtek 8111CP PCIe GbE
	RS-232	1	3	2	3	6 (5)	6 (5)
	Display	1 x HDMI 1 x DVI-D 1 x VGA	1 x HDMI 1 x DVI-D 1 x DVI-I	1 x DVI-I (DVI-D + VGA) 1 x DVI-D	1 x VGA + 1 x HDMI	1 (2) x VGA	1 (2) x VGA
	Resolution	2048 x 1536 @ 75Hz (VGA), 1920 x 1200 @ 60Hz (HDMI), 1920 x 1080 @ 60Hz (DVI-D)	1920 x 1080 @ 60Hz (DVI-I and DVI-D), 1920 x 1200 @ 60Hz (HDMI)	1920 x 1200 @ 60 Hz (Digital) 2048 x 1536 @ 75 Hz (Analog)	2048 x 1536 @ 75 Hz (Analog) 1080P (HDMI)	2048 x 1536 @ 60Hz (1024x768 @ 60Mhz)	1920 x 1200 @ 60Hz (1024x768 @ 60Mhz)
	Audio	1 x Mic-in, 1 x Line-out	1 x Mic-in, 1 x Line-out, 1 x Line-in	1 x Mic-in, 1 x Line-out, 1 x Line-in	1 x Mic-in, 1 x Speaker out	1 x Speaker out	1 x Speaker out
	Other	N/A	Integrated TPM function	N/A	1 x IEEE-1394	N/A	N/A
	Wireless	1 x 802.11 b/g/n	1 x 802.11 b/g/n	1 x 802.11 b/g/n	1 x 802.11 b/g/n	1 x 802.11 b/g/n	1 x 802.11 b/g/n
	Expansions	2 x PCIe Mini card slot (reserved for Wi-Fi and TV-Tuner)	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)
Power	Power Input	100 ~ 240V AC input	9V ~ 36V DC input	12V DC in	12V DC in	12VDC in 9-36V (WD Model)	12VDC in 9-36V (WD Model)
	Power Consumption	19V@3.5A (Intel® Core™ i7-2600S CPU with 1333MHz 4G DDR3 memory)	19V@3.6A (Intel® Core™ i7-2600S CPU with 1333MHz 4G DDR3 memory)	12V@4.18A (Intel® Core™ i5-520M 2.66G, DDR3 2GB)	12V@3.24A (Intel® Core™ i5-520M 2.66G, DDR3 2GB)	12V@1.79A (Intel® Atom™ D525 1.8GHz with DDR3 1GB)	12V@1.25A (Intel® Atom™ N270 1.6GHz with DDR2 1GB)
Reliability	Mounting	Desktop, Wall mount	Desktop, Wall mount	Desktop, wall mount, VESA mount	Desktop, VESA mount, wall mount	DIN mount, VESA 75 mount, wall mount	DIN mount, VESA 75 mount, wall mount
	Operating Temperature	-20°C ~ 50°C	-20°C ~ 60°C	-10°C ~ 50°C with SSD	-10°C ~ 45°C with CompactFlash®/SSD -10°C ~ 40°C with HDD	-20°C ~ 65°C with CompactFlash®/SSD -10°C ~ 50°C with HDD	-10°C ~ 70°C with CompactFlash®/SSD -10°C ~ 50°C with HDD
	Operating Shock	Half-sine wave shock 3G, 11ms, 3 shocks per axis					
	Operating Vibration	* MIL-STD-810F 514.5C-1 MIL-STD-810F 514.5C-2		MIL-STD-810F 514.5C-1		* MIL-STD-810F 514.5C-1 MIL-STD-810F 514.5C-2	
Weight (Net/Gross)		3.1 Kg/4.3 Kg	1.8 Kg/3.0 Kg	1.1kg/2kg	2.6kg/3.9kg	2.1kg/3.9kg	2.1kg/3.9kg

*Systems with hard drive meet MIL-STD-810F 514.5C-1 specifications. SSD/CF systems meet MIL-STD-810F 514.5C-2 specifications.

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Panel Solutions Introduction

ECN-780-Q67

Embedded System with 2nd Gen Intel® Core™ i7/i5/i3 Desktop Processors



Features

- ◆ 2nd Generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® desktop processors
- ◆ Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0
- ◆ On-board 2GB DDR3 memory and one DDR3 SO-DIMM slot (system max. 10GB)
- ◆ Dual Gigabit Ethernet with Intel® AMT 7.0 support
- ◆ Dual display output supported by VGA/DVI/HDMI
- ◆ Optional 2.4GHz 802.11 b/g/n Wi-Fi
- ◆ Easy to install SATA hard drive
- ◆ USB 3.0 ports provide super speed data transfer



Specifications

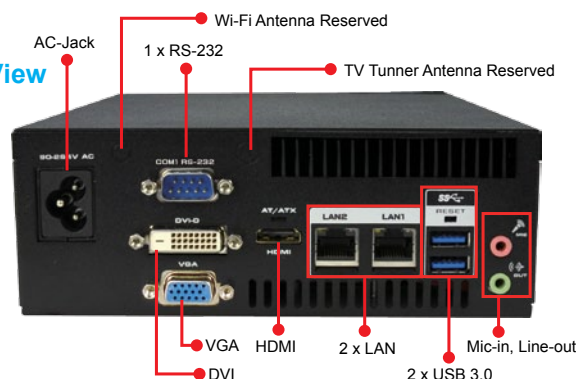
Model Name		ECN-780-Q67
Chassis	Color	Black
	Dimensions (WxHxD) (mm)	230 x 60 x 173
	Chassis Construction	SECC
Motherboard	CPU	2nd Generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® desktop processors
	Chipset	Intel® Q67
	Ethernet	Intel® 82579 PHY with Intel® AMT 7.0 supported Intel® 82583V Ethernet controller
	Audio	Realtek ALC892 HD Audio
	Memory	On-board 2GB DDR3 memory 1 x 204-pin 1066/1333 MHz dual-channel DDR3 SDRAM DIMM slot (system max. 10GB)
Storage	SATA	1 x 2.5" SATA HDD Space
System Function	USB	2 x USB 3.0 on rear side 2 x USB 2.0 on front side
	Ethernet	2 x RJ-45 Gigabit LAN
	RS-232	1 x RS-232 on rear side, 1 x RS-232 on front side
	RS-422/485	1 x RS-422/485 on front side
	Display	1 x HDMI 1 x DVI-D 1 x VGA
	Resolution	Up to 2048 x 1536 @ 75Hz (VGA), 1920 x 1200 @ 60Hz (HDMI), 1920 x 1080 @ 60Hz (DVI-D)
	Audio	1 x Mic-in, 1 x Line-out on rear
	Internal Expansions	2 x PCIe Mini slot (reserved for Wi-Fi or TV-Tuner)
	Switch	Reset switch AT/ATX switch
	Watchdog Timer	Software programmable support 1~255 sec. system reset
Power	Power Supply	100 ~ 240V AC input
	Power Consumption	19W@3.5A (Intel® Core™ i7-2600S CPU with 1333MHz 4GB DDR3 memory)
Reliability	Mounting	Desktop, Wall mount
	Operating Temperature	-20°C ~ 50°C with air flow
	Storage Temperature	-30°C ~ 60°C with air flow
	Operating Humidity	5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 3G, 11ms, 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	3.1 Kg/4.3 Kg
Safety & EMC		CE/FCC

Fully Integrated I/O

• Front View



• Rear View



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Panel
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Introduction

Easily accessible HDD disk drive

The hard disk drive can be accessed easily by removing screws from the HDD bracket.



In-chassis Power Adapter

The ECN-780 has a built-in power adapter module to prevent disorder situations and inconveniences caused by an external power adapter.

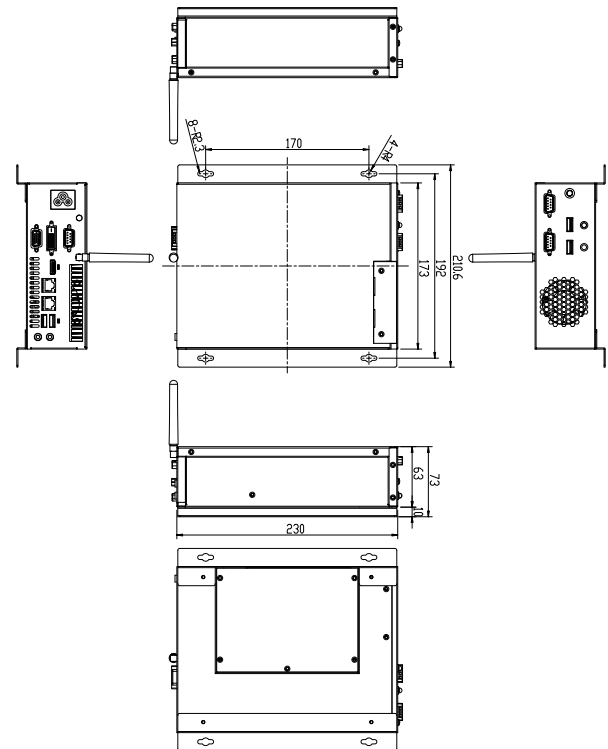


Dual display by VGA/DVI/HDMI

- The ECN-780 has three types of display interfaces - VGA, DVI and HDMI, which support dual display and high resolution
- VGA supports resolutions up to 2048x1536@75Hz
- HDMI supports resolutions up to 1920x1200@60Hz
- DVI supports resolutions up to 1920x1080@60Hz



Dimensions (Unit: mm)



Packing List

Item	P/N	Q'ty	Description
Utility CD		1	Drivers and user manual
One Key Recovery CD	7B000-000724-RS	1	
Power cord	32702-000401-100-RS	1	1500 mm, European Standard
Wi-Fi antenna (for Wi-Fi module only)	32505-000900-100-RS	1	External Antenna
Mounting brackets		2	
Mounting bracket screws	44015-030041-RS	4	Mounting brackets screw
Power cord convert cable	32000-089400-RS	1	Covert normal type cord to triangle type cord cable
Thermal pad	34100-000197-RS	1	Thermal pad; 27.5*27.5*1.0mm; Silicone;K=6; Color: Reddish gray; RoHS

Ordering Information

Part No.	Description
ECN-780-Q67-i5-R10	Embedded system, Core™ i5 Dual Core 2xxxT CPU (Above 2.7GHz), TDP 35W, 2GB DDR3 on-board memory, dual display multimedia BOX, Dual GbE LAN, supports Intel® AMT 7.0, 100~240VAC Input, built-in 90W adapter, black, R10
ECN-780W-Q67-i5-R10	Embedded system, Core™ i5 Dual Core 2xxxT CPU (Above 2.7GHz), TDP 35W, 2GB DDR3 on-board memory, dual display multimedia BOX, Dual GbE LAN, build-in 802.11b/g/n wireless, supports Intel® AMT 7.0, 100~240VAC Input, built-in 90W adapter, black, R10
ECN-780-Q67-i3-R10	Embedded system, Core™ i3 Dual Core 2xxxT CPU (Above 2.5GHz), TDP 35W, 2GB DDR3 on-board memory, dual display multimedia BOX, Dual GbE LAN, 100~240VAC Input, built-in 90W adapter, black, R10
ECN-780W-Q67-i3-R10	Embedded system, Core™ i3 Dual Core 2xxxT CPU (Above 2.5GHz), TDP 35W, 2GB DDR3 on-board memory, dual display multimedia BOX, Dual GbE LAN, build-in 802.11b/g/n wireless, 100~240VAC Input, built-in 90W adapter, black, R10
ECN-780-Q67-P-R10	Embedded system, Pentium® Dual Core G6xxT CPU (Above 2.2GHz), TDP 35W, 2GB DDR3 on-board memory, dual display multimedia BOX, Dual GbE LAN, 100~240VAC Input, built-in 90W adapter, black, R10
ECN-780W-Q67-P-R10	Embedded system, Pentium® Dual Core G6xxT CPU (Above 2.2GHz), TDP 35W, 2GB DDR3 on-board memory, dual display multimedia BOX, Dual GbE LAN, build-in 802.11b/g/n wireless, 100~240VAC Input, built-in 90W adapter, black, R10
Memory Selection	DDR3-SO-1333-2GB SO-DIMM DDR3 1333MHz 2GB
	DDR3-SO-1333-4GB SO-DIMM DDR3 1333MHz 4GB

ECN-680A-H61

Embedded System with 2nd Gen Intel® Core™ i7/i5/i3 Desktop Processors



Features

- ◆ 2nd Generation Intel® Core™ i7/i5/i3 Pentium® and Celeron® desktop processor supported
- ◆ Intel® HD graphics supports H.264/AVC-MPEG2/VC1, DirectX 10.1 and OpenGL 3.0
- ◆ One 204-pin DDR3 SO-DIMM slot (system max. 8GB)
- ◆ Dual DVI display output supported
- ◆ Optional 2.4GHz 802.11 b/g/n 2T2R MIMO Wi-Fi for high speed wireless transmission
- ◆ Wide DC power input range 9 ~ 36V
- ◆ Extended temperature design supports -20°C to 60°C with air flow condition
- ◆ USB 3.0 for super high speed data transfer
- ◆ TPM V1.2 hardware security function supported



Specifications

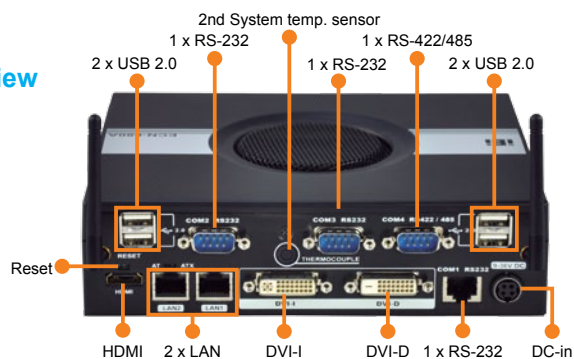
Model Name		ECN-680A-H61
Chassis	Color	Black
	Dimensions	222 (W) x 163 (H) x 54.5 (D) mm
	Chassis Construction	SECC + Plastic
Motherboard	CPU	2nd Generation Intel® Core™ i7/i5/i3 Pentium® and Celeron® desktop processor
	Chipset	Intel® H61 (Co-lay Q67 chipset production by MOQ limitation)
	Ethernet	Intel® 82579 PHY Ethernet (supports Intel® AMT 7.0 with Q67 chipset) Intel® 82583V Ethernet controller
	Memory	1 x 204-pin 1066/1333 MHz DDR3 SDRAM DIMM slot (system max. 8GB)
Storage	SATA	1 x 2.5" SATA HDD bay
System Function	USB	4 x USB 2.0 on rear 2 x USB 3.0 on front
	Ethernet	2 x RJ-45 Gigabit LAN
	RS-232	3 x RS-232 COM port 2 by DB9 port, 1 by RJ-45 port)
	RS-422/485	1 x RS-422/485
	Display	1 x HDMI 1 x DVI-D 1 x DVI-I
	Resolution	Up to 1920 x 1080 @ 60Hz (DVI-I and DVI-D), 1920 x 1200 @ 60Hz (HDMI)
	Audio	1 x Mic-in, 1 x Line-out, 1 x Line-in on front
	Internal Expansions	1 x PCIe Mini slot (reserved for Wi-Fi)
	Switch	Reset switch AT/ATX switch
	TPM	TPM-IN01-R11
Power	Watchdog Timer	Software programmable support 1~255 sec. system reset
	Power Supply	9V ~ 36V DC input
	Power Consumption	19W@3.6A (Intel® Core™ i7-2600S CPU with 1333MHz 4GB DDR3 memory)
Reliability	Mounting	Desktop, Wall mount
	Operating Temperature	-20°C ~ 60°C with air flow (SSD)
	Storage Temperature	-30°C ~ 80°C
	Operating Humidity	5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 3G, 11ms, 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	1.8 Kg/3.0 Kg
Safety & EMC		CE/FCC

Fully Integrated I/O

• Front View



• Rear View



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Panel Solutions Introduction

Easily accessible HDD disk driver

The hard disk drive can be easily accessed by removing screws from the HDD bracket.



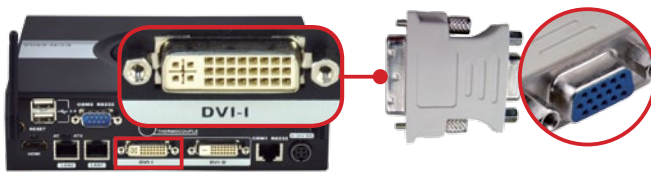
Customized RS-232/422/485

The ECN-680A has one RS-422/485 and two RS-232 for COM Ports. The flexibility of the two COM ports allow the user choose two RS-232 or one RS-232 and one RS-422/485 according to applications.

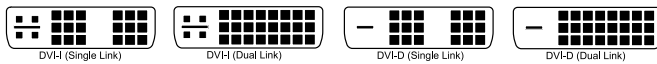


Dual DVI display and full HD display

- The ECN-680A has DVI-I, DVI-D display interfaces which supports dual display and high resolution with audio output for signage applications.
- DVI-I and DVI-D support resolutions up to 1920x1200@60Hz



DVI interfaces



Classify	Single	Convert VGA	Transfer Speed	Max resolution refresh rate
DVI-I single link	Digital/Analog	Yes	165Mbps	1920x1080, 60hz/ 1600x1200, 60hz
DVI-I dual link	Digital/Analog	Yes	330Mbps	2560x1600, 60Hz/ 1920x1080, 120Hz
DVI-D single link	Digital	No	165Mbps	1920x1080, 60hz/ 1600x1200, 60hz
DVI-I dual link	Digital	No	330Mbps	2560x1600, 60Hz/ 1920x1080, 120Hz

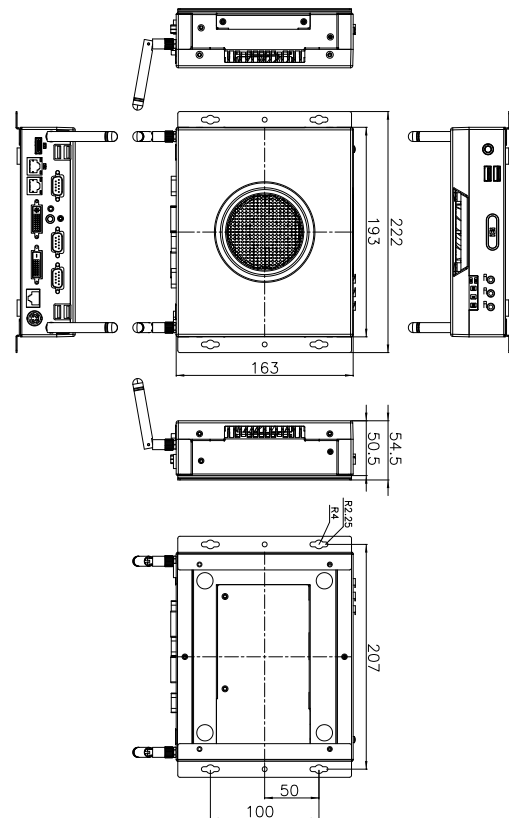
Packing List

Item	P/N	Q'ty	Description
Utility CD		1	Drivers and user manual
One Key Recovery CD	7B000-000724-RS	1	
Power adapter	63040-010090-020-RS	1	FSP090-D2BA1; 90 ~ 264VAC input; 90W; 19VDC output; Din 4-pin
Power cord	32702-000401-100-RS	1	1500 mm, European Standard
Power cord convert cable	32000-089400-RS	1	Convert normal type cord to triangle type cord cable
Wi-Fi antenna (for Wi-Fi module only)	32505-000900-100-RS	2	External antenna
Mounting brackets	41020-0343C2-00-RS	2	Wall mount kit
Mounting bracket screws	44015-030041-RS	8	Mounting brackets screw/HDD securing screw
RJ-45 to DB-9 COM port cable	32005-000200-200-RS	1	Round cable; RS-232/422/485; RS-232 cable; 2;300mm; 26AWG; (A)D-SUB 9P male; (B)RJ-45 8P8C+SHELL; RoHS
Thermal pad	34100-000197-RS	1	Thermal pad; 27.5*27.5*1.0mm; Silicone;K=6; Color: Reddish gray; RoHS
RS-422/485 Cable	32205-004200-100-RS	1	Flat cable; RS-232/422/485;RS-422/485 Cable;2;100mm;28AWG; (A)DU PONT 2*4P P=2.0 Female, IDIOT-PROOF; (B)D-SUB 9P, RoHS

Ordering Information

Part No.	Description
ECN-680A-H61-I5-R10	Embedded system, Core™ i5 Dual Core 2xxxT CPU (Above 2.7GHz), TDP 35W, Pre-installed 2GB DDR3 RAM*1, dual DVI display multimedia box, Dual GbE LAN, HDMI, USB 2.0, USB 3.0, SATA 3Gb/s, TPM, 9~28VDC Input, 90W adapter, black , R10
ECN-680AW-H61-I5-R10	Embedded system, Core™ i5 Dual Core 2xxxT CPU (Above 2.7GHz), TDP 35W, Pre-installed 2GB DDR3 RAM*1, dual DVI display multimedia box, Dual GbE LAN, build-in 802.11b/g/n wireless, HDMI, USB 2.0, USB 3.0, SATA 3Gb/s, TPM, 9~28VDC Input, 90W adapter, black, R10
ECN-680A-H61-I3-R10	Embedded system, Core™ i3 Dual Core 2xxxT CPU (Above 2.5GHz), TDP 35W, Pre-installed 2GB DDR3 RAM*1, dual DVI display multimedia box, Dual GbE LAN, HDMI, USB 2.0, USB 3.0, SATA 3Gb/s, TPM, 9~28VDC Input, 90W adapter, black, R10
ECN-680AW-H61-I3-R10	Embedded system, Core™ i3 Dual Core 2xxxT CPU (Above 2.5GHz), TDP 35W, Pre-installed 2GB DDR3 RAM*1, dual DVI display multimedia box, Dual GbE LAN, build-in 802.11b/g/n wireless, HDMI, USB 2.0, USB 3.0, SATA 3Gb/s, TPM, 9~28VDC Input, 90W adapter, black, R10
ECN-680A-H61-P-R10	Embedded system, Pentium® Dual Core G6xxT CPU (Above 2.2GHz), TDP 35W, Pre-installed 2GB DDR3 RAM*1, dual DVI display multimedia box, Dual GbE LAN, HDMI, USB 2.0, USB 3.0, SATA 3Gb/s, TPM, 9~28VDC Input, 90W adapter, black, R10
ECN-680AW-H61-P-R10	Embedded system, Pentium® Dual Core G6xxT CPU (Above 2.2GHz), TDP 35W, Pre-installed 2GB DDR3 RAM*1, dual DVI display multimedia box, Dual GbE LAN, build-in 802.11b/g/n wireless, HDMI, USB 2.0, USB 3.0, SATA 3Gb/s, TPM, 9~28VDC Input, 90W adapter, black, R10

Dimensions (Unit: mm)



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Panel Solutions Introduction

ECN-581A-QM57

Intel® Mobile Core™ i5 Dual DVI Display Multimedia Box

The ECN-581A Series has a high performance graphics engine with full AVC, VC-1 and MPEG2 decoding acceleration as well as 1080p HD digital output for large-sized panels which makes it an ideal system for digital signage.

Features

- ◆ Supports Socket G Intel® 32nm mobile processor Intel® Core™ i5-520M
- ◆ Dual DVI independent display support
- ◆ DDR3 800/1066 MHz SDRAM supported up to 4GB
- ◆ Intel® GbE LAN with Intel® AMT 6.0 supported
- ◆ 12V DC power input
- ◆ Optional wireless by PCIe mini card



Specifications

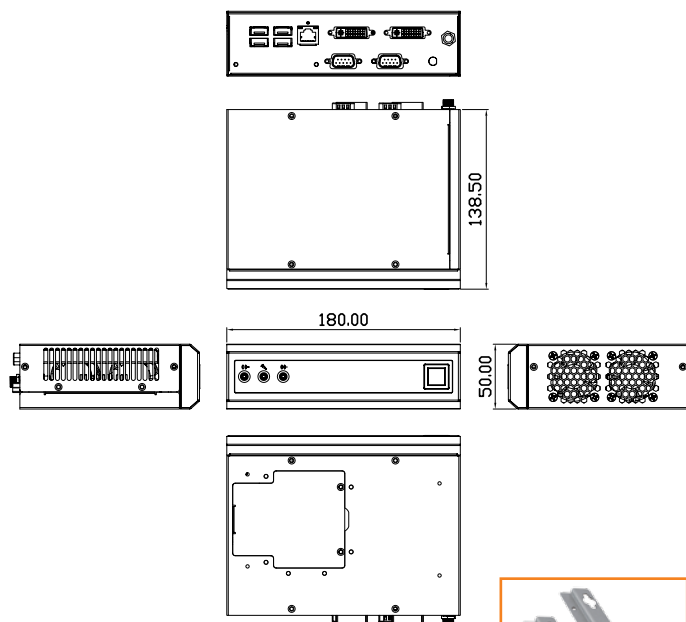
Model Name	ECN-581A-QM57
SBC	NANO-QM57A
Processor	Intel® Core™ i5-520M
Chipset	Intel® Mobile QM57
System Memory	Pre-installed 1 x 2 GB DDR3 SDRAM SO-DIMM (max: 4GB)
Ethernet	One Intel® 82577 PCIe LAN controller (with Intel® AMT 6.0)
Display	1 x DVI-D (1920x1200) 1 x DVI-I (supports VGA by DVI to VGA adapter)
USB 2.0	4
Serial Port	2 x RS-232
Audio	1 x Mic-in, 1 x Line-out, 1 x Line-in (front panel)
Storage	Supports 1 x 2.5" SATA HDD space
Expansions	1 x PCIe Mini card slot, reserved for Wi-Fi
Power Input	12 V DC in
Power Consumption	12V@4.18A (Intel® Core™ i5-520M 2.66G, DDR3 2GB)
Operating Temperature	-10°C ~ 50°C (with HDD) with air flow*
Operating Shock	Half-sine wave shock 3G; 11ms; 3 shocks per axis (SSD)
Operating Vibration	MIL-STD-810F 514.5C-2 (SSD)
Weight (Net/Gross)	1.1 kg/2 kg
Dimensions (DxWxH)	180 mm (W) x 138 mm (D) x 50 mm (H)
Mounting	Desktop, wall mount

Intel® AMT 6.0

The ECN-581A-QM57 is integrated with an Intel® QM57 Express Chipset that supports Intel® Active Management Technology for remote management. The Intel® AMT allows IT personnel to better monitor and protect networked computing assets. Benefits include enhanced asset management, fewer desk side visits and downtime reduction.



Dimensions (Unit: mm)



Wall Mount bracket

Packing List

1 x QIG	1 x Screw set
2 x Wall mount bracket	1 x Driver CD
1 x 60W 12V power adapter (P/N: 63000-FSP060DBAB1552-RS)	1 x Power cord
1 x 2dbi Wireless antenna (for wireless model only)	1 x One Key Recovery CD

Ordering Information

Part No.	Description
ECN-581A-R11/QM57-I5/2GB	Embedded system with NANO-QM57A, Intel® Core i5-520M Processor 3M Cache 2.40 GHz, with dual DVI display support Intel® AMT6.0, with 2GB DDR3 memory, 12VDC, 60W power adapter with ERP and PSE certificates, Reflex Blue C + 8403C, RoHS
ECN-581AW-R11/QM57-I5/2GB	Embedded system with NANO-QM57A, Intel® Core i5-520M Processor 3M Cache, 2.40 GHz, with dual DVI display support Intel® AMT6.0, built-in 802.11b/g/n wireless, with 2GB DDR3 memory, 12VDC, 60W power adapter with ERP and PSE certificates, Reflex Blue C + 8403C, RoHS

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Panel Solutions Introduction

ECN-381B Intel® Socket P Core 2 Duo Fanless Multimedia Box



Features

- ◆ Intel® 45nm mobile Core™ 2 Duo fanless design
- ◆ Intel® GM45 rich media features with VGA+HDMI dual display
- ◆ 1080i/p Full HD by HDMI with HDCP support
- ◆ High quality media MPEG-2 decoding, WMV9 (VC-1), H.264 (AVC), DirectX 10
- ◆ IEI One Key Recovery solution allows you to create rapid OS backup and recovery



GM45 Leadership Performance

Montevina Platform – Key Features



- Penryn on 45nm process (6M, 1066FSB)
- Introduces DDR3 Support (800/1066)
- SSE4 (SIMD Software enhancements)
- Enhanced Graphics Engine (Gen 5 gfx)



- Support for High Def decode in H/W
- Integrated DisplayPort™ & HDMI/HDCP
- Additional USB & SATA ports (no PATA)
- Integrated TPM and Packet Filtering



- Smaller FormFactor Chipsets and CPUs
- Deep Power Down Technology (w/ C6 state)
- Thermal compatibility with Santa Rosa

As the latest 3-chip mobile solution, Intel® GM45 has substantial improvement on graphic and media related features over 945GME including HD display and Blu-ray support as well as MPEG-2 decoding acceleration. Its High-Definition Multimedia Interface(HDMI) enables 1080p HD digital output to large size panel, ideal for signage application.

	GM45	945GME
FSB	667/800/1066MHz	667MHz
Memory support	DDR3 800/1066MHz	DDR2 400/533/667MHz
Graphic engine	GMA4500MHD	GMA950
Render clock	533-MHz core render clock	250-MHz core render clock
DP/HDMI	Available, with HDCP support	N/A
Multimedia features	• High performance MPEG-2 decoding • WMV9 (VC-1) and H.264 (AVC) support • Hardware acceleration for MPEG2 VLD/iDCT • Blu-ray* support @ 40 Mb/s	N/A
DirectX Version	DirectX 10	DirectX 9.1

Core™2 Duo Fanless

The ECN-381B has a passive cooling architecture design. The heat pipes and extruded aluminum fins instantly transfer heat from CPU and chipset to the system aluminum enclosure by natural convection. With an Intel® Mobile Core™2 Duo 2.26GHz CPU, the ECN-381B has verified reliability and stability operating under 40°C, and supporting up to 31W CPU TDP fanless operation.

**Intel®
Core™2 Duo**

Intel® Mobile Core™2 Duo 2.26GHz, Processor P8400
3MB L2 cache
TDP 25W

**Intel®
Celeron® M**

Intel® Celeron® M 2.0 GHz, Processor 575
1MB L2 cache
TDP 31W



A high temperature operation test is performed with ambient air speed of 0.5 meter/sec, compliant with IEC-68-2-2 standard.

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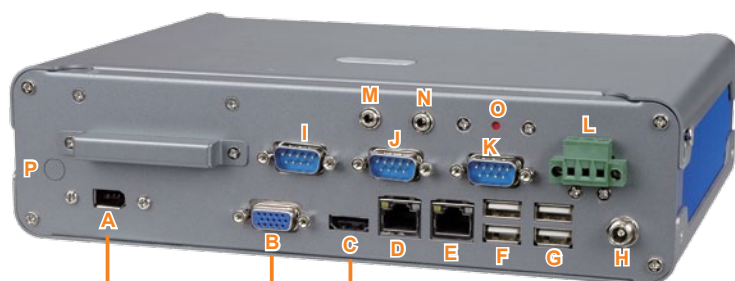
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I/O Interface



- A. IEEE 1394a (6-pin)
- B. VGA
- C. HDMI
- D. GbE
- E. GbE
- F. Dual USB
- G. Dual USB
- H. DC-in
- I. RS-232
- J. RS-232
- K. RS-232
- L. TB DC in
- M. Line-out
- N. Mic-in
- O. Reset
- P. Antenna (option)



IEEE 1394a

♦ Industrial high speed camera

- Industrial inspection
- Machine vision
- Healthcare and medical
- Security and traffic

♦ HD camcorder

- Broadcasting business
- Professional video editing



VGA up to 2048x1536

Full HD Dual Display

The latest 3-chip mobile solution, the Intel® GM45, has substantially improved graphics and medias including an HD display, Blu-ray support as well as MPEG-2 decoding acceleration. Its High-Definition Multimedia Interface (HDMI) support provides 1080p HD digital output perfect for large sized panels and signage applications.

The ECN-381B has VGA and HDMI dual display interfaces for high resolution, and independent screen with audio output. Possible applications include: fine art demonstrations, high fashion displays, large screen digital signage, etc. Any application that requires high definition graphics performance in order to show the true beauty of products and content. The ECN-381B is an excellent choice to fulfill high-end digital signage needs.



Storage Support

The ECN-381B supports three kinds of storage devices including 2.5" Serial ATA hard drive, CompactFlash® and SSD. Using the ECN-381B as a signage player, you can install the operating system on a CF card while storing multimedia content in the hard drive. This protects the OS image from damage caused by frequent read/write during content playback and update.



2.5" SATA hard drive/SSD



CompactFlash® II

About HDMI

HDMI is a compact audio/video interface for transmitting uncompressed digital data. It represents a digital alternative to consumer analog standards such as Radio Frequency (RF) coaxial cable, composite video, S-Video, SCART, component video, D-Terminal, and VGA. HDMI connects digital audio/video sources such as set-top boxes, Blu-ray Disc players, personal computers, video game consoles, and AV receivers to compatible digital audio devices, computer monitors, and digital televisions.

Ordering Information

Part No.	Description
ECN-381B-R10/CM575/1GB	Fanless embedded system with Intel Celeron M 575 2.0 GHz 1MB L2 cache, GM45 chipset, with 1GB DDR3 memory, 12VDC, 60W power adaptor with ERP and PSE certificates, Reflex Blue C+8403C, RoHS
ECN-381B-R10/P8400/1GB	Fanless embedded system with Intel Core 2 Duo P8400 2.26 GHz 3MB L2 cache, GM45 chipset, with 1GB DDR3 memory, 12VDC, 60W power adaptor with ERP and PSE certificates, Reflex Blue C+8403C, RoHS
ECN-381BW-R10/CM575/1GB	Fanless embedded system, Intel Celeron M 575 2.0 GHz 1MB L2 cache, GM45 chipset, built-in 802.11b/g wireless, with 1GB DDR3 memory, 12VDC, 60W power adaptor with ERP and PSE certificates, Reflex Blue C+8403C, RoHS
ECN-381BW-R10/P8400/1GB	Fanless embedded system, Intel Core 2 Duo P8400 2.26 GHz 3MB L2 cache and GM45 chipset, built-in 802.11b/g wireless, with 1GB DDR3 memory, 12VDC, 60W power adaptor with ERP and PSE certificates, Reflex Blue C+8403C, RoHS

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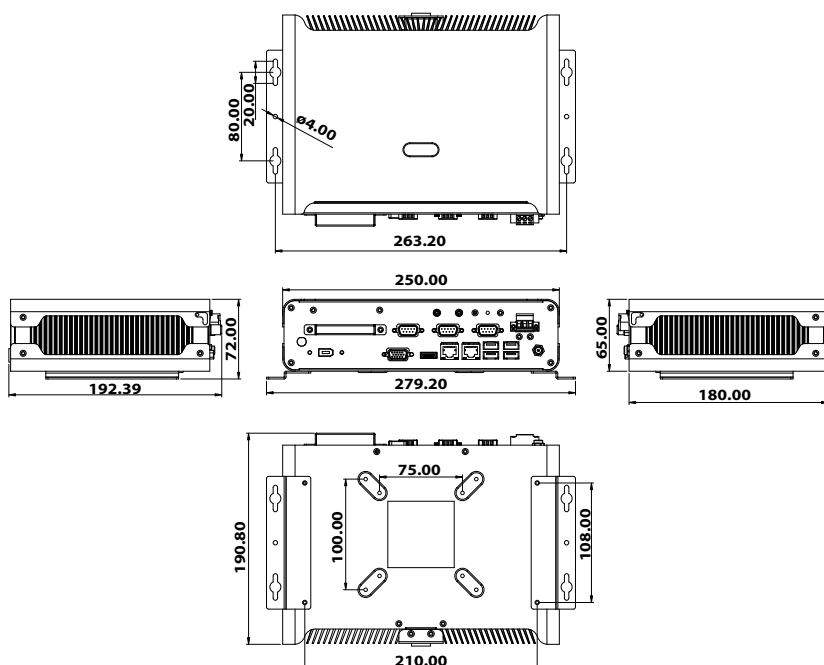
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Specifications

Model Name		ECN-381B
Chassis	Color	Cool Gray+Blue
	Dimensions	252 x 186 x 64mm
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	NANO-GM45A2
	M/B Size	EPIC (165mm x 115mm)
	Processor CPU	Intel® Core™ Duo 2.26GHz, 3MB L2 cache, processor P8400 Intel® Celeron™ M 2.0GHz 1MB L2 cache, processor 575
	Chipset	Intel® GM45 + ICH9M
	System Memory	1 GB DDR3 204-pin SODIMM memory pre-installed
Storage	Hard Drive	1 x 2.5" SATA HDD Space
	CompactFlash®	1
System Function	USB 2.0	4
	Ethernet	2 x Realtek 8111CP PCIe GbE
	RS-232	3
	Display	1 x VGA + 1 x HDMI
	Resolution	2048 x 1536 @ 75 Hz (Analog) 1080P (HDMI)
	Audio	1 x Mic-in, 1 x Speaker out
	Other	1 x IEEE-1394a
	Wireless	1 x 802.11 b/g/n
	Expansions	1 x PCIe Mini card slot (reserved for Wi-Fi)
Power	Power Input	12V DC in
	Power Consumption	12V@3.24A (Intel® Core™2 Duo P8400 2.53G, DDR3 2GB)
Reliability	Mounting	Desktop, VESA mount, wall mount
	Operating Temperature	-10°C ~ 45°C with CompactFlash®/SSD ; -10°C ~ 40°C with 2.5" HDD
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-1; MIL-STD-810F 514.5C-2
	Weight (Net/Gross)	2.6kg/3.9kg

Dimensions (unit: mm)



Packing List

- 1 x QIG
- 2 x wall mount bracket
- 1 x SATA hard drive cable
- 1 x 2dbi wireless antenna (for wireless model only)
- 1 x screw set
- 1 x driver CD
- 1 x power cord
- 1 x 12VDC 60W power adaptor (with ERP and PSE certificates)
- 1 x One Key Recovery CD

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Panel Solutions Introduction

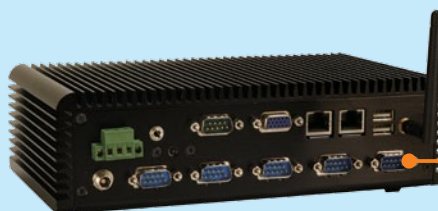
ECW-281B/B2 Series

Fanless Embedded System for Intel® Atom™ dual-core D525/N270

New

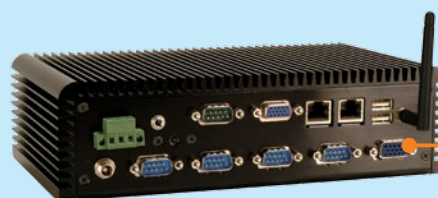


Extended Temperature



6 COM

COM2 for ECW-281B Series



Dual VGA

2nd VGA for ECW-281B2 Series

Features

- ◆ Fanless system with
 - » 1.8 GHz Intel® Atom™ D525 dual-core CPU
 - » 1.6 GHz Intel® Atom™ N270 CPU
- ◆ Supports four USB 2.0 ports and six COM ports
- ◆ Dual GbE LAN ideal for high speed network applications
- ◆ Supports CompactFlash®, 2.5" SATA HDD and SSD storage devices
- ◆ 12 VDC and 9 VDC - 36 VDC power input models available
- ◆ Supports dual VGA display (B2 model only)



Specifications

-20°C ~ +70°C

Model Name	ECW-281B-D525 (ECW-281B2-D525)	ECW-281B-N270 (ECW-281B2-N270)	ECW-281B-N270-WT
Platform	Intel®		
Color	Black		
Dimensions	229 x 132 x 64 mm		
Chassis Construction	Aluminum alloy with heavy duty metal		
Motherboard Model	WAFER-PV-D5252	WAFER-945GSE-N270	WAFER-945GSE-N270W2
Processor CPU	Intel® Atom™ D525 Processor 1.8GHz/1MB L2 cache	Intel® Atom™ N270 1.6GHz/512KB L2 cache	
Chipset	ICH8M	Intel® 945GSE + ICH7M	Intel® 945GSE + ICH7M
System Memory	1 x 204-pin 1GB DDR3 SODIMM (2GB for optional)	1 x 200-pin 1GB DDR2 SODIMM (2GB for optional)	1 x 200-pin 1GB DDR2 SODIMM (2GB for optional)
Hard Drive	1 x 2.5" SATA HDD space		
Compact Flash	1	1	1
USB 2.0	4	4	4
Ethernet	2 x Realtek RTL8111E PCIe GbE	2 x Realtek RTL8111E PCIe GbE	2 x Realtek RTL8111E PCIe GbE
RS-232	6 RS-232 ports for ECW-281B-D525 (COM2: Default RS-232, RS422/485 optional) 5 RS-232 ports for ECW-281B2-D525	6 RS-232 ports for ECW-281B-N270 (COM2: Default RS-232, RS422/485 optional) 5 RS-232 ports for ECW-281B2-N270	6 RS-232 ports for ECW-281B-N270 (COM2: Default RS-232, RS422/485 optional) 5 RS-232 ports for ECW-281B2-N270
Display	1 (2) x VGA	1 (2) x VGA	1 x VGA
Resolution	2048 x 1536 @ 60Hz	1920 x 1200 @ 60Hz	1920 x 1200 @ 60Hz
Audio	1 x Speaker out		
Wireless	1 x 802.11 b/g/n	1 x 802.11 b/g/n	N/A
Expansions	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot (reserved for Wi-Fi)	1 x PCIe Mini card slot
Power Consumption	12V@1.79A (Intel® Atom™ D525 1.8GHz with DDR3 1GB)	12V@1.25A (Intel® Atom™ N270 1.6G with 1GB DDR2)	12V@1.25A (Intel® Atom™ N270 1.6G with 1GB DDR2)
Power input	12VDC in 9-36V (WD Model)	12VDC in 9-36V (WD Model)	12VDC in
Mounting	DIN mount, VESA 75 mount, wall mount		
Operating Temperature	-20°C ~ 65°C with CF/SSD -10°C ~ 50°C with HDD	-10°C ~ 60°C with CF/SSD -10°C ~ 50°C with HDD	-20°C ~ 70°C with CF/SSD
Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis		
Operating Vibration	* MIL-STD-810F 514.5C-1 MIL-STD-810F 514.5C-2	MIL-STD-810F 514.5C-2	MIL-STD-810F 514.5C-2
Weight (Net/Gross)	2.1kg/3.9kg		

*Systems with hard drive meet MIL-STD-810F 514.5C-1 specifications. SSD/CF systems meet MIL-STD-810F 514.5C-2 specifications.

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Industrial Computing Solutions

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Video Capture Solutions

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Embedded Computing Solutions

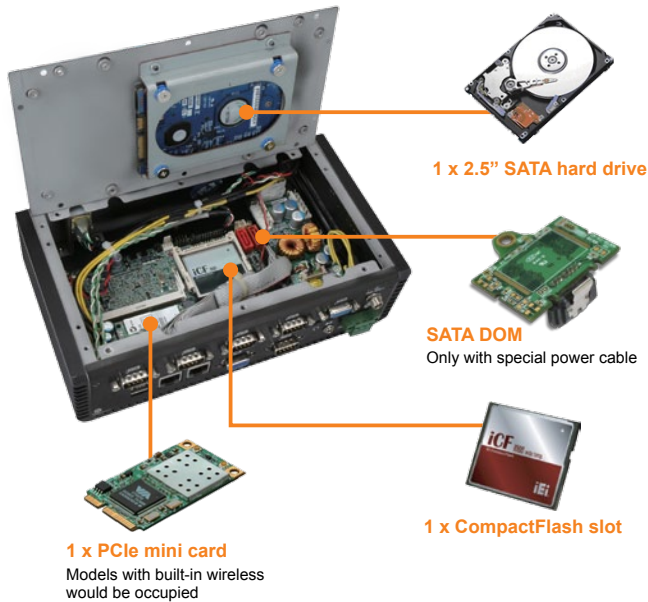
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Power Supply/Peripherals

5

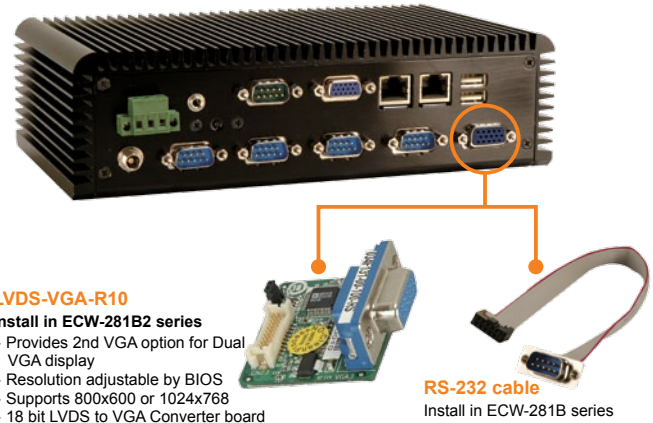
Panel Solutions Introduction

Storage & Expansions



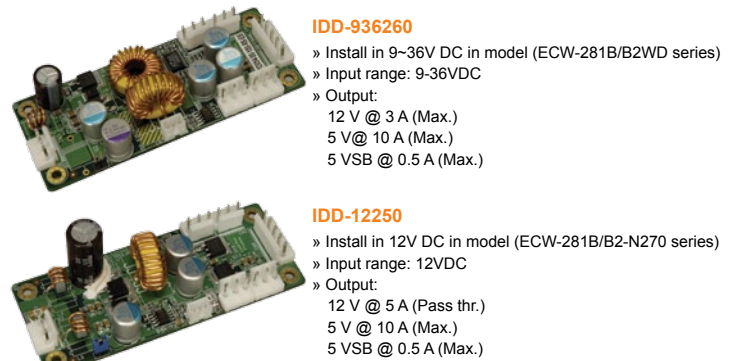
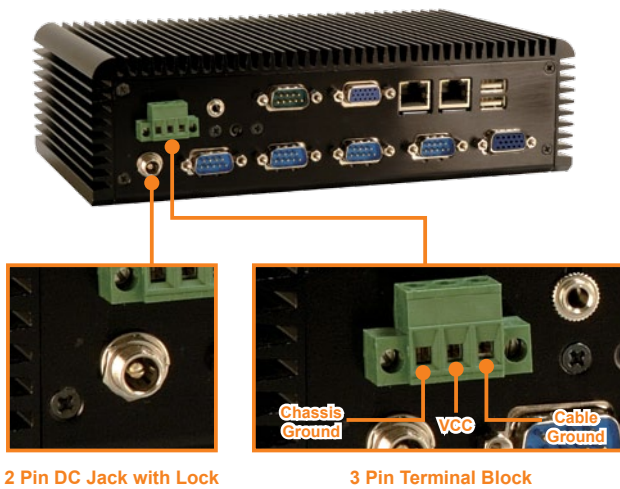
Dual Display

The models of the ECW-281B series, either with Intel® Atom™ N270 single-core processor or D525 dual-core processor, all support dual VGA display through the optional LVDS to VGA converter module. The first VGA output signal comes from the on-board chipset and supports resolutions up to 2048x1536 (D525), while the second display output is made through the LVDS to VGA converter board (LVDS-VGA-R10) through the LVDS interface and supports resolutions up to 1024x768.

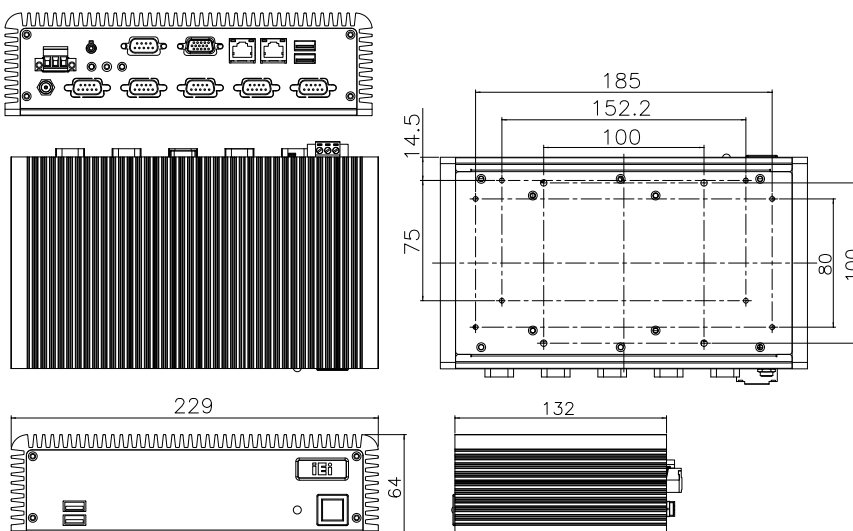


Extended Voltage Input

The ECW-281B rear panel has two types of power input connectors which support either single 12 V DC input or 9~36 VDC input depending on the power module installed in the system.



Dimensions (Unit: mm)



Packing List

1 x QIG
1 x Screw set
1 x DIN mount
1 x Hard drive thermal pad
2 x Wall mount bracket
1 x Driver & user manual CD
1 x 12V 60W power adapter (optional for WD model) (P/N: 63000-FSP060DBAB1552-RS)
1 x Power cord (optional for WD model)
1 x Wireless antenna (for wireless model)
1 x One Key Recovery CD



DK-84MB

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Industrial
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Solutions

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Solutions

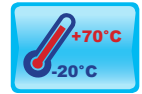
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Embedded
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Introduction

Extended Temperature

The ECW-281B series with Intel® Atom™ N270 single-core processor is a fanless system which supports a wide range of temperatures from -20°C to 70°C. The ECW-281B series industrial computer is powerful and can meet customers' needs with its various add-on functions. The table below is a model selection guide for the ECW-281B series.



Spec Comparison table

Model	ECW-281B	ECW-281B2	ECW-281BWD	ECW-281B2WD	ECW-281B-WT
Wireless model	ECW-281BW	ECW-281B2W	ECW-281BWDW	ECW-281B2WDW	N/A
Main board	WAFER-945GSE-N270 WAFER-PV-D5252	WAFER-945GSE-N270 WAFER-PV-D5252	WAFER-945GSE-N270 WAFER-PV-D5252	WAFER-945GSE-N270 WAFER-PV-D5252	WAFER-945GSE-N270W2
COM port	6	5	6	5	6
VGA display	1	2	1	2	1
Power input	12V DC in	12V DC in	9~36V DC in	9~36V DC in	12V DC in
Adapter	60W	60W	N/A	N/A	N/A

Ordering Information

D525	12VDC input	ECW-281B-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with 6 serial ports, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
		ECW-281BW-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with 6 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
		ECW-281B2-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
		ECW-281B2W-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
	9~36VDC input	ECW-281BWD-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with 6 serial ports, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
		ECW-281BWDW-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with 6 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
		ECW-281B2WD-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
		ECW-281B2WDW-R10/D525/1GB	Fanless embedded system with WAFER-PV-D5252, with dual-core Intel® Atom™ D525 1.8G, with dual VGA display and 5 serial ports, built-in 802.11b/g/n wireless, with 1GB DDR3 memory, 9-36VDC in, w/o power adapter, black, RoHS
N270	12VDC input	ECW-281B-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, built-in 1GB DDR2 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
		ECW-281BW-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, built-in 802.11b/g/n wireless, with 1GB DDR2 memory, 12VDC in, 60W power adapter with ERP and PSE certificates, black, RoHS
		ECW-281B2-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, dual VGA, built-in 1GB DDR2 memory, 12VDC in, with 60W power adapter with ERP and PSE certificates, black, RoHS
		ECW-281B2W-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, dual VGA, built-in 802.11b/g/n wireless, with 1GB DDR2 memory, 12VDC in, 60W adapter with ERP and PSE certificates, black, RoHS
	9~36VDC input	 ECW-281B-WT-R30/N270/1GB	Extend temperature fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, built-in 1GB DDR2 memory, 12VDC in, w/o power adapter, -20°C ~ 70°C degree, black, RoHS
		ECW-281BWD-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, built-in 1GB DDR2 memory, 9-36VDC in, w/o power adapter, black, RoHS
		ECW-281BWDW-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, built-in 802.11b/g/n wireless, with 1GB DDR2 memory, 9-36VDC in, w/o power adapter, black, RoHS
		ECW-281B2WD-R30/N270/1GB	Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, dual VGA, built-in 1GB DDR2 memory, 9-36VDC in, w/o power adapter, black, RoHS
ECW-281B2WDW-R30/N270/1GB		Fanless embedded system with Intel® Atom™ N270 1.6GHz CPU, 945GSE, dual VGA, built-in 802.11b/g/n wireless, with 1GB DDR2 memory, 9-36VDC in, w/o power adapter, black, RoHS	
32205-003200-100-RS		Flat cable; RS-232/422/485, RS-422/485 cable, 2, 100mm, 28AWG; (A) D-SUB 9-pin male; (B) DU pont 2x7P P=2.0, female, IDIOT-PROOF; 32200-074600-RS substitute, hwalong, RoHS	

Embedded OS

ECWCF-281B-D525-XPE	Windows XP Embedded OS image, for ECW-281B-D525, with 1GB CompactFlash® memory card, RoHS
ECWCF-281B-D525-CE060	Windows CE 6.0 OS image, for ECW-281B-D525, with 128MB CompactFlash® memory card, RoHS
ECWCF-281B-945GSE-XPE	Windows XP Embedded OS image, for ECW-281B-N270, with 1GB CompactFlash® memory card, RoHS
ECWCF-281B-945GSE-CE060	Windows CE 6.0 OS image, for ECW-281B-N270, with 128MB CompactFlash® memory card, RoHS

Embedded Chassis Series



Model Name		EBC-2102	EBC-2100	EBC-2101	EBC-3000	EBC-3100	EBC-3200	EBC-3680
Platform		Case Only	Case Only	Case Only	Case Only	Case Only	Case Only	Case Only
Chassis	Color	Cool Gray	Cool Gray	Cool Gray	Black	Black	Black	Cool Gray
	Dimensions	262 x 134 x 56 mm	262 x 134 x 56 mm	262 x 134 x 56 mm	230 x 280 x 88 mm	250 x 260 x 156 mm	260 x 180 x 55 mm	335 x 200 x 270 mm
	System Fan	*1 x 4cm	*1 x 4cm	*1 x 4cm	1 x 6cm	1 x 8cm	2 x 4cm	1 x 12cm
	Chassis Construction	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Aluminum alloy with heavy duty metal	Heavy duty metal with plastic front panel	Heavy duty metal with plastic front panel	Heavy duty metal	
Motherboard	Motherboard Model	NANO-PV-D5251, NANO-PV-D4251, NANO-PV-N4551	NANO-LX	NANO-945GSE	KINO-G45A, KINO-9652, KINO-780AM2, KINO-G410	KINO-G45A, KINO-9652, KINO-780AM2, KINO-G410	KINO-QM57A, KINO-HM551, KINO-PVN-D5251, KINO-PV-D5252, KINO-GM45A, eKINO-945GSE, KINO-780EB, KINO-945GSE2	KINO-QM57A, KINO-HM551, KINO-PVN-D5251, KINO-PV-D5252, KINO-GM45A, eKINO-945GSE, KINO-945GSE2
	M/B Size	EPIC (165 x 115mm)	EPIC (165 x 115mm)	EPIC (165 x 115mm)	Mini-ITX (170 x 170mm)	Mini-ITX (170 x 170mm)	Mini-ITX (170 x 170mm)	Mini-ITX (170 x 170mm)
Storage	ODD	N/A	N/A	N/A	N/A	*1 x 5.25" slim	N/A	N/A
	Hard Drive	1 x 2.5" SATA HDD space	1 x 2.5" SATA HDD space	1 x 2.5" SATA HDD space	1 x 3.5" SATA HDD space	1 x 3.5" SATA HDD space	2 x 2.5" SATA HDD space	4 x 3.5" SATA HDD space
	CompactFlash®	1	1	1	refer to SBC	refer to SBC	refer to optional module	N/A
	SD Card	N/A	N/A	N/A	refer to SBC	refer to SBC	refer to SBC	refer to SBC
System Function	PS2 (KB/MS)	1	N/A	N/A	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	USB 2.0	6	4	2	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Ethernet	2	1	2	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	RS-232	4	1 + *2	1 + *2	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	RS-232/422/485	N/A	N/A	N/A	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	LPT	1	*1	N/A	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Display	1 x VGA	1 x VGA	1 x VGA	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Resolution	refer to SBC	N/A	N/A	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Audio	3 x Audio jack	*3 x Audio jack	1 x AC-KIT08-R10	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Wireless	1 x 802.11 b/g/n	N/A	*1 x 802.11 b/g/n	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Video Capturing	N/A	N/A	N/A	refer to SBC	refer to SBC	refer to SBC	refer to SBC
	Mini-PCIe/PCI	refer to SBC	refer to SBC	refer to SBC	refer to SBC	refer to SBC	refer to SBC	refer to SBC
Power	Power Input	12V DC in	12V DC in	12V DC in	90~264V AC	90~264V AC	12V DC in	90~264V AC
	Power Supply	12VDC in, AT mode only, w/60W power adapter	12VDC in, AT mode only, w/60W power adapter	12VDC in, AT mode only, w/60W power adapter	ACE-A618A 180W ACE-A627A 270W	ACE-A618A 180W ACE-A627A 270W	12V DC in	ACE-A130B
Reliability	Mounting	Desktop, wall mount	Desktop, wall mount	Desktop, wall mount	Desktop, wall mount	Desktop, wall mount	Desktop, wall mount	N/A
	Operating Temperature	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis						
	Operating Vibration	MIL-STD-810F 514.5C-1	MIL-STD-810F 514.5C-1			MIL-STD-810F 514.5C-1		MIL-STD-810F 514.5C-1
	Weight (Net/Gross)	1kg/3kg	1kg/3kg	1kg/3kg	2.5kg/3.9kg	2.5kg/3.9kg	1.1kg/2kg	1kg/3kg

* Optional items

** Systems with hard drive meet MIL-STD-810F 514.5C-1 specifications. SSD/CF systems meet MIL-STD-810F 514.5C-2 specifications.

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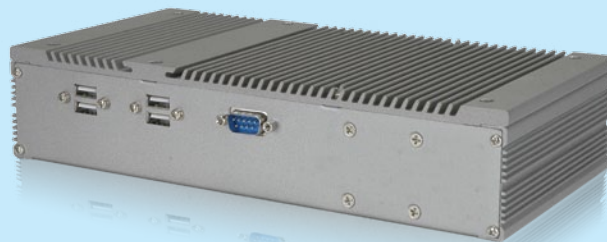
Power Supply/Peripherals

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Panel Solutions Introduction

EBC-2102

Embedded Chassis for EPIC NANO Series



Features

- ◆ Fanless system with Intel® Atom™ D525 1.8GHz dual-core processor
- ◆ Complete I/O Interfaces, including dual GbE, four COM, six USB, LPT
- ◆ Single 12V DC power input support AT/ATX mode
- ◆ DDR3 supports up to 4GB (D525/D425)



Specifications

Model Name	EBC-2102	
Chassis	Color	Cool Gary
	Dimensions	262 x 134 x 56 mm
	System Fan	1 x 4cm (Optional)
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	NANO-PV-D5251-R10, NANO-PV-D4251-R10, NANO-PV-N4551-R10
	M/B Size	EPIC (165mm x 115mm)
	Processor	refer to SBC
	Chipset	refer to SBC
Storage	System Memory	D525/D425 Memory supports up to DDR3 4GB, N455 memory supports up to DDR3 2GB
	Hard Drive	1 x 2.5" SATA HDD bay
	CompactFlash®	1
System Function	USB 2.0	6
	Ethernet	Dual Realtek 8111E GbE
	RS-232	4
	LPT	1
	Display	1 x VGA
	Audio	3 x Audio jack (Line-in, Line-out, Mic-in)
	Wireless	1 x 802.11 b/g/n (optional for wireless model)
Power	Expansions	1 x PCI-104, 1x PCIe Mini card slot reserved for wi-fi module
	Power Input	12VDC in, AT mode (default)
	Power Consumption	2.21A @ 12V (Intel® Atom™ D525 with 2GB 1066MHz DDR3) 2.11A @ 12V (Intel® Atom™ D425 with 2GB 1066MHz DDR3) 2.00A @ 12V (Intel® Atom™ N455 with 2GB 1066MHz DDR3)
Reliability	Mounting	Desktop, wall mount
	Operating Temperature	-10°C ~ 50°C fanless, -10°C ~ 60°C with CPU fan or system fan
	Operating Shock	Half-sine wave 3G, 11ms 3 shocks per axis
	Operating Vibration	Meet MI-STD-810F 514.5C-1
	Weight (Net/Gross)	1kg

Packing List

1 x EBC-2102 Chassis
1 x 12V 60W power adapter (P/N: 63000-FSP060DBAB1552-RS)
1 x Power cord
1 x Wall mount kit
1 x Screw set
1 x Utility CD/QIG
1 x One Key Recovery CD

Ordering Information

Part No.	Description
EBC-2102-R10	Embedded Chassis for NANO-D5251/D4251/N4551, compatible with 2.5" SATA/CFII hard drive, 4x COM, 6x USB, 1x LPT, 60W power adapter silver, RoHS
EBC-2102W-R10	Embedded Chassis for NANO-D5251/D4251/N4551, compatible with 2.5" SATA/CFII hard drive, 4x COM, 6x USB, 1x LPT, 802.11 b/g/n wireless, 60W power adapter silver, RoHS
19100-000027-RS	4010 system Fan, +12V ball bearing
NANO-PV-D5251-R10	EPIC with Intel® Atom™ D525 1.8GHz, DDR3, VGA/LVDS, Dual GbE, USB 2.0, CF II, audio and SATA 3Gb/s, RoHS
NANO-PV-D4251-R10	EPIC with Intel® Atom™ D425 1.8GHz, DDR3, VGA/LVDS, Dual GbE, USB 2.0, CF II, audio and SATA 3Gb/s, RoHS
NANO-PV-N4551-R10	EPIC with Intel® Atom™ N455 1.66GHz, DDR3, VGA/LVDS, Dual GbE, USB 2.0, CF II, audio and SATA 3Gb/s, RoHS

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Panel Solutions Introduction

EBC-2100/2101

Embedded Chassis for EPIC NANO Series



EBC-2100



EBC-2101

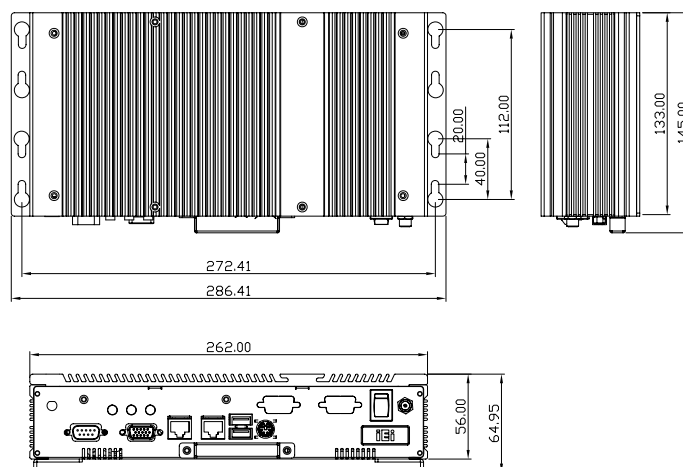
Specifications

Model Name		EBC-2100	EBC-2101
Platform		Case Only	
Chassis	Color	Cool Gray	
	Dimensions	262 x 134 x 56mm	
	System FAN	*1 x 4cm	
	Chassis Construction	Aluminum alloy with heavy duty metal	
Motherboard	Motherboard Model	NANO-LX	NANO-945GSE
	M/B Size	EPIC (165 x 115mm)	
	Processor CPU	refer to SBC	Intel® Atom™ N270 1.6GHz
	Chipset	refer to SBC	
	System Memory	refer to SBC	
Storage	Hard Drive	1 x 2.5" SATA HDD Space	
	CompactFlash®	1	
System Function	USB 2.0	4	2
	Ethernet	1	2
	RS-232	1 + *2	1 + *2
	LPT	*1	N/A
	Display	1 x VGA	
	Audio	*3 x Audio jack	1 x AC-KIT08-R10
	Wireless	N/A	*1 x 802.11 b/g/n
	Expansions	1 x PCI-104	
	Power Input	12VDC in, AT mode only	
Power	Mounting	Desktop, wall mount	
	Operating Temperature	0°C ~ 50°C	
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis	
	Operating Vibration	Meet MIL-STD-810F 514.5C-1	
	Weight (Net/Gross)	1kg/3kg	
Reliability			

*Optional items

**The system that with Hard drive can meet the Standard testing MIL-STD-810F 514.5C-1. and with SSD/CF can pass MIL-STD-810F 514.5C-2

Dimensions (Unit: mm)



Packing List

- 1 x EBC-2101/EBC-2100 chassis
- 1 x 12V 60W power adapter (P/N: 63000-FSP060DBAB1552-RS)
- 1 x Power cord
- 1 x Wall mount kit
- 1 x Screw set
- 1 x QIG
- 1 x One Key Recovery CD



Wall Mount bracket

Ordering Information

Part No.	Description
EBC-2100-R40	Embedded chassis for NANO-LX, compatible with 2.5" SATA hard drive, 60W power adapter with ERP and PSE certificates, silver, RoHS
EBC-2101-R20	Embedded chassis for NANO-945GSE-N270, compatible with SATA hard drive, w/60W power adapter with ERP and PSE certificates, silver, RoHS
32000-114001-RS	2.5" SATA HDD cable with 2-pin WAFER 2.0mm power cable, for NANO-945GSE-N270 in EBC-2101, 20cm
19100-000027-RS	4010 system fan, +12V ball bearing
32200-000037-RS	44-pin IDE cable for 2.5" hard drive

EBC-3000 Mini-ITX Chassis for High Power Consumption Application



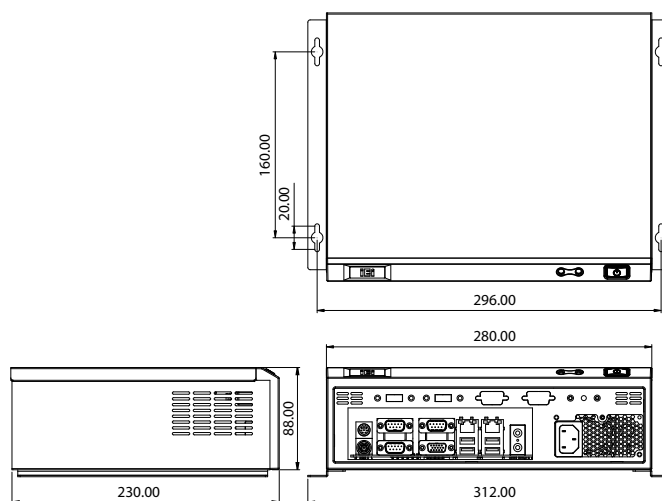
Features

- ◆ Designed for high performance applications, bundled with 270W high efficiency ATX power supply
- ◆ Front accessible I/O design
- ◆ One 3.5" hard drive capacity

Specifications

Model Name	EBC-3000
Platform	Case Only
Color	Black
Dimensions	230 x 280 x 88mm
System Fan	1 x 6cm
Chassis Construction	Heavy duty metal with plastic front panel
Motherboard Model	KINO-G45A, KINO-9652, KINO-780AM2, KINO-G410
M/B Size	Mini-ITX (170 x 170mm)
Hard Drive	1 x 3.5" SATA HDD Space
Power Input	90~264V AC
Power Model	ACE-A618A 180W, ACE-A627A 270W
Mounting	Desktop, wall mount
Operating Temperature	0°C ~ 50°C
Weight (Net/Gross)	2.5kg/3.9kg

Dimensions (Unit: mm)



Compatible SBC

Part No.	Recomand CPU Cooler
KINO-G410	CF-520-RS-R11, CF-775B-RS
KINO-G45A	CF-520-RS-R11, CF-775B-RS
KINO-9652	CF-479B-RS
KINO-780AM2	CF-478D-RS-R11

Packing List

1 x EBC-3000	1 x QIG
1 x Wall mount kit	1 x Screw set
1 x Power cord	1 x One Key Recovery CD

Ordering Information

Part No.	Description
EBC-3000-R11/ACE-A627A	Mini-ITX embedded chassis, one 3.5" hard drive bay, with ACE-A627A-RS-R11 270W ATX power supply, black, RoHS
EBC-3000-R11/ACE-A618A	Mini-ITX embedded chassis, one 3.5" hard drive bay, with ACE-A618A-RS-R11 180W ATX power supply, black, RoHS

1U AC Input									
Products	Model No.	Watt AT/ATX PFC	Input Voltage	Output Current Range					Efficiency
				+3.3 V	+5 V	+12 V	-12 V	+5 Vsb	
	ACE-A627A	270W ATX PFC	90 ~ 264 VAC	16 A (0.5A min)	18A (0.5A min)	V1:16 A (1A) V2:10A (1A)	0.8A	2.5A	80%
	ACE-A618A	180W ATX PFC	90 ~ 264 VAC	14 A (0.3 A min)	16 A (0.3 A min)	14 A (1.5 A min)	0.5 A	2 A	68%

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Industrial Computing Solutions

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Power Supply/ Peripherals

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Panel Solutions Introduction

EBC-3100

Mini-ITX Chassis for High Power Consumption Application



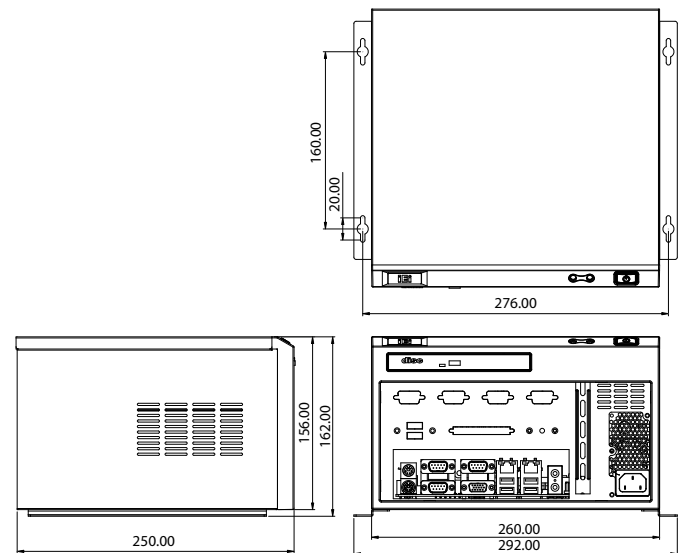
Features

- ◆ Designed for high performance applications, bundled with 270W high efficiency ATX power supply
- ◆ Front accessible I/O design
- ◆ Supports one expansion slot
- ◆ One 3.5" hard drive, one slim type optical drive capacity

Specifications

Model Name	EBC-3100
Platform	Case Only
Color	Black
Dimensions	250 x 260 x 156mm
System Fan	1 x 8cm
Chassis Construction	Heavy duty metal with plastic front panel
Motherboard Model	KINO-G45A, KINO-9652, KINO-780AM2, KINO-G410
M/B Size	Mini-ITX (170 x 170mm)
ODD	1 x 5.25" slim
Hard Drive	1 x 3.5" SATA HDD Space
Expansions	1 x full high expansion slot Max Dimension: 220mm (L) x 27mm (D)
Power Input	90~264V AC
Power Model	ACE-A618A 180W, ACE-A627A 270W
Mounting	Desktop, wall mount
Operating Temperature	0°C ~ 50°C
Weight (Net/Gross)	2.5kg/3.9kg

Dimensions (Unit: mm)



Compatible SBC

Part No.	Expansion Type	Recomand CPU Cooler
KINO-G410	PCIe x16	CF-520-RS-R11, CF-775A-RS, CF-775B-RS
KINO-G45A	PCI	CF-520-RS-R11, CF-775A-RS, CF-775B-RS
KINO-9652	PCI	CF-479B-RS
KINO-780AM2	PCIe x16	CF-478D-RS-R11

Packing List

1 x EBC-3100	
1 x Wall mount kit	1 x Screw set
1 x SATA slim ODD cable	1 x Power cord
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
EBC-3100-R11/ACE-A627A	Mini-ITX embedded chassis, one 3.5" hard drive and one slim ODD bay, with ACE-A627A-RS-R11 270W ATX power supply, black, RoHS
EBC-3100-R11/ACE-A618A	Mini-ITX embedded chassis, one 3.5" hard drive and one slim ODD bay, with ACE-A618A-RS-R11 180W ATX power supply, black, RoHS

1U AC Input									
Products	Model No.	Watt AT/ATX PFC	Input Voltage	Output Current Range					Efficiency
				+3.3 V	+5 V	+12 V	-12 V	+5 Vsb	
	ACE-A627A	270W ATX PFC	90 ~ 264 VAC	16 A (0.5A min)	18A (0.5A min)	V1:16 A (1A) V2:10A (1A)	0.8A	2.5A	80%
	ACE-A618A	180W ATX PFC	90 ~ 264 VAC	14 A (0.3 A min)	16 A (0.3 A min)	14 A (1.5 A min)	0.5 A	2 A	68%

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Introduction

EBC-3200

Embedded Chassis for IEI Single Voltage Mini-ITX SBC



Features

- ◆ Design for Mini-ITX SBC with single voltage input
- ◆ Flexible storage with CF or 2.5" HDD (optional)
- ◆ One PCI or PCIe expansion slot (optional)



Flexible design with five optional module for storage and expansion slot



Flexible storage by Optional module

2 x internal 2.5" HDD (Default)



1 x Internal 2.5" HDD
1 x CF slot



1 x Expansion slot (PCI/PCIe)
1 x Internal 2.5" HDD



1 x Expansion slot (PCI/PCIe)
1 x CF slot

Specifications

Model Name	EBC-3200
SBC Form Factor	Mini-ITX SBC (Single Voltage input)
Cooling Fan	2 x 4cm
Storage	2 x 2.5" HDD (Default) or support by optional module
Indicates	Power, HDD LED
Buttons	Power switch, reset
Expansions	1 x Low Profile PCI/PCIe (support by Optional module) Max Dimension: 147mm (L) x 10.5mm (D)
Color	Black
Dimensions	260mm(W) x 180mm(D) x 55 mm (H)
Weight (Net/Gross)	1.1KG/2KG
Operating temperature	-10°C ~ 50°C with air flow*
Mounting	Desktop, wall mount, VESA mount

(*Ambient air speed pre IEC-68-2-2 standard)

Compatible SBC

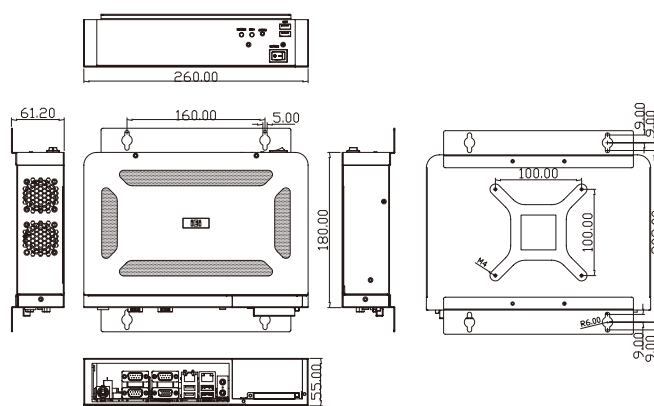
Part No.	Expansion Type (optional)	CPU Cooler
KINO-945GSE2	PCI	Fanless
eKINO-945GSE	PCI	Fanless
KINO-780EB	PCI	On Board CPU Fan
KINO-GM45A	PCI	CF-479B-RS
KINO-QM57A	PCIe x16	CF-989A-RS-R11
KINO-PVN-D5251	PCI or PCIe x1	On board CPU Fan
KINO-PV-D5252	PCI or PCIe x1	Fanless
KINO-HM551	PCIe x16	CF-989A-RS-R11

Ordering Information

Part No.	Description
EBC-3200-R10	Mini-ITX embedded chassis, compatible two 2.5" HDD, w/o power adapter, Black, RoHS
63000-FSP060DBAB1554-RS	Power Adapter; FSP060-DBAB1554; VAC:90V~264V; 12V/5A; 60W; DIN 4 PIN/WITH LOCK; 1800MM; FSP; RoHS
32000-000002-RS	European standard power cord, 1830mm
32000-000025-RS	American standard power cord, 1830mm

Optional Module	
Part No.	Description
EBCKIT-01-R10/PCI-HDD	EBC-3200 optional module with 1 x PCI slot and 1 x 2.5" HDD, RoHS
EBCKIT-02-R10/PCIe-HDD	EBC-3200 optional module with 1 x PCIe x1 slot and 1 x 2.5" HDD, RoHS
EBCKIT-03-R10/PCI-CF	EBC-3200 optional module with 1 x PCI slot and 1 x CompactFlash® slot, RoHS
EBCKIT-04-R10/PCIe-CF	EBC-3200 optional module with 1 x PCIe x1 slot and 1 x CompactFlash® slot, RoHS
EBCKIT-05-R10/CF-HDD	EBC-3200 optional module with 1 x CompactFlash® slot and 1 x 2.5" HDD, RoHS
EBCKIT-06-R10/PCIe16-HDD	EBC-3200 optional module with 1 x PCIe x16 slot and 1 x 2.5" HDD, RoHS
EBCKIT-07-R10/PCIe16-CF	EBC-3200 optional module with 1 x PCIe x16 slot and 1 x CompactFlash® slot, RoHS

Dimensions (Unit: mm)



Packing List

1 x QIG	1 x Screw set
2 x Wall mount brackets	1 x Driver CD
1 x Power cord	1 x One Key Recovery CD

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Panel Solutions Introduction

EBC-3680 Mini-ITX Chassis for Hot-swappable Drive Bay Application



Features

- ◆ Small chassis for Mini-ITX form factor - Similar A4 size (front view)
- ◆ Excellent in thermal & acoustic simulation
- ◆ Uses low noise PWM fan
- ◆ 4 x Removable 3.5" HDD drive bay (Front side) and 2 x Internal 2.5" HDD drive bay.
- ◆ Additional air duct
- ◆ Side door security alert - Intrusion switch

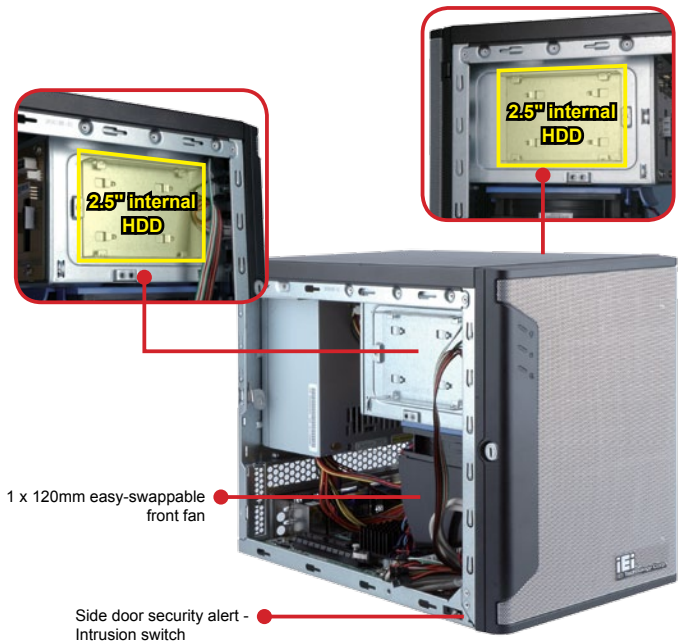


Specifications

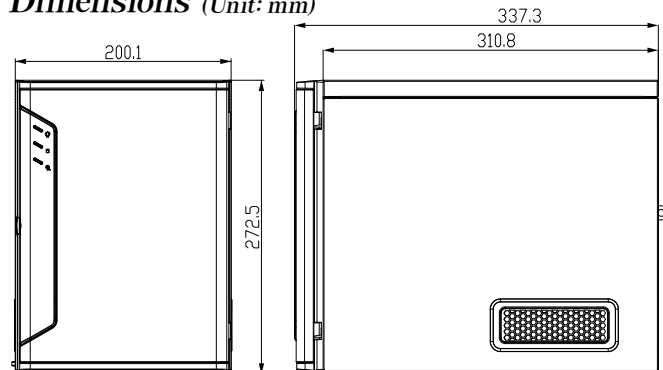
Model Name	EBC-3680
Platform	Case only
Color	Black
SBC Form Factor	Mini-ITX SBC
Cooling Fan	1 x 120mm
Drive Bays	4 x 3.5" Removable 2 x 2.5" HDD
PSU	PS2
Power Input	90 ~ 264VAC
Switch/Controls	Power On/Off System Reset Power LED
Indicators	HDD Activity LED Error LED
Access I/O	2 x USB 2.0
Operating Temperature	0°C ~ 50°C
Dimensions (mm) (D x W x H)	310 x 220 x 270
Expansion Slot type	Low profile type

Compatible SBC

Model	Expansion Type	SATA	CPU Cooler
KINO-AQ670	1 x PCIe x16 slot	2 x SATA 3Gb/s 2 x SATA 6Gb/s with RAID 0/1/5/10 support	CF-1156A-RS CF-1156B-RS CF-1156C-RS CF-1156D-RS
KINO-AH611	1 x PCIe x16 slot	3 x SATA 3Gb/s	CF-1156A-RS CF-1156B-RS CF-1156C-RS CF-1156D-RS
KINO-AH612	1 x PCIe x4 slot	4 x SATA 3Gb/s	CF-1156A-RS CF-1156B-RS CF-1156C-RS CF-1156D-RS
KINO-G45A	1 x PCI	6 x SATA 3Gb/s	CF-775A-RS CF-520-RS-R11
KINO-G410	1 x PCIe x16 slot	4 x SATA 3Gb/s	CF-775A-RS CF-520-RS-R11 CF-775B-RS
KINO-CVR-D27002	N/A	6 x SATA 3Gb/s with RAID 0/1/5/10 support	Fanless
KINO-780AM2	1 x PCIe x16	4 x SATA 3Gb/s with RAID 0/1/10 support	CF-478D-RS-R11 CF-478E-RS-R11
KINO-PV-D4253/D5253	1 x PCI slot 1 x PCIe x1 slot	2 x SATA 3Gb/s	Fanless
KINO-945GSE	1 x PCI	2 x SATA 1.5Gb/s	Fanless



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
EBC-3680-R10	Mini-ITX embedded chassis, compatible two 2.5" HDD, 4 x 3.5" H/S HDD, w/o power, black, RoHS
ACE-A130B-R10	300W AC-DC PS/2 ATX power supply with ErP/PFC, 80 PLUS bronze certified

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Introduction

ECN-581A for HM55/D525

Embedded Compact Chassis
for NANO Series

Features

ECN-581A-R10-HM551

- ◆ Socket G1 for Intel® 32nm mobile Core processor
- ◆ VGA + HDMI Dual display
- ◆ One 204-pin DDR3 SO-DIMM SDRAM supported up to 4GB

ECN-581A-R10-D5251

- ◆ Intel® Atom™ Processor D525 1.8GHz/1 MB L2 Cache
- ◆ One 204-pin DDR3 SO-DIMM SDRAM, system support up to 2GB



Specifications

Model Name		ECN-581A-R10-D5251	ECN-581A-R10-HM551
Chassis	Color	Cool Gray+Blue	Cool Gray+Blue
	Dimensions	180 x 138 x 50mm	180 x 138 x 50mm
	System Fan	N/A	2 x 4cm
	Chassis Construction	Heavy duty metal	Heavy duty metal
Motherboard	Motherboard Model	NANO-PV-D5251/D4521/N4551	NANO-HM551
	M/B Size	EPIC (165 x 115mm)	EPIC (165 x 115mm)
	Processor CPU	Intel® Atom™ D525	Intel® Core™ i5/i3/Celeron® M Mobile Processor
	Chipset	ICH8M	HM55
	System Memory	1 x 204-pin DDR3 SODIMM support up to 2GB	1 x 204-pin DDR3 SODIMM support up to 4GB
Storage	Hard Drive	1 x 2.5" SATA HDD space	1 x 2.5" SATA HDD space
	Compact Flash	1	N/A
System Function	PS2 (KB/MS)	1/1	N/A
	USB 2.0	4	4
	Ethernet	2 x Realtek 8111E PCIe GbE	2 x Realtek 8111E PCIe GbE
	Serial Port	1 x RS-232 1 x RS-232/422/485 (Default RS-232)	1 x RS-232 1 x RS-232/422/485 (Default RS-232)
	Display	1 x VGA	1 x VGA+ 1 x HDMI
	Resolution	2048 x 1536 @ 60 Hz	2048 x 1536 @ 60 Hz (VGA) 1080 p (HDMI)
	Audio	1 x Mic-in, 1 x Line-out, 1 x Line-in	1 x Mic-in, 1 x Line-out, 1 x Line-in
	PCIe Mini Card	1 x PCIe Mini card slot (PCIe + SATA+USB) Reserve for Wi-Fi or IEI Mini DOM	1 x PCIe Mini card slot (PCIe + SATA+USB) Reserve for Wi-Fi or IEI Mini DOM
	Power	12 VDC in	12 VDC in
Reliability	Mounting	Desktop, wall mont	Desktop, wall mont
	Operating Temperature	-20°C~50°C (SATA SSD/CF) with Air flow* -10°C~50°C (Wi-Fi model with SATA SSD/CF) with Air Flow* *Ambient air speed pre IEC-68-2-2 standard	-20°C~50°C (SATA SSD) with Air flow* -10°C~50°C (Wi-Fi model with SATA SSD) with Air Flow* *Ambient air speed pre IEC-68-2-2 standard
	Operating Shock	Half-sine wave 3G; 11ms 3 shocks per axis	Half-sine wave 3G; 11ms 3 shocks per axis
	Operating Vibration	Meet MIL-STD-810F 514.5C-1 with SATA HDD MIL-STD-810F 514.5C-2 with SATA SSD/CF	Meet MIL-STD-810F 514.5C-1 with SATA HDD MIL-STD-810F 514.5C-2 with SATA SSD
	Weight (Net/Gross)	1.1kg/2kg	1.1kg/2kg

Fanless

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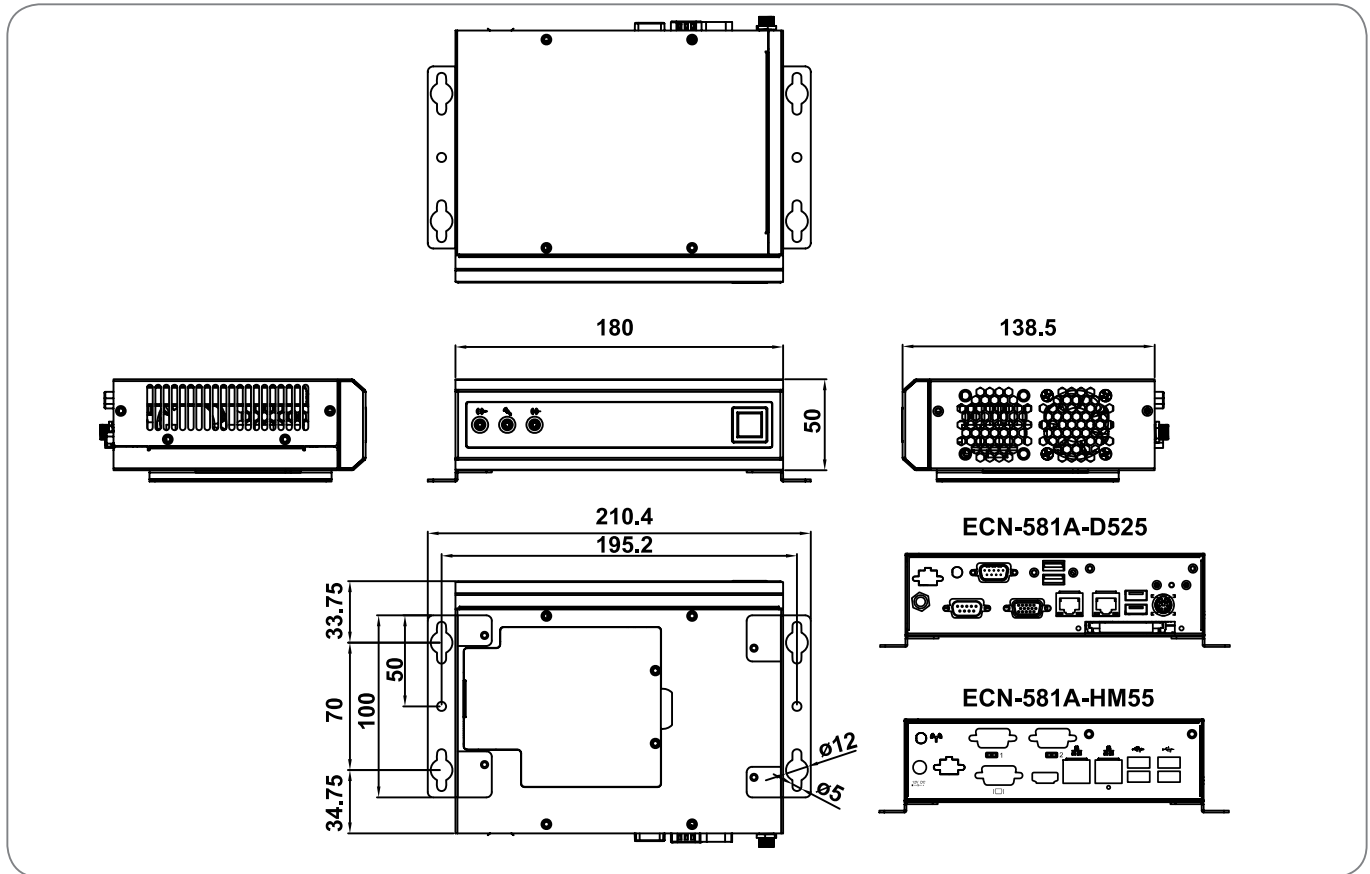
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Dimensions (Unit: mm)

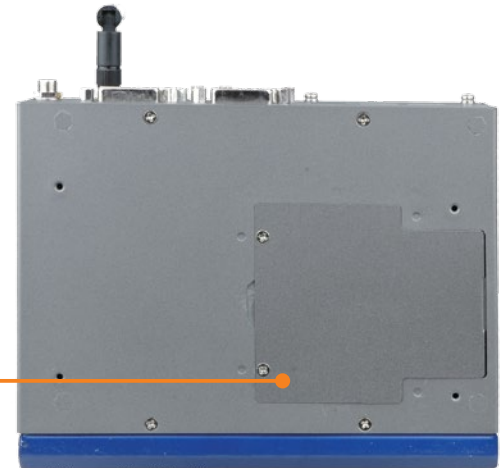


Packing List

1 x QIG
1 x Screw set
2 x Wall mount bracket
1 x Driver CD
1 x 12V DC 60W power adapter (with ErP and PSE certificates)
1 x Power cord
1 x 2dbi Wireless antenna (for wireless model only)
1 x One Key Recovery CD



1 x 2.5" SATA HDD space



Ordering Information

Part No.	Description
NANO-PV-D5251-R10	EPIC with Intel® Atom™ D525 1.8GHz, DDR3, VGA/LVDS, Dual GbE, USB 2.0, CF II, audio and SATA II, RoHS
NANO-PV-D4251-R10	EPIC with Intel® Atom™ D425 1.8GHz, DDR3, VGA/LVDS, Dual GbE, USB 2.0, CF II, audio and SATA II, RoHS
NANO-PV-N4551-R10	EPIC with Intel® Atom™ N455 1.66GHz, DDR3, VGA/LVDS, Dual GbE, USB 2.0, CF II, audio and SATA II, RoHS
ECN-581A-R10-D5251	Embedded chassis for NANO-PV-D5251, Support Intel® Atom™ D525 Processor, DDR3 SO-Dimm memory, 12VDC, 60W power adapter with ERP and PSE certificates, Reflex Blue C + 8403C, RoHS, w/o MB
ECN-581AW-R10-D5251	Embedded chassis for NANO-PV-D5251, Support Intel® Atom™ D525 Processor, DDR3 SO-Dimm memory, 802.11b/g/n wireless, 12VDC, 60W power adapter with ERP and PSE certificates, Reflex Blue C + 8403C, RoHS, w/o MB
NANO-HM551-R10	EPIC SBC supports Socket G1 for Intel® Core™ i7 CPU, VGA/HDMI, Dual PCIe GbE, USB 2.0, Mini PCIe, SATA II and Audio, RoHS
ECN-581A-R10-HM551	Embedded chassis for NANO-HM551, Support Intel® Core i5/i3/Celeron® Processor, DDR3 SO-Dimm memory, 12VDC, 60W power adapter with ERP and PSE certificates, Reflex Blue C + 8403C, RoHS, w/o MB
ECN-581AW-R10-HM551	Embedded chassis for NANO-HM551, Support Intel® Core i5/i3/Celeron® Processor, DDR3 SO-Dimm memory, 802.11b/g/n wireless, 12VDC, 60W power adapter with ERP and PSE certificates, Reflex Blue C + 8403C, RoHS, w/o MB
CF-989A-RS-R11	CPU cooler for mobile socket-G (PGA988) up to 55W processor, copper, 60 x 60 x 27.6 mm, RoHS

Note: Above Part No. is for chassis only without MB.