

SBC Embedded System



Model Name		ECN-380-QM87	ECN-360A-ULT3	ECN-360A-D2550	ECW-281B-BT
Chassis	Color	Silver	Black	Black	Black
	Dimensions (WxDxH) (mm)	265 x 134 x 56.7	255 x 130 x 75	255 x 130 x 63	229 x 132 x 64
	System Fan	Fanless	Fanless	Fanless	Fanless
	Chassis Construction	Aluminum alloy with heavy duty metal	SECC	SECC	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	NANO-QM871-i1	NANO-ULT3	NANO-QV-D25502	WAFER-BT-i1
	SBC Size (mm)	EPIC (165 x 115)	EPIC, 165 x 115	EPIC (165 x 115)	3.5", 146 x 102
	CPU	Intel® Core™ i5-4400E 2.7 GHz Intel® Celeron® 2000E 2.2 GHz	Intel® Core™ i5-6300U Intel® Celeron® 3855U	Intel® Atom™ D2550 dual-core 1.86GHz	Intel® Celeron® J1900 quad-core 2.42GHz
	Chipset	Intel® QM87	N/A	Intel® NM10	SoC
	System Memory	One 204-pin DDR3 4GB SO-DIMM pre-installed (system max: 8GB)	2 x 260-pin 2133/1866 MHz dual-channel DDR4 SO-DIMMs support up to 32GB Pre-install 4GB DDR4	1 x 204-pin DDR3 SDRAM SO-DIMM (system max: 4 GB) Pre-installed 2 GB DDR3 memory	1 x 204-pin 2 GB 1066/1333 MHz single-channel DDR3L SO-DIMM (system max. 4 GB)
IPMI	iRIS Solution	1 x iRIS-1010	N/A	N/A	1 x iRIS-1010-R10
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD bay	2 x 2.5" SATA HDD bay (No RAID support)	1 x 2.5" SATA HDD bay	1 x 2.5" SATA 3Gb/s HDD bay
	CF Card/CFast	N/A	N/A	N/A	N/A
I/O Interfaces	USB 3.1 Gen 1	2	4	0	1
	USB 2.0	4	N/A	6	3
	Ethernet	2 x RJ-45 LAN1: Intel® I217LM PHY with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller	LAN1: Intel® I219-LM LAN2: Intel® I211-AT	2 x Realtek RTL8111E with ASF 2.0 support	LAN 1: PCIe GbE by Intel® I210 controller LAN 2: PCIe GbE by Intel® I211 controller
	COM Port	2 x RS-232	1 x RS-232/422/485 2 x RS-232	3 x RS-232 1 x RS-422/485	3 x RS-232 1 x RS-422/485
	Digital I/O	N/A	8-bit digital I/O	N/A	8-bit digital I/O (4-bit input, 4-bit output)
	Display	2 x HDMI, 1 x VGA	2 x HDMI	2 x VGA	1 x VGA
	Resolution	VGA: Up to 1920x1200@60Hz HDMI: Up to 2500x1600@60Hz	HDMI: up to 4096x2160@24Hz	VGA: Up to 1920 x 1200@60Hz	VGA: 2560x1600@60Hz
	Audio	1 x Line-out, 1 x Mic-in	1 x Line-out	1 x Line-out	1 x Line out
	Wireless	1 x 802.11b/g/n	2 x 802.11b/g/n (optional)	1 x 802.11b/g/n	1 x 802.11b/g/n
Expansions	PCIe Mini	1 x Full-size PCIe Mini (supports mSATA, SATA 6Gb/s signal only) 1 x Half-size PCIe Mini (only for iRIS-1010)	1 x Full-size PCIe Mini card slot (with SIM holder & mSATA support) 1 x Half-size PCIe Mini card slot	1 x Full-size (supports mSATA) 1 x Half-size	1 x Full-size PCIe Mini card slot (supports mSATA) 1 x Half-size PCIe Mini card (only for iRIS)
Power	Power Input	DC Jack: 12 V DC 3-pin terminal: 9 V~36 V DC	DC 12V (Optional 9~36V) Power 1: DC jack Power 2: Terminal block (for optional 9~36V only)	9 V~36 V DC Power 1: DC Jack Power 2: Terminal block	DC jack: 12 V DC 3-pin terminal: 9 V~36 V DC
	Power Consumption	12 V@4.6 A (Intel® mobile Core™ i5-4400E CPU with 4GB 1333MHz DDR3 memory)	12 V@2.4 A (Intel® i5-6300U with 4GB DDR4 memory)	12 V@1.59 A (Intel® Atom™ D2550 CPU with 2GB DDR3 memory)	12V@1.45A (Intel® Celeron® J1900 CPU and one 8 GB 1333 MHz DDR3 memory)
Reliability	Mounting	Wall mount, VESA 100	Wall mount, VESA 100	Wall mount, VESA 100	Wall mount, VESA 100
	Operating Temperature	-20°C ~60°C with air flow (SSD), 10% ~ 95%, non-condensing	-20°C~60°C with air flow (SSD), 5% ~ 95%, non-condensing	-10°C~60°C with air flow (SSD), 5% ~ 95%, non-condensing	-20°C~60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis			Half sine wave 5G, 11ms 3-axis (non-operational)
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-2 (with SSD)	MIL-STD-810F 514.5C-1 (HDD)
Weight (Net/Gross)	Weight (Net)	2.4 kg/4.2 kg	2.2 kg/3 kg	2.2 kg/3 kg	2.1 kg / 3.9 kg
	Gross				

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

ECN-380-QM87

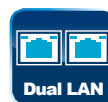
■ Intel® Core™ i5/Celeron® CPU

■ Triple Video Outputs



Features

- Intel® Core™ i5/Celeron® CPU
 - » Intel® Core™ i5-4400E 2.7 GHz/Celeron® 2000E 2.2 GHz
- Triple video outputs
 - » 2 x HDMI + VGA
- Two 2.5" SATA 6Gb/s HDD/SSD drive bays



Specifications

Model Name		ECN-380-QM87
Chassis	Color	Silver
	Dimensions (WxDxH) (mm)	265 x 134 x 56.7
	System Fan	Fanless
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	NANO-QM871-i1
	SBC Size (mm)	EPIC, 165 x 115
	CPU	Intel® mobile Core™ i5-4400E with AMT 9.0 support (up to 2.7GHz, dual-core, 3MB cache, TDP=37W) Intel® mobile Celeron® 2000E (up to 2.2GHz, dual-core, 2MB cache, TDP=37W)
	Chipset	Intel® QM87
	System Memory	One 204-pin 4GB DDR3 SO-DIMM pre-installed (system max: 8GB)
IPMI	iRIS Solution	1 x iRIS-1010 (optional)
Storage	Hard Drive	2 x 2.5" SATA 6Gb/s HDD/SSD drive bay
I/O Interfaces	USB 3.1 Gen 1	2
	USB 2.0	4
	Ethernet	2 x RJ-45 LAN1: Intel® I217LM PHY with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller
	COM Port	2 x RS-232
	Display	2 x HDMI, 1 x VGA
	Resolution	VGA: Up to 1920 x 1200@60Hz HDMI: Up to 2560 x 1600@60Hz
	Audio	1 x Line-out, 1 x Mic-in
	Wireless	1 x 802.11b/g/n (optional)
Expansions	PCIe Mini	1 x Full-size PCIe Mini (supports mSATA, SATA 6Gb/s signal only)* 1 x Half-size PCIe Mini (only for iRIS-1010)
Power	Power Input	DC jack: 12 V DC 3-pin terminal: 9 V~36 V DC
	Power Consumption	12 V@4.6 A (Intel® mobile Core™ i5-4400E with 4GB 1333MHz DDR3 memory)
Reliability	Mounting	Wall mount, VESA 100
	Operating Temperature	-20°C ~60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-30°C ~70°C with air flow (SSD), 10% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (with SSD)
	Weight (Net/Gross)	2.4 kg/4.2 kg

* ECN-380-QM87i-WD-QGW without Full-size PCIe Mini Card slot expansion

Removable 2.5" SATA HDD/SSD Bay



The ECN-380 series is equipped with two 2.5" SATA HDD bays. One of the HDD bays is removable for easy installation.



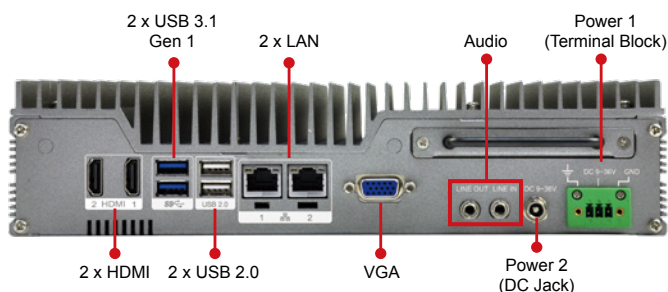
Triple Display Outputs



The ECN-380-QM87 contains two HDMI and one VGA. All of the display outputs support high resolution video, which can be applied widely in multi-monitor applications.



- ECN-380-QM87 Rear I/O



Technical drawing of the 100W LED module showing dimensions in mm:

- Top View:** Overall width 289.3 mm. Mounting holes on the left are spaced 52 mm apart, with radii R2.5 and R5. Mounting holes on the right are spaced 10 mm apart, with a total height of 112 mm.
- Left Side View:** Overall height 73 mm, mounting hole offset 64 mm. Base width 134 mm, mounting bracket width 150 mm.
- Right Side View:** Overall height 172.12 mm.
- Front View:** LED array width 266.7 mm, total width 273.7 mm, and mounting bracket width 303.3 mm. Mounting holes are 4- $\varnothing 3.5$. Bottom features include a power switch, a power button, and two D-sub connectors.

Part No.	Description
ECN-380-QM87i-i5/4G-R11	Fanless embedded system with Intel® Core™ i5-4400E 2.7 GHz CPU, TDP 37W, 2 x HDMI, 1 x VGA, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, iRIS-1010, 12 V DC, RoHS
ECN-380-QM87i-C/4G-R11	Fanless embedded system with Intel® Celeron® 2000E 2.2 GHz CPU, TDP 37W, 2 x HDMI, 1 x VGA, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, iRIS-1010, 12 V DC, RoHS
ECN-380-QM87i-i5/WD/4G-R11	Fanless embedded system with Intel® Core™ i5-4400E 2.7 GHz CPU, TDP 37W, 2 x HDMI, 1 x VGA, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, iRIS-1010, 9 V~36V DC, RoHS
ECN-380-QM87i-C/WD/4G-R11	Fanless embedded system with Intel® Celeron® 2000E 2.2 GHz CPU, TDP 37W, 2 x HDMI, 1 x VGA, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, iRIS-1010, 9 V~36 V DC, RoHS
ECN-380-QM87i-WD-QGW-R10	Fanless embedded system with Intel® Core™ i5-4400E 2.7 GHz, TDP 37W, 2 x HDMI, 1 x VGA, 2 x 2.5" SATA HDD bay, 8GB memory pre-installed, iRIS-1010, with QTS-gateway, 9 V~36V DC, RoHS

Part No.	Description
IRIS-1010-R10	IPMI 2.0 adapter card with AST1010 BMC chip (W/O KVM over IP function) for PCIe Mini socket interface
ECN380VK-100-R10	VESA 100 mount kit for ECN-380
ECN-380-QM87i-WES7E-R10	OS image with Windows Embedded Standard 7 E for ECN-380-QM87i Series, WES7E license label, with DVD ROM

1 x Power cord	1 x Chassis screw set
1 x Power adapter (with PSE/ErP certified)	1 x Wall mount bracket

ECN-360A-ULT3

Fanless Embedded System with Intel® Solution

New**E-Window**

Features

- On-board CPU
 - » i5-6300U dual-core up to 3.0GHz
 - » 3855U dual-core up to 1.6GHz
- Two 2.5" SATA 6Gb/s HDD/SSD drive bay
- Operating temperature: -20°C ~ 60 °C
- Two flexible E-Window for modularized expansion I/O



Specifications

Model Name		ECN-360A-ULT3
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	255 x 130 x 75
	System Fan	Fanless
	Chassis Construction	SECC
Motherboard	Motherboard Model	NANO-ULT3
	SBC Size (mm)	EPIC, 165 x 115
	Processor	Intel® Core™ i5-6300U Intel® Celeron® 3855U
	System Memory	2 x 260-pin 2133/1866 MHz dual-channel DDR4 SO-DIMMs support up to 32GB Pre-install 4GB DDR4
Storage	Hard Drive	2 x 2.5" SATA HDD bay(No RAID support)
I/O Interfaces	USB 3.1 Gen 1	4
	Ethernet	LAN1: Intel® I219-LM LAN2: Intel® I211-AT
	COM Port	1 x RS-232/422/485 2 x RS-232
	Digital I/O	8-bit digital I/O
	Display	2 x HDMI
	Resolution	HDMI: up to 4096x2160@24Hz
	Audio	1 x Line-out
	Wireless	2 x 802.11b/g/n (optional)
Expansions	PCIe Mini	1 x Full-size PCIe Mini card slot (with SIM holder & mSATA support) 1 x Half-size PCIe Mini card slot
Power	Power Input	DC 12V (Optional 9~36V) Power 1: DC jack Power 2: Terminal block(for optional 9~36V only)
	Power Consumption	12 V@2.4 A (Intel® i5-6300U with 4GB DDR4 memory)
Reliability	Mounting	Wall mount, VESA 100
	Operating Temperature	-20°C~60°C with air flow (SSD), 5% ~ 95%, non-condensing
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-2 (SSD)
	Weight (Net/Gross)	2.2 kg/3 kg

*3855U belongs to Skylake ULT Base series CPU, PCIe signal support only PCIe Gen 2

Friendly to Use

Easy for installation

- Flexible I/O function for expansion requirement
- Easy assembly and integration changing with IEI E-window tool kit

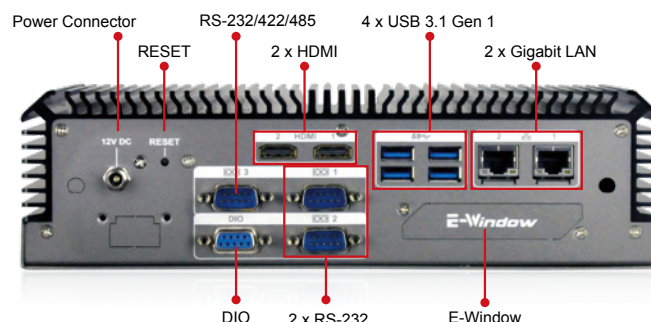
**E-Window**

Fully Integrated I/O

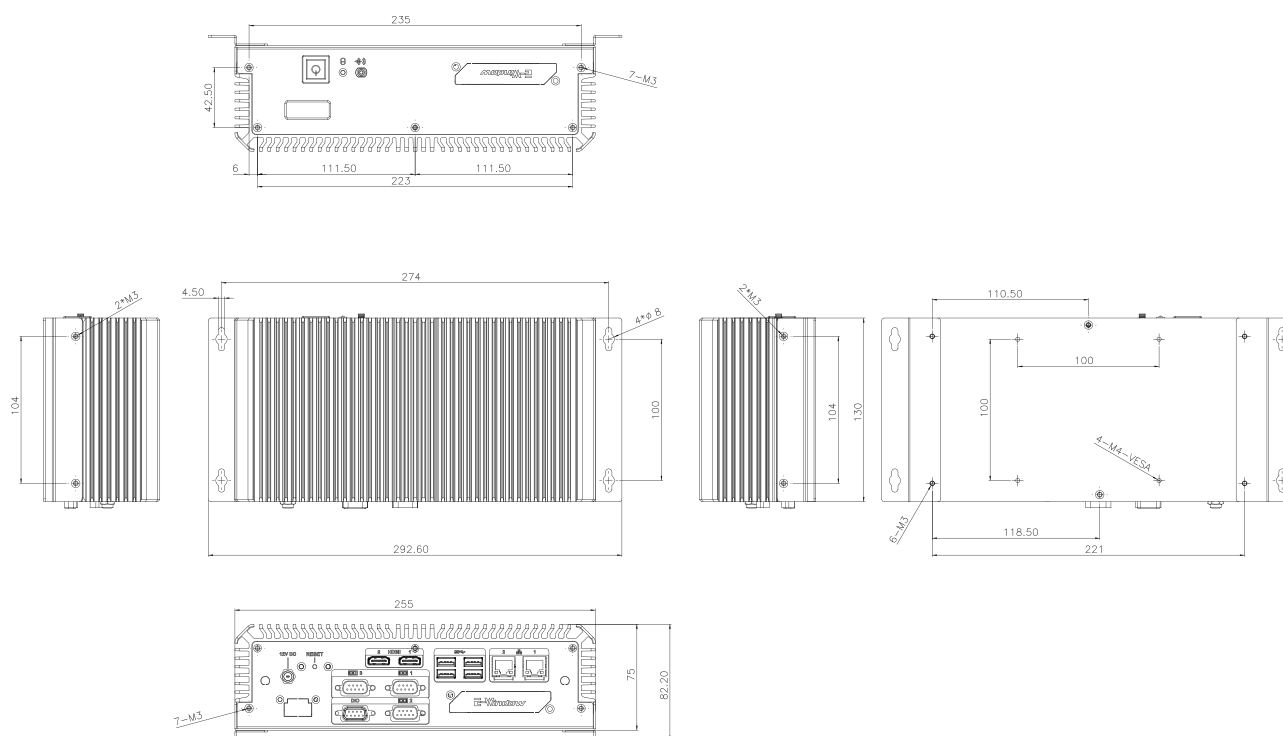
Front view



Rear view



Dimensions (Unit: mm)



Ordering Information

Part No.	Description
ECN-360A-ULT3-i5/4G-R10	Fanless System with Intel® Core™ i5-6300U up to 3.0GHz , TDP 15W, 2 x GbE LAN port , 2 x HDMI, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, 12V DC, RoHS
ECN-360A-ULT3-CE/4G-R10	Fanless System with Intel® Celeron® 3855U up to 3.0GHz/1.6GHz , TDP 15W, 2 x GbE LAN port , 2 x HDMI, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, 12V DC, RoHS
ECN-360A-ULT3-i5-WD/4G-R10**	Fanless System with Intel® Core™ i5-6300U up to 3.0GHz , TDP 15W, 2 x GbE LAN port , 2 x HDMI, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, 9~36V DC, RoHS
ECN-360A-ULT3-CE-WD/4G-R10**	Fanless System with Intel® Celeron® 3855U up to 1.6GHz , TDP 15W, 2 x GbE LAN port , 2 x HDMI, 2 x 2.5" SATA HDD bay, 4GB memory pre-installed, 9~36V DC, RoHS
63040-010060-120-RS	FSP060-DIBAN2, 12V 60W AC/DC Adapter
E-MPCIE-LAN03-R10	PCIe mini card supports 1-port GbE with REALTEK RTL8111E controller, with PMS 194C I/O bracket and 150 mm cable
E-MPCIE-DLAN03-R10	PCIe mini card supports 2-port GbE with Intel® I211 controller, with PMS 194C I/O bracket and 150mm cable

**By order production, MOQ: 50

Packing List

1 x Screw set

1 x Wall mount bracket

ECW-281B-BT

Fanless Embedded System with
Intel® Celeron® J1900 Processor



Features

- Fanless system with Intel® Celeron® J1900 Processor
- Supports four COM ports (three RS-232, one RS-422/485)
- 12V DC and 9 V~36 V DC models available
- Wide operating temperature: -20°C ~ 60°C with SSD



Specifications

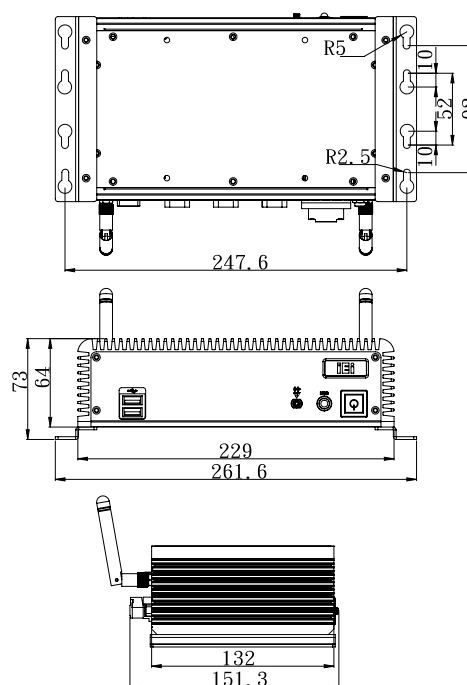
Model Name		ECW-281B-BT
Chassis	Color	Black
	Dimensions (WxHxD) (mm)	229 x 132 x 64
	System Fan	Fanless
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	WAFER-BT-i1
	SBC Size (mm)	3.5", 146 x 102
	CPU	Intel® Celeron® J1900 processor (quad-core, 2 MB cache, TDP=10W, up to 2.42GHz)
	Chipset	SoC
System Memory	System Memory	1 x 204-pin 1066/1333 MHz single-channel DDR3L SO-DIMM (system max. 8 GB)
	IPMI	iRIS Solution 1 x iRIS-1010-R10 (optional)
Storage	Hard Drive	1 x 2.5" SATA 3Gb/s HDD bay
	USB 3.1 Gen 1	1
I/O Interfaces	USB 2.0	3
	Ethernet	LAN 1: PCIe GbE by Intel® I210 controller LAN 2: PCIe GbE by Intel® I211 controller
	COM Port	3 x RS-232 1 x RS-422/485
	Digital I/O	8-bit digital I/O
	Display	1 x VGA
	Resolution	VGA: Up to 2560x1600@60Hz
	Audio	1 x Line out
	Wireless	1 x 802.11b/g/n (optional)
	Expansion	1 x Full-size PCIe Mini card slot (supports mSATA)* 1 x Half-size PCIe Mini card (only for iRIS)
	Power	DC jack: 12 V DC 3-pin terminal: 9 V~36 V DC
Reliability	Consumption	12V@1.45A (with Intel® Celeron® J1900 CPU and one 8 GB 1333 MHz DDR3 memory)
	Mounting	Wall mount, VESA 100
	Operating Temperature	-20°C~60°C with air flow (SSD), 10% ~ 95%, non-condensing
	Storage Temperature	-20°C ~ 60°C
	Operating Shock	Half sine wave 5G, 11ms 3-axis (non-operational)
	Operating Vibration	MIL-STD-810F 514.5C-1 (HDD)
	Weight (Net/Gross)	2.1 kg / 3.9 kg

*ECW-281BWD-BTi-QGW without Full-size PCIe Mini Card slot expansion

Ordering Information

Part No.	Description
12V DC Input ECW-281B-BTi-J1/2GB-R10	Fanless embedded system with WAFER-BTi, Intel® Celeron® J1900 2.42 GHz processor, four serial ports, pre-installed 2GB DDR3L SO-DIMM, 12 V DC-in, 60 W power adapter, black, RoHS
9 V~36 V DC Input ECW-281BWD-BTi-J1/2GB-R10	Fanless embedded system with WAFER-BTi, Intel® Celeron® J1900 2.42 GHz processor, four serial ports, pre-installed 2GB DDR3L SO-DIMM, 9 V ~ 36 V DC-in, black, RoHS
ECW-281BWD-BTi-QGW-R10	Fanless embedded system with WAFER-BTi-R10, with Intel® Celeron J1900 2GHz, 4 serial ports, with 4GB DDR3L pre-installed SO-DIMM memory, with QTS-Gateway, 9~36VDC in, w/o adapter, black, RoHS

Dimensions (Unit: mm)



Options

Part No.	Description
IRIS-1010-R10	IPMI 2.0 adapter card with AST1010 BMC chip (W/O KVM over IP function) for PCIe Mini socket interface
ECW-281B-BTi-WES7E64-R10	OS Image with Windows® Embedded Standard 7 E 64Bit for ECW-281BTi Series, with DVD-ROM, RoHS, R10
DK-100-R10	VESA 100 to DIN-Rail mounting kit

Packing List

1 x Power cord only for 12V	1 x Wall mount bracket
1 x 12V 60W power adapter only for 12V	1 x Screw set

Embedded Chassis Series



Model Name		BRICK-KINO	BRICK-WAFER	BRICK-NANO
Chassis	Platform	Case only		
	Color	Black		
	Dimensions (WxDxH) (mm)	203 x 178 x 64	220 x 143 x 55	
Motherboard	Motherboard Model	tKINO-ULT3 KINO-DAL KINO-DBT tKINO-AL tKINO-BW eKINO-BT	WAFER-AL WAFER-BT	NANO-AL NANO-BT
	SBC Size (mm)	Mini-ITX (170 x 170)	3.5" (146 x 102)	3.5" (165 x 115)
Buttons		Power switch		
Reliability	Operating Temperature	0°C ~ 40°C		
	Weight (Net/ Gross)	1.25kg/1.5kg	1.2kg/1.5kg	

BRICK Series

Embedded Chassis for IEI DC input Mini-ITX/EPIC/3.5" SBC

New



▼ BRICK Chassis with WAFER-AL
(SBC not included)

▲ BRICK Chassis with eKINO-BT
(SBC not included)

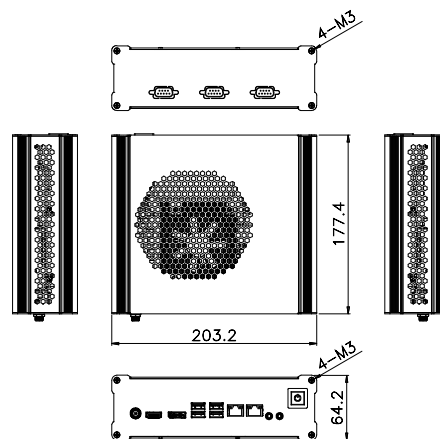
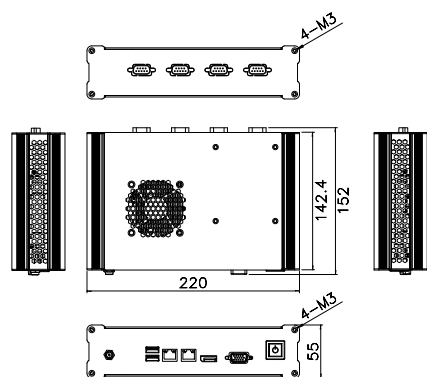
Features

- Designed for Mini-ITX / EPIC / 3.5" SBC with DC input
- Flexible SBC compatibility
- One 2.5" hard drive capacity
- Cost-effective, RoHS compliant design

Specifications

Model Name		BRICK-KINO	BRICK-WAFER	BRICK-NANO
Platform		Case only		
Chassis	Color	Black		
	Dimensions (WxDxH) (mm)	203 x 178 x 64	220 x 143 x 55	220 x 143 x 55
Motherboard	Motherboard Model	tKINO-ULT3 KINO-DAL KINO-DBT tKINO-AL tKINO-BW eKINO-BT	WAFER-AL WAFER-BT	NANO-AL NANO-BT
	SBC Size (mm)	Mini-ITX (170 x 170)	3.5" (146 x 102)	3.5" (165 x 115)
Buttons		Power switch		
Reliability	Operating Temperature	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
	Weight (Net/Gross)	1.25kg/1.5kg	1.2kg/1.5kg	1.2kg/1.5kg

BRICK-NANO/WAFER Dimensions (Unit: mm) BRICK-KINO Dimensions (Unit: mm)



Ordering Information

Part No.	Description
BRICK-KINO-DAL-R10	Embedded chassis for KINO-DAL SBC, with IO bracket ,power switch, mat black and RoHS
BRICK-KINO-DBT-R10	Embedded chassis for KINO-DBT SBC, with IO bracket ,power switch, mat black and RoHS
BRICK-eKINO-BT-R10	Embedded chassis for eKINO-BT SBC, with IO bracket ,power switch, mat black and RoHS
BRICK-tKINO-AL-R10	Embedded chassis for tKINO-AL SBC, with IO bracket ,power switch, mat black and RoHS
BRICK-tKINO-BW-R10	Embedded chassis for tKINO-BW SBC, with IO bracket ,power switch, mat black and RoHS
BRICK-tKINO-ULT3-R10	Embedded chassis for tKINO-ULT3 SBC, with IO bracket ,power switch, mat black and RoHS
BRICK-WAFER-AL-R10	Embedded chassis for WAFER-AL SBC, with SATA cable ,IO bracket ,power switch, DC input cable, mat black and RoHS
BRICK-WAFER-BT-R10	Embedded chassis for WAFER-BT SBC, with SATA cable ,IO bracket ,power switch, DC input cable, mat black and RoHS
BRICK-NANO-AL-R10	Embedded chassis for NANO-AL SBC, with SATA cable ,IO bracket ,power switch, DC input cable, mat black and RoHS
BRICK-NANO-BT-R10	Embedded chassis for NANO-BT SBC, with SATA cable ,IO bracket ,power switch, DC input cable, mat black and RoHS

Packing List

BRICK-KINO	1 x BRICK Chassis	1 x Power switch cable	1 x Screw set	1 x QIG	
BRICK-WAFER/NANO	1 x BRICK Chassis	1 x Power switch cable	1 x Screw set	1 x QIG	1 x SATA cable

Embedded Chassis Series




Model Name		EBC-3300	EBC-3220	EBC-3200	EBC-3100
Chassis	Platform	Case only	Case only	Case only	Case only
	Color	Black	Black	Black	Black
	Dimensions (WxDxH) (mm)	190 x 190 x 43	190 x 180 x 55	260 x 180 x 55	260 x 250 x 156
	System Fan	--	1 x 4 cm	2 x 4 cm	1 x 8 cm
	Chassis Construction	Heavy duty metal	Heavy duty metal	Heavy duty metal	Heavy duty metal with plastic front panel
Motherboard	Motherboard Model	EBC-3300-ULT3-R10: tKINO-ULT3 EBC-3300-AL-R10 :tKINO-AL EBC-3300-BW-R10: tKINO-BW	tKINO-BW KINO-DQM170 KINO-DH810 KINO-DBT eKINO-BT KINO-DA750-i2 KINO-KBN/SE-i2 KINO-DQM871-i1 KINO-DH610 KINO-QM770 KINO-QM670 KINO-QM57A KINO-HM551	tKINO-BW KINO-DQM170 KINO-DH810 KINO-DBT eKINO-BT KINO-DA750-i2 KINO-KBN/SE-i2 KINO-DQM871-i1 KINO-DH610 KINO-QM770 KINO-QM670 KINO-QM57A KINO-HM551	KINO-AQ170 KINO-ABT KINO-AA750-i2 KINO-AQ870 KINO-AQ670 KINO-AH611 KINO-AH612
	SBC Size (mm)	Mini-ITX (170 x 170)	Mini-ITX (170 x 170)	Mini-ITX (170 x 170)	Mini-ITX (170 x 170)
	Hard Drive	1 x 2.5" SATA HDD drive bay	1 x 2.5" SATA HDD drive bay	2 x 2.5" SATA HDD space	1 x 3.5" SATA HDD space
Storage	CF Card/CFast	N/A	N/A	Refer to optional module	Refer to SBC
	SD Card	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	PS2 (KB/MS)	N/A	N/A	N/A	Refer to SBC
I/O Interfaces	USB 3.1 Gen 1	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	USB 2.0	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	Ethernet	2	2	2	2
	COM Port	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	LPT	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	Display	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	Resolution	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	Audio	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
Expansions	Wireless	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
	PCI	N/A	N/A	1 x low profile expansion slot*	N/A
	PCIe	N/A	N/A	1 x low profile expansion slot*	1 x Full-height expansion slot
	PCIe Mini	Refer to SBC	Refer to SBC	Refer to SBC	Refer to SBC
Power	Others	1 x E-Window	N/A	N/A	N/A
	Power Input	12V DC	12V DC	12V DC in	90~264V AC
	Power Supply	12V DC	12V DC	12V DC in	ACE-A618B 180W ACE-A627A 270W
Reliability	Mounting	VESA 100, wall mount	VESA 100, wall mount	Desktop, wall mount	Desktop, wall mount
	Operating Temperature	-10°C~50°C	-10°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			
Weight (Net/ Gross)		1 kg/2 kg	1 kg/2 kg	1.1 kg/2 kg	2.5 kg/3.9 kg

* Optional items

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

Embedded Chassis Series



New



Model Name		EBC-3000	EBC-2200	EBC-2100	EBC-1100
Chassis	Platform	Case only	Case only	Case only	Case only
	Color	Black	Black	Cool gray	Black
	Dimensions (WxDxH) (mm)	280 x 230 x 88	215 x 150 x 55	262 x 134 x 56	190 x 140 x 46
	System Fan	1 x 6 cm	1 x 4 cm	1 x 4 cm*	Refer to MB
	Chassis Construction	Heavy duty metal with plastic front panel	Aluminum alloy with heavy duty metal		
Motherboard	Motherboard Model	KINO-AQ170 KINO-ABT KINO-AA750-i2 KINO-AQ870 KINO-AQ670 KINO-AH611 KINO-AH612	NANO-BT-i1 NANO-BTW2 NANO-QM871	NANO-LX	WAFER-BT-E38001W2
	SBC Size (mm)	Mini-ITX (170 x 170)	EPIC (165 x 115)	EPIC (165 x 115)	3.5" SBC (146x102)
	Hard Drive	1 x 3.5" SATA HDD space	1 x 2.5" SATA 6Gb/s HDD/SSD drive bay	1 x 2.5" SATA HDD space	1 x 2.5" SATA HDD space
Storage	CF Card/CFast	Refer to SBC	N/A	1	N/A
	SD Card	Refer to SBC	N/A	N/A	N/A
	PS2 (KB/MS)	Refer to SBC	Refer to SBC	1	Refer to SBC
I/O Interfaces	USB 3.1 Gen 1	Refer to SBC	Refer to SBC	N/A	1
	USB 2.0	Refer to SBC	Refer to SBC	4	3
	Ethernet	2	2	1	2
	COM Port	Refer to SBC	Refer to SBC	1+2 RS-232*	1x RS232, 1 x RS-232 & 1 x RS-422/485*
	LPT	Refer to SBC	N/A	*1	N/A
	Display	Refer to SBC	Refer to SBC	1 x VGA	1 x VGA
	Resolution	Refer to SBC	Refer to SBC	N/A	VGA (up to 2560x1600@60Hz)
	Audio	Refer to SBC	1 x Line out, 1 x Mic-in	3 x Audio jack*	1 x Line out, 1 x Mic-in
	Wireless	Refer to SBC	1 x 802.11b/g/n	N/A	802.11b/g/n *
	PCI	N/A	N/A	N/A	N/A
Expansions	PCIe	N/A	N/A	N/A	N/A
	PCIe Mini	Refer to SBC	1 x Full-size PCIe Mini card slot	N/A	3
	Others	N/A	N/A	1 x PCI-104	N/A
	Power Input	90~264V AC	12V DC	12V DC in	12V DC in
Power	Power Supply	ACE-A618B 180W ACE-A627A 270W	12V, 5A	12 V DC in, AT mode only, with 60W power adapter	12V DC in
	Mounting	Desktop, wall mount	Wall mount, VESA 100	Desktop, wall mount	Wall mount, VESA 75
Reliability	Operating Temperature	0°C ~ 50°C	-20°C ~ 60°C	0°C ~ 50°C	-40°C ~ 75°C (refer to MB)
	Operating Shock	Half-sine wave 3G, 11ms 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis	Half-sine wave 3G, 11ms 3 shocks per axis	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-1			MIL-STD-810F 514.5C-1 (with SSD)
	Weight (Net/Gross)	2.5 kg/3.9 kg	1.1kg/2kg	1 kg/3 kg	1.2Kg/2.2Kg

* Optional items

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

EBC-3300

Embedded Chassis for IEI thin Mini-ITX SBC

New



Features

- Designs for thin type Mini-ITX SBC with single voltage input
- Total height 42mm for space critical application
- One 2.5" hard drive capacity
- Flexible E-Window tool kit support

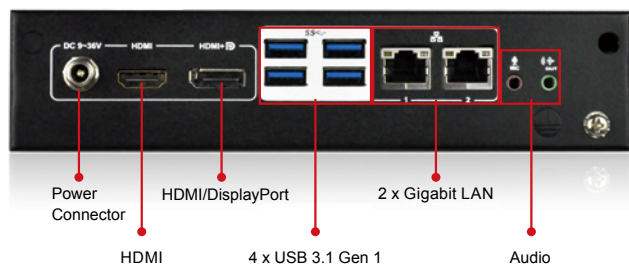


Specifications

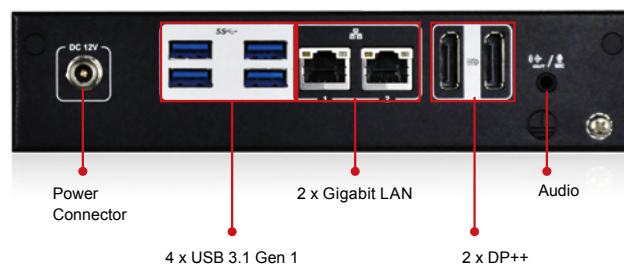
Model Name		EBC-3300-R10		
		EBC-3300-ULT3-R10	EBC-3300-AL-R10	EBC-3300-BW-R10
Platform		Case only	Case only	Case only
Chassis	Color	Black	Black	Black
	Dimension(WxDxH)	190 x 190 x 43	190 x 190 x 43	190 x 190 x 43
	System Fan	--	--	--
	Chassis Construction	Heavy duty metal	Heavy duty metal	Heavy duty metal
Motherboard	Motherboard	tKINO-ULT3	tKINO-AL	tKINO-BW
	SBC Size (mm)	Mini-ITX (170 x 170)	Mini-ITX (170 x 170)	Mini-ITX (170 x 170)
	CPU	Refer to SBC	Refer to SBC	Refer to SBC
	System Memory	2 x DDR4 2133 SO-DIMM (system Max : 32GB)	2 x DDR3L 1333/1066 SO-DIMM (system Max : 8GB)	1 x DDR3L 1333/1066 SO-DIMM (system Max : 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD Bay		
	SD Card	N/A	1	1
	mSATA / M.2	1 (Colay MPCIE2)	1 (M.2 B-key)	1
I/O interfaces	PS2 (KB/MS)	pin header	pin header	pin header
	USB 3.1 Gen 1	4	4	4
	USB 2.0	pin header	pin header	pin header
	Ethernet	2	2	2
	RS-232/422/485	2 (pin header)	2 (pin header)	2 (pin header)
	RS-232	4 (pin header)	4 (pin header)	4 (pin header)
	DIO	8-bit (pin header)	8-bit (pin header)	8-bit (pin header)
	Display	1 x HDMI 1 x DP/HDMI	2 x DP++	1 x VGA 1 x DP/HDMI
	Resolution	1 x HDMI 1.4 (up to 4096x2160@24Hz) 1 x HDMI/DP (up to 4096x2160@24Hz)	2 x DP++ (up to 4096x2160@60Hz)	1 x VGA (up to 1920x1200@60Hz) 1 x HDMI/DP (up to 3840x2160@30Hz)
	Audio	Realtek ALC662 2 x Audio jacks (line-out, mic-in)	Realtek ALC269 1 x Audio jacks (line-out, mic-in)	Realtek ALC662 1 x Audio jacks (line-out, mic-in)
	Wireless	Refer to SBC	Refer to SBC	Refer to SBC
	Expansions	2 x Full-size PCIe Mini	1 x Full-size PCIe Mini	1 x Full-size PCIe Mini
Power	Others	N/A	1 x M.2 B key 2242 (SATA/USB2)	N/A
	Power Input	9~36V	12V	9~30V
	Power Consumption	12V@4.68A	12V@2.58A	12V@1.61A
	Others	1 x Power switch	1 x Power switch	1 x Power switch
Reliability	Mounting	VESA 100, wall mount		
	Operating Temperature	-10 ~ 50 °C with air flow (SSD), 10% ~ 95%, non-condensing		
	Storage Temperature	-20°C ~ 60°C		
	Operating Shock	Half-sine wave shock 3G, 11ms, 3 shocks per axis		
	Operation Vibration	MIL-STD-810G 514.5C-1 (with SSD)		
	Weight (Net/Gross)	1 kg/ 2kg		

Fully Integrated I/O

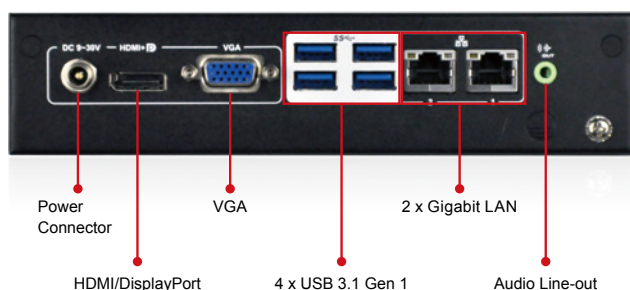
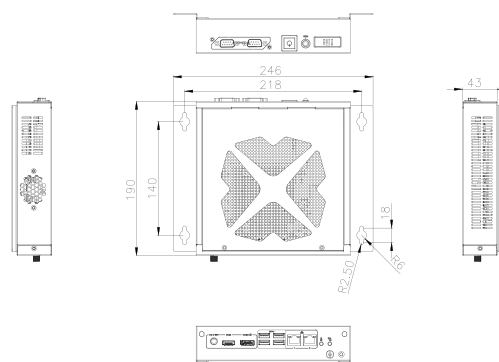
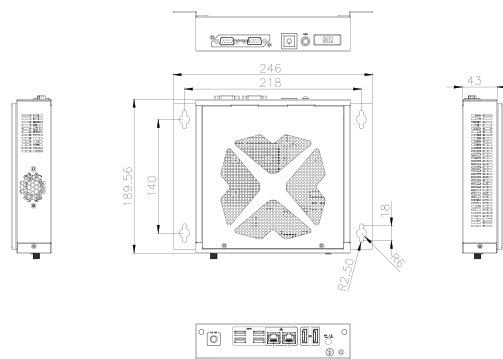
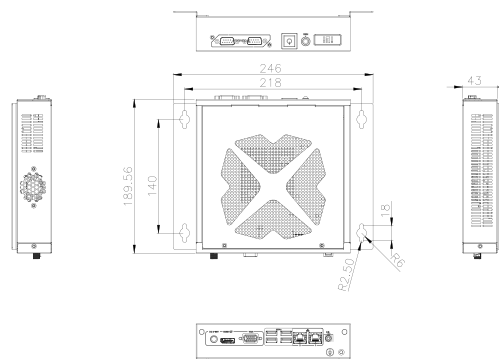
●EBC-3300-ULT3-R10 Rear I/O



●EBC-3300-AL-R10 Rear I/O



●EBC-3300-BW-R10 Rear I/O

*EBC-3300-ULT3-R10 Dimensions (Unit: mm)**EBC-3300-AL-R10 Dimensions (Unit: mm)**EBC-3300-BW-R10 Dimensions (Unit: mm)*

Ordering Information

Part No.	Description
EBC-3300-ULT3-R10	Embedded chassis for tKINO-ULT3 with one 2.5" SATA hard drive bay, IO bracket, one LED cable, one power switch cable and RoHS
EBC-3300-AL-R10	Embedded chassis for tKINO-AL with one 2.5" SATA hard drive bay, IO bracket, one LED cable, one power switch cable and RoHS
EBC-3300-BW-R10	Embedded chassis for tKINO-BW with one 2.5" SATA hard drive bay, IO bracket, one LED cable, one power switch cable and RoHS

Options

Part No.	Description
E-MPCIE-3G-R10	PCIe mini card supports 3G WWAN Module, with PMS 130C I/O bracket, RF antenna 300mm cable and GSM antenna cable, R10
19FR123510BH-000001-RS	Fan Module, FAN, +12V, 3PIN, 31100-000409-RS, STANDARD, R123510BHAC6M5AR, CABLE L:300mm, MOLEX 5051-03P P=2.54 (For EBC-3300-ULT3-R10)
19FR123510BH-000002-RS	Fan Module, FAN, +12V, 4PIN, 31100-000410-RS, STANDARD, R123510BHAF6M6AR, CABLE L:300mm, MOLEX 5051-04P P=2.54 (For EBC-3300-AL-R10 & EBC-3300-BW-R10)
63040-010060-120-RS	FSP060-DIBAN2, 12V 60W AC/DC Adapter

Packing List

1 x QIG	1 x Wall mount bracket kit	1 x Screw set
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EBC-3220

Compact Embedded Chassis for IEI Single Voltage Mini-ITX SBC



Features

- Designed for Mini-ITX SBC with single voltage input
- Space critical application
- One 2.5" hard drive capacity
- Cost-effective, RoHS compliant design

Specifications

Model Name		EBC-3220
Platform		Case only
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	190 x 180 x 55
	System Fan (WxDxH) (mm)	40 x 40 x 10 (optional)
Motherboard	Motherboard Model	Refer to KINO Series
	SBC Size (mm)	Mini-ITX (170 x 170)
Storage	Hard Drive	1 x 2.5" HDD bracket
Buttons		Power switch
Reliability	Mounting	Desktop, wall mount, VESA mount
	Operating Temperature	-10°C ~ 50°C with air flow*
	Weight (Net/Gross)	1 kg/2 kg

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

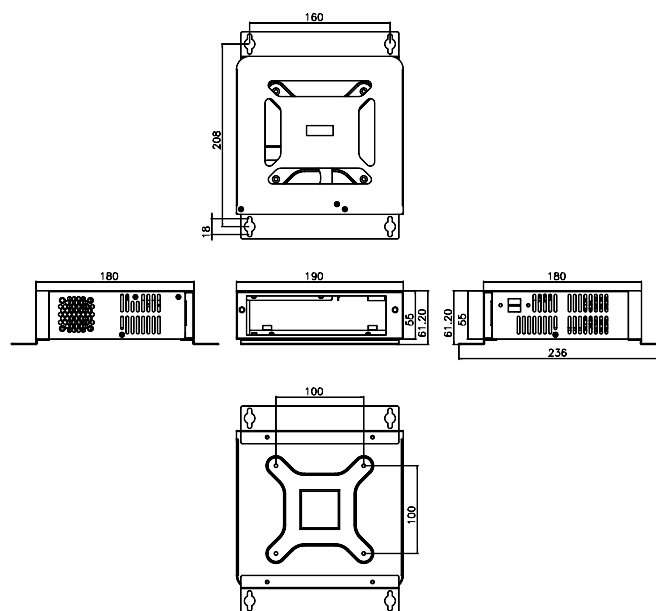
Compatible Mini-ITX SBC

Part No.	Recommended CPU Cooler
tKINO-BW	Fanless
KINO-DQM170	19100-000203-00-RS (suitable for 25W CPU)
KINO-DH810	CF-1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-DBT	Fanless
eKINO-BT	Fanless
KINO-DA750-I2	CF-989B-RS
KINO-KBN/SE-I2	GX-424CC & GX415GA with fan
KINO-DQM871-I1	19100-000203-00-RS
KINO-DH610	CF-1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-QM770	CF-989A-RS
KINO-QM670	CF-989A-RS
KINO-QM57A	CF-989A-RS, CF-989B-RS
KINO-HM551	CF-989A-RS

Options

Part No.	Description
32001-010800-100-RS	Dual port USB cable, 200mm, w/o bracket
63040-010060-110-RS	Power adapter, FSP060-DIBAN2, 90 V~264 V AC, 60W, 1500mm, 12 V DC, Din 4-pin/lock, CCL, ErP, PSE, RoHS
63040-010084-010-RS	Power adapter, FSP084-DIBAN2, 90 V~264 V AC, 84W, 1800mm, 12 V DC, Din 4-pin/lock, CCL, ErP, RoHS
19FR124010BL-000003-RS	Fan module, L=200mm, 4cm, 3-pin, CCL, RoHS

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
EBC-3220-R11	Mini-ITX embedded chassis, for DC input model only, with one 2.5" HDD bracket, w/o power adapter, black, RoHS

Packing List

1 x QIG	1 x Wall mount bracket kit	1 x Screw set
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EBC-3200

Embedded Chassis for IEI Single Voltage Mini-ITX SBC



Features

- Designed 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 modules for storage and expansion slot



Flexible storage by optional modules

2 x Internal 2.5" HDD bays (default)



1 x Internal 2.5" HDD bay
1 x CF slot



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



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

Specifications

Model Name		EBC-3200
Platform		Case only
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	260 x 180 x 55
	System Fan (WxDxH) (mm)	2, 40 x 40 x 10
Motherboard	Motherboard Model	Refer to KINO Series
	SBC Size (mm)	Mini-ITX (170 x 170)
Storage	Hard Drive	2 x 2.5" HDD bays (default) Varies by optional modules
	PCI/PCIe	1 x Low profile PCI/PCIe (support by optional modules) Max. dimensions: 147 mm (L) x 10.5 mm (D)
Buttons		Power switch Reset
Indicators		Power LED Error LED
Reliability	Mounting	Desktop, wall mount, VESA mount
	Operating Temperature	-10°C ~ 50°C with air flow*
	Weight (Net/Gross)	1.1 kg/2 kg

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

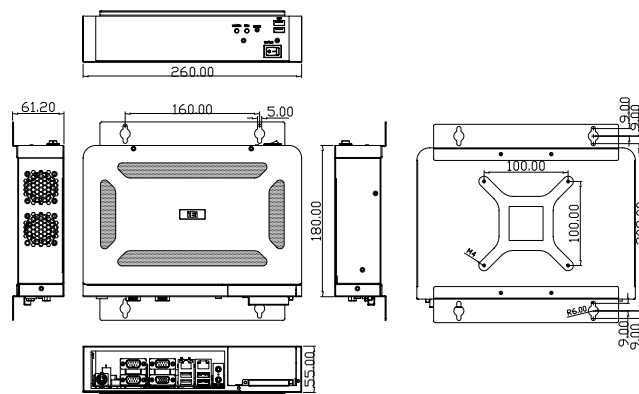
Compatible SBC

Part No.	Expansion Type	Recommended CPU Cooler
tKINO-BW	1 x PCIe x1	Fanless
KINO-DQM170	1 x PCIe x16	19100-000203-00-RS
KINO-DH810	1 x PCIe x1	CF-1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-DBT	1 x PCIe x4	Fanless
eKINO-BT	1 x PCIe x1	Fanless
KINO-DA750-i2	N/A	CF-989B-RS
KINO-KBN/SE-i2	1 x PCIe x4	GX-424CC & GX415GA with fan
KINO-DQM871-i1	1 x PCIe x16	19100-000203-00-RS
KINO-DH610	1 x PCI 1 x PCIe x1	CF-1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-QM770	1 x PCIe x16	CF-989A-RS
KINO-QM670	1 x PCIe x16	CF-989A-RS
KINO-QM57A	1 x PCIe x16	CF-989A-RS, CF-989B-RS
KINO-HM551	1 x PCIe x16	CF-989A-RS

Optional Modules

Part No.	Description
EBCKIT-01-R10/PCI-HDD	EBC-3200 optional module with one PCI slot and one 2.5" HDD bay, RoHS
EBCKIT-02-R10/PCIe-HDD	EBC-3200 optional module with one PCIe x1 slot and one 2.5" HDD bay, RoHS (For KINO-PV-D4252/D5252 only)
EBCKIT-03-R10/PCI-CF	EBC-3200 optional module with one PCI slot and one CompactFlash® slot, RoHS
EBCKIT-06-R10/PCIe16-HDD	EBC-3200 optional module with one PCIe x16 slot and one 2.5" HDD bay, RoHS

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
EBC-3200-R10	Mini-ITX embedded chassis, compatible two 2.5" HDD, w/o power adapter, black, RoHS

Options

Part No.	Description
32000-000002-RS	European standard power cord, 1830mm
32000-000025-RS	American standard power cord, 1830mm
63040-010060-110-RS	Power adapter, FSP060-DIBAN2, 90 V~264 V AC, 12 V DC, 60W, Din 4-pin/lock, Erp, RoHS
19FR124010BL-000002-RS	Fan module, 40x40x10mm, CCL, RoHS

Packing List

1 x QIG	2 x Wall mount brackets	1 x Screw set
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EBC-3100

Mini-ITX Chassis for High Power Consumption Applications



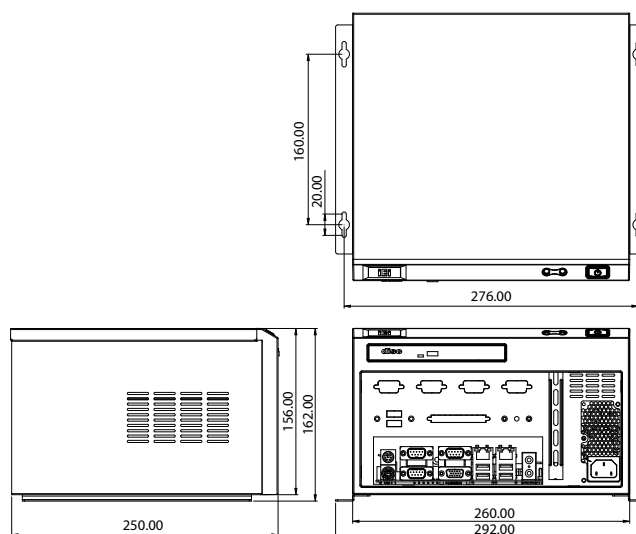
Features

- 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
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	260 x 250 x 156
	System Fan (WxDxH) (mm)	80 x 80 x 25
	Chassis Construction	Heavy duty metal with plastic front panel
Motherboard	Motherboard Model	Refer to KINO Series
	SBC Size (mm)	Mini-ITX (170 x 170)
Storage	Hard Drive	1 x 3.5" SATA HDD space
	ODD	1 x 5.25" slim type
Expansions		1 x Full-height expansion slot Max. dimensions: 220 mm (L) x 27 mm (D)
Power	Power Input	90 V~264 V AC
	Power Model	ACE-A618B 180W, ACE-A627A 270W
Reliability	Mounting	Desktop, wall mount
	Operating Temperature	0°C ~ 50°C
Weight (Net/Gross)		2.5 kg/3.9 kg

Dimensions (Unit: mm)



Compatible SBC

Part No.	Expansion Type	Recommended CPU Cooler
KINO-AQ170	1 x PCIe x16	CF1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-ABT	1 x PCIe x4	Fanless
KINO-AA750-i2	1 x PCIe x8	CF-989B-RS
KINO-AQ870	1 x PCIe x4	CF-1150SC-RS
KINO-AQ670	1 x PCIe x16	CF1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-AH611	1 x PCIe x16	CF1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-AH612	1 x PCIe x4	CF1156A-RS, CF-1156C-RS, CF-1156D-RS

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-A630B	300W ATX	90~265 VAC	16A (0.5A min.)	18A (0.5A min.)	15A (0.5A min.)	0.5A	3A	82%
	ACE-A618B	180W ATX	90~264 VAC	10A (0.1A min.)	14A (0.2A min.)	10A (0.6A min.)	0.3A	2.5A	85%

Ordering Information

Part No.	Description
EBC-3100-R12/ACE-A618B	Mini-ITX embedded chassis, one 3.5" hard drive bay, with ACE-A618B-RS 180W ATX power supply, black
EBC-3100-R12/ACE-A630B	Mini-ITX embedded chassis, one 3.5" hard drive bay, with ACE-A630B-RS 300W ATX power supply, black

Packing List

1 x System Fan	1 x Screw set	1 x QIG
1 x Power cord	1 x Wall mount kit	1 x SATA slim ODD cable

EBC-3000

Mini-ITX Chassis for High Power Consumption Applications



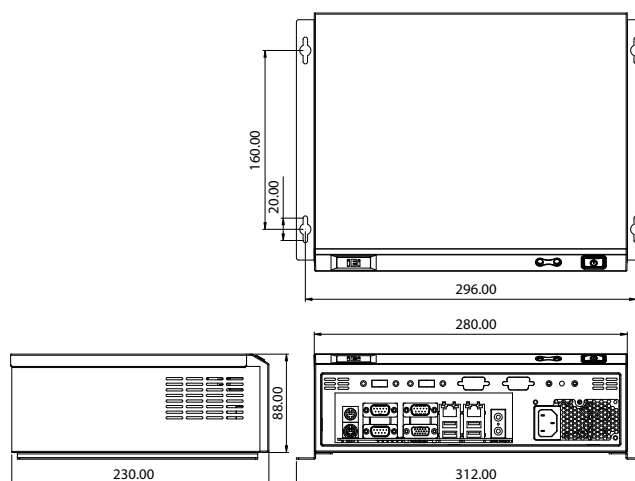
Features

- 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
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	280 x 230 x 88
	System Fan (WxDxH) (mm)	60 x 60 x 25
	Chassis Construction	Heavy duty metal with plastic front panel
Motherboard	Motherboard Model	Refer to KINO Series
	SBC Size (mm)	Mini-ITX (170 x 170)
Storage	Hard Drive	1 x 3.5" SATA HDD space
Power	Power Input	90 V~264 V AC
	Power Model	ACE-A618B 180W, ACE-A627A 270W
Reliability	Mounting	Desktop, wall mount
	Operating Temperature	0°C ~ 50°C
	Weight (Net/Gross)	2.5 kg/3.9 kg

Dimensions (Unit: mm)



Compatible SBC

Part No.	Recommended CPU Cooler
KINO-AQ170	CF1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-ABT	Fanless
KINO-AA750-i2	CF-989B-RS
KINO-AQ870	CF-1150SC-RS
KINO-AQ670	CF1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-AH611	CF1156A-RS, CF-1156C-RS, CF-1156D-RS
KINO-AH612	CF1156A-RS, CF-1156C-RS, CF-1156D-RS

		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-A630B	300W ATX	90~265 VAC	16A (0.5A min.)	15A (0.5A min.)	0.5A	0.8A	3A	82%
	ACE-A618B	180W ATX	90~264 VAC	10A (0.1A min.)	14A (0.2A min.)	10A (0.6A min.)	0.3A	2.5A	85%

Ordering Information

Part No.	Description
EBC-3000-R12/ACE-A618B	Mini-ITX embedded chassis, one 3.5" hard drive bay, with ACE-A618B-RS 180W ATX power supply, black
EBC-3000-R12/ACE-A630B	Mini-ITX embedded chassis, one 3.5" hard drive bay, with ACE-A630B-RS 300W ATX power supply, black

Packing List

1 x System fan	1 x Screw set	1 x QIG
1 x Power cord	1 x Wall mount kit	

EBC-2200

Embedded Chassis for EPIC SBC

New

Features

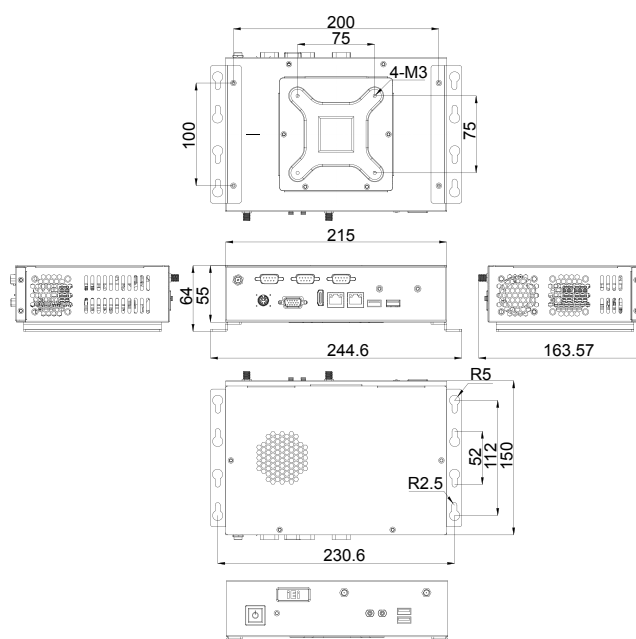
- Designed for EPIC SBC with single voltage input
- One 2.5" hard drive capacity
- Support one PCIe Mini expansion slot
- Complete I/O interface, including dual GbE, dual display port



Specifications

Model Name		EBC-2200-BT	EBC-2200-QM87
Platform		Case only	
Chassis	Color	Black	
	Dimensions (WxDxH) (mm)	215 x 150 x 55	215 x 150 x 55
	System Fan (WxDxH) (mm)	40 x 40 x 10 (optional)	
	Chassis Construction	Aluminum alloy with heavy duty metal	
Motherboard	Motherboard Model	NANO-BT-I1 NANO-BTW2	NANO-QM871
	SBC Size	EPIC SBC (165 mm x 115 mm)	
	Processor	Refer to SBC	Refer to SBC
	Chipset	SoC	Intel® QM87
	System Memory	1 x 204-pin 1066/1333 MHz DDR3L SO-DIMM (system max. 8GB)	1 x 204-pin 1600/1333 MHz DDR3 SO-DIMM (system max. 8GB)
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD drive bay	
System Function	PS2 (KB/MS)	1	N/A
	USB 3.1 Gen 1	1	2
	USB 2.0	3	4
	Ethernet	LAN1: Intel® I210-AT PCIe controller with NCSI support LAN2: Intel® I211-AT PCIe controller	LAN1: Intel® I217LM PHY with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller
	COM Port	2 x RS-232 1 x RS-232/422/485	1 x RS-232 1 x RS-232/422/485
	Digital I/O	N/A	1
	Display	1 x HDMI, 1 x VGA	2 x HDMI, 1 x VGA
	Audio	1 x Line out, 1 x Mic-in	1 x Line out, 1 x Mic-in
	Wireless	1 x 802.11b/g/n (optional)	1 x 802.11b/g/n (optional)
Expansion	PCIe Mini	1 x Full-size PCIe Mini card slot	
Power	Power Input	12 V DC	12 V DC
	Power Consumption	12V@1.52A (Intel® Atom™ J1900 CPU with 8GB 1333MHz DDR3 memory)	12V@4.78A (Intel® Core™ i7-4770EQ CPU with 4GB 1333MHz DDR3 memory)
Reliability	Mounting	Wall mount, VESA 75	Wall mount, VESA 75
	Operating Temperature	-20°C ~60°C	
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis	
	Operating Vibration	MIL-STD-810F 514.5C-1 (with SSD)	
Weight	Weight (Net/Gross)	1.1 kg/2 kg	1.1 kg/2 kg

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
EBC-2200-BT-R10	Embedded chassis for NANO-BT Series SBC with one 2.5" SATA hard drive bay, IO bracket, one LED cable, one power switch cable, one USB cable, RoHS, R10
EBC-2200-QM87-R10	Embedded chassis for NANO-QM87 Series SBC with one 2.5" SATA hard drive bay, IO bracket, one LED cable, one power switch cable, one USB cable, RoHS, R10

Options

Part No.	Description
32231-000100-200-RS	DIO cable, 150 mm, 2x5 pin
32205-001400-200-RS	RS-232 cable, 200 mm, 2x5 pin
32107-004000-100-RS	Audio cable, 250 mm, two 3.5 mm phone jacks with nut
63040-010060-120-RS	Power adapter, FSP060-DIBAN2, 90 V~264 V AC, 60 W, 12 V DC, ErP
31100-000272-RS	Fan, +12 V DC, 4-pin, YEN SUN, 40 mm x 40 mm x 15 mm, 6000 RPM

Packing List

1 x QIG	2 x Wall mount bracket	1 x Screw set
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EBC-2100

Embedded Chassis for EPIC NANO Series



Features

- Fanless system with AMD LX-800
- Complete I/O interfaces, including LAN, COM, four USB
- Single 12V DC power input, AT mode only
- DDR support up to 1GB

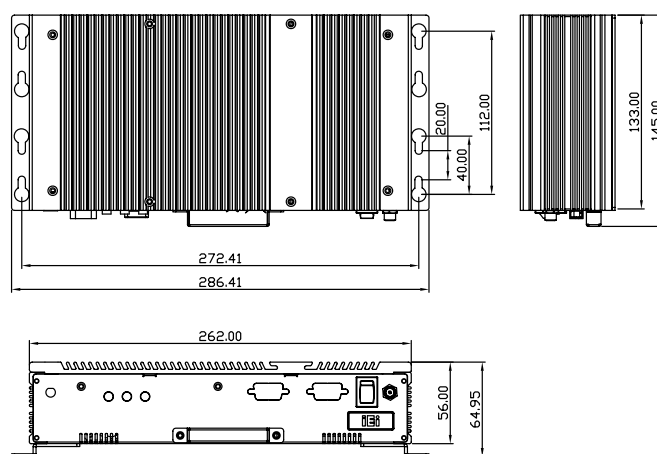
Specifications

Model Name		EBC-2100
Platform		Case only
Chassis	Color	Cool gray
	Dimensions (WxDxH) (mm)	262 x 134 x 56
	System FAN (WxDxH) (mm)	40 x 40 x 10 (optional)
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	NANO-LX
	SBC Size (mm)	EPIC (165 x 115)
	Processor	Refer to SBC
	Chipset	Refer to SBC
	System Memory	Refer to SBC
Storage	Hard Drive	1 x 2.5" SATA HDD drive bay
	CF Card/CFast	1
I/O Interfaces	PS2 (KB/MS)	1
	USB 2.0	4
	Ethernet	1 x Realtek 8100C
	COM Port	1+2 RS-232*
	LPT	1*
	Display	1 x VGA
	Audio	3 x Audio jack*
	Wireless	N/A
Expansions	PCIe Mini	N/A
	Others	1 x PCI-104
Power	Power Input	12 V DC in, AT mode only
	Power Consumption	12V@0.92A (AMD LX800 CPU with 400MHz 256MB DDR RAM)
Reliability	Mounting	Desktop, wall mount
	Operating Temperature	0°C ~ 50°C
	Operating Shock	Half-sine wave 3G, 11ms 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-1
	Weight (Net/Gross)	1 kg/3 kg

*Optional items

**The system with hard drive can meet the standard testing MIL-STD-810F 514.5C-1; the system with SSD/CF can pass MIL-STD-810F 514.5C-2.

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
EBC-2100-R41	Embedded chassis for NANO-8522/LX, compatible with 2.5" SATA hard drive, 60W power adapter with ERP and PSE certificates, sliver, RoHS

Options

Part No.	Description
32221-001000-101-RS	44-pin IDE cable for 2.5" hard drive
32801-000205-100-RS	2.5" SATA HDD cable with 2-pin WAFER 2.0mm power cable, for NANO-945GSE-N270 in EBC-2101, 20cm
CF-PV4010-R10	4010 system fan, +12V ball bearing

Packing List

- 1 x 12V 60W power adapter
- 1 x Power cord
- 1 x Screw set
- 1 x Wall mount kit
- 1 x QIG



Wall mount bracket

EBC-1100

Embedded Chassis for 3.5" SBC



Features

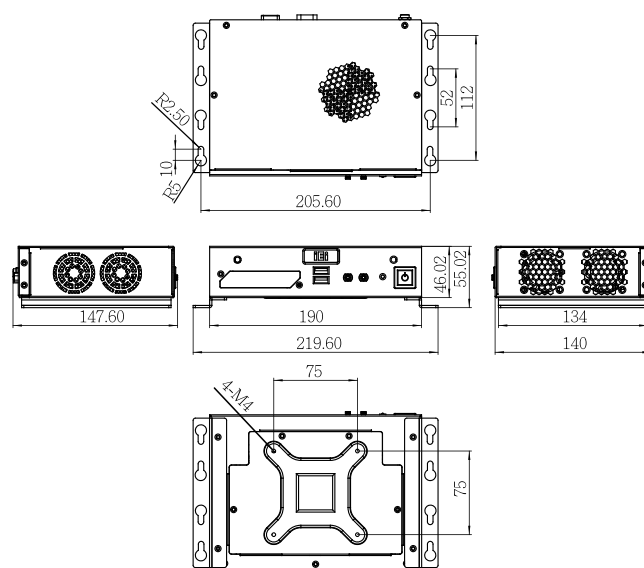
- Designed for WAFER-BT-E38001W2 SBC with single voltage input
- One 2.5" hard drive capacity and two PCIe Mini expansion slots
- On-board memory and on-board SSD for choice
- Flexible E-Window tool kit support
- 40°C ~ 75°C wide temperature support



Specifications

Model Name		EBC-1100
Platform		Chassis only
Chassis	Color	Black
	Dimensions (WxDxH) (mm)	190 x 140 x 46
	System Fan (WxDxH) (mm)	Refer to MB
	Chassis Construction	Aluminum alloy with heavy duty metal
Motherboard	Motherboard Model	WAFER-BT-E38001W2
	Processor	Intel® Atom™ E3800 series on-board SoC
	Chipset	SoC
	System Memory	4GB solder-down 1066/1333 MHz DDR3L memory for E3845 2GB solder-down 1066/1333 MHz DDR3L memory for other SKUs
Storage	Hard Drive	1 x 2.5" SATA 6Gb/s HDD/SSD drive bay
	Storage	On-board SSD colay SATA1 (optional) 1 x mSATA colay SATA2 1 x microSD socket
System Function	USB 3.1 Gen 1	1
	USB 2.0	3
	Ethernet	2 x RJ-45 LAN1: Intel® I210-IT PCIe controller LAN2: Intel® I210-IT PCIe controller
	COM Port	2 x RS-232 (RS-232 pin header is optional) 1 x RS-422/485 (pin header, optional)
	Display	1 x VGA
	Resolution	VGA (up to 2560x1600@60Hz)
	Audio	1 x Line-out, 1 x Mic-in
	LED Indicator	Power, HDD
	Wireless	802.11b/g/n 2T2R (optional)
	Expansions	2 x Full-size PCIe Mini slot
Power	Power Input	DC jack: 12 V DC
	Power Consumption	12 V @ 1.32 A (Intel® Atom™ E3845 processor)
Reliability	Mounting	Wall mount, VESA 75
	Operating Temperature	E3845 (10W): -40°C ~ 50°C without fan module/ -40°C ~ 75°C with fan module E3825 (6W): -40°C ~ 65°C without fan module
	Operating Shock	Half-sine wave shock 5G, 11ms, 3 shocks per axis
	Operating Vibration	MIL-STD-810F 514.5C-1 (with SSD)
	Weight (Net/Gross)	1.2 kg/2.2 kg

Dimensions (Unit: mm)



Ordering Information

Part No.	Description
EBC-1100-BTW2-R10	Embedded chassis for WAFER-BT-E38001W2 Series MB with one 2.5" SATA hard drive bay, IO bracket, one LED cable, one power switch cable, one USB cable, one audio cable, RoHS, R10

Options

Part No.	Description
63040-010060-120-RS	FSP060-DIBAN2, 90 V ~ 264 V AC, 60 W, 12 V DC, ErP
19FR124010BL-000001-RS	Fan module, +12 V DC, 3-pin, 40 mm x 40 mm x 10 mm, EVERFLOW, 5000 RPM, two ball bearing, L=250 mm
32205-004700-100-RS	RS-422/485 cable, 100 mm, P=2.0
32200-074500-RS	RS-232 cable, 150 mm, P=2.0
32801-003608-100-RS	SATA power cable kit, 150 mm
DK-75-R10	VESA 75 to DIN-rail mounting kit

Packing List

1 x QIG	1 x Wall mount bracket	1 x Screw set
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