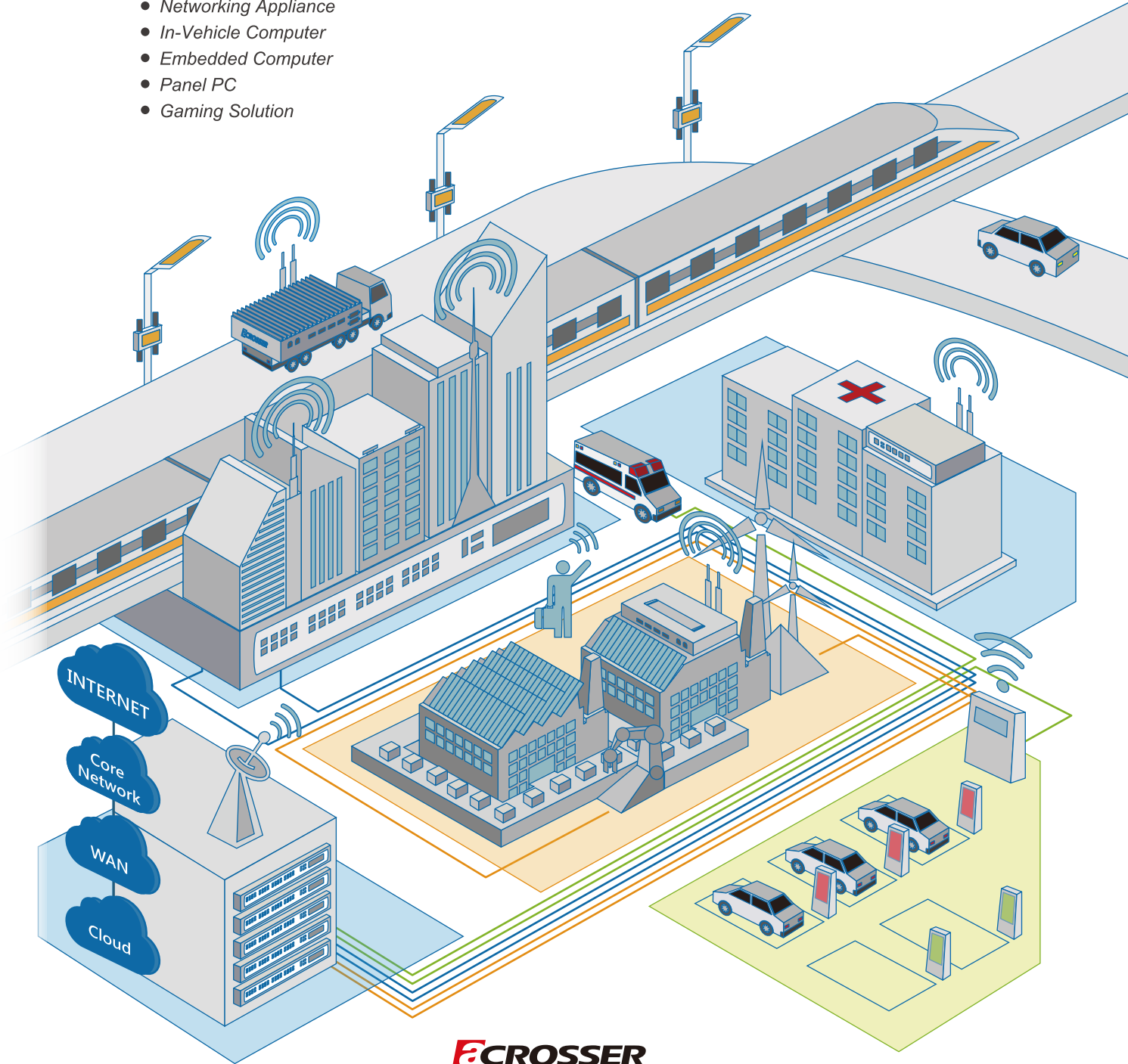


2018  
Vol. 1.0

# To Make Your *Embedded* Idea a Reality



- Networking Appliance
- In-Vehicle Computer
- Embedded Computer
- Panel PC
- Gaming Solution



# Company Profile

Founded in 1987, Acrosser is a global pioneer in the evolution of industrial computing. For several decades now, Acrosser had provided innovative embedded computer solutions and high-quality hardware products at very competitive prices to over thousands of customers world-wide, substantially helped them reduce time-to-market and gain high-level competence to succeed and win in the marketplace.



# Business Scope



## Wide Array of Standard Industrial PC Products

Acrosser designs a wide array of commercially-off-the-shelf(COTS) single board computer (SBC) products, all following International Open Standards. Acrosser manufactures SBCs; such as embedded PC/104(+), EPIC, embedded ATX, mini-ITX, industrial ISA, PCI, PCI-Express, among others. These products/ solutions provide easy-maintenance, faster-upgrade and offer international compatibility advantages; thereby saving your initial investment/s. Acrosser offers a broad range of product lines (SBCs, embedded) computers, panel PCs, networking appliances) that efficiently performs in various widely-used major operating systems such as: Windows®7, Windows®8, Windows®10, Linux Fedora, Linux Ubuntu, and many others.



## In-Depth and Versatile Applications Experience

Since 1987, Acrosser had and continues to assist its customers develop various embedded systems for different automation, such as: network security, wireless appliance, gaming, medical, industrial automation, surveillance, POS, KIOSK, digital signage, home and building automation, instrumentation, marine, military, transportation, etc. Acrosser's team of professionals has the necessary knowledge of the vertical markets, and can help its customers develop the right solutions to easily pass the required certificates in projects, such as: FDA for medical, GLI, Comma 6A for gaming, and FCC/ CE for al products.



## Top Quality Assurance with Long Life-Cycle Supply

Acrosser, through the years, had been and continues to be among preferred vendors of thousands of customers world-wide, some of which rank among the top Fortune 500 companies. Acrosser's implementation of 100% ESS (Environmental Stress Screen) burning, dynamic vibration and various functional tests on every mass production unit help its customers save from costly RMA repairs. As for its commitment to high quality products, Acrosser designs all products based on its embedded roadmap with a minimum 5-year product life. Along with a very strict revision control system, Acrosser provides its customers with stable, long term products supply.

Acrosser values and encourages participation from all its employees, and believes that everyone contributes to Acrosser's overall success. With a mission statement "Making Your Embedded Idea a Reality", Acrosser keeps its major promise to all its customers by continuously developing innovative solutions, and providing professional and cost-effective OEM/ODM/JDM custom design services in a timely manner. In the bottom-line, Acrosser will assist you and your company in becoming a market leader, and substantially help in building and achieving a win-win business partnership together.

**ACROSSER**

# Table of Contents

CPU/Chipset	Form Factor	Model No.	Page
<b>In-Vehicle Computer</b>			
Intel Q170	In-Vehicle PC	AIV-Q170V1FL	8
Intel Apollo Lake	In-Vehicle PC	AIV-APL1V1FL	10
Intel QM97	In-Vehicle PC	AIV-QM97V1FL	12
Intel HM76	In-Vehicle PC	AIV-HM76V1FL	14
	Car Monitor	AR-DP071VW	16
	Car Monitor	AR-DP080V	17
	Car Monitor	AR-DP080VW	18
	Car Monitor	AR-DP100VVD	19
<b>Gaming Platform</b>			
AMD Fusion	Proprietary Gaming Board	AMB-A55EG1	22
<b>Networking Appliance</b>			
Intel Purley Series	2U Rackmount	ANR-C627/622N1	28
Intel Purley Series	2U Rackmount	ANR-C627/622N1U	30
Intel PCH C236	1U Rackmount	ANR-C236N1	32
Intel Apolle Lake Series	1U Rackmount	ANR-APL1N1	34
Intel B75	1U Rackmount	ANR-IB75N2/A/B	36
Intel Bay Trail Celeron J1900 / J1800	1U Rackmount	ANR-J190/J180N2-C612	38
Intel Denverton Series	Desktop	AND-DNV3N1	40
Intel Apolle Lake Series	Microbox	AND-APL1N1FL	42
Intel Bay Trail Celeron J1900 / J1800	Microbox	AND-J190/J180N2-C612	44
AMD® G-Series	Microbox	AND-G420N1	46
<b>Embedded SBC</b>			
Intel Bay trail	Mini-ITX	AMB-BT45B1	50
Intel Bay trail	Mini-ITX	AMB-BT19T2	52
Intel XEON D	COM Express type 7	AMB-XD15MT	54
Intel HM76	COM Express type 6	AMB-HM76B1FL/76B1	55
Intel Celeron N2807	3.5"	AMB-BT28S2	56
Intel Bay trail	3.5"	AMB-BT19S1	57
DM&Vortex86DX Dx3	ISA Half-Size	AMB-VDX3H1	58
DM&Vortex86DX	ISA Half-Size	AR-B8172	59



CPU/Chipset	Form Factor	Model No.	Page
<b>Fanless Embedded System</b>			
Intel HM76	Fanless Embedded System	AES-HM76Z1FL	62
Intel Apollo lake	Fanless Embedded System	AES-APL1E1FL	64
<b>Panel PC</b>			
Intel Bay Trail Atom Celeron N2930	Industrial Panel PC	AR-PA807(P)FL	68
Intel Bay Trail Atom Celeron N2930	Industrial Panel PC	AR-PA808(P)FL	68
Intel Bay Trail Atom Celeron N2930	Industrial Panel PC	AR-PA810(P)FL	70
Intel Bay Trail Atom Celeron N2930	Industrial Panel PC	AR-PA812(P)FL	70
Intel Bay Trail Atom Celeron N2930	Industrial Panel PC	AR-PA815(P)FL	72
Intel Bay Trail Atom Celeron N2930	Industrial Panel PC	AR-PA817(P)FL	72
Freescale I.MX6 DualLite	Industrial Panel PC	APC-MX610FL/GFL/PFL	74
Freescale I.MX6 DualLite	Industrial Panel PC	APC-MX612FL/GFL/PFL	74
Freescale I.MX6 DualLite	Industrial Panel PC	APC-MX615FL/GFL/PFL	74
Intel Celeron N2930	Industrial Panel PC	APC-MX810FL/GFL/PFL	76
Intel Celeron N2930	Industrial Panel PC	APC-MX812FL/GFL/PFL	76
Intel Celeron N2930	Industrial Panel PC	APC-MX815FL/GFL/PFL	76

# Embedded SBC Intel CPU Support List

Process	Series	Processor number	Clock	L2	Socket	CPU TDP	AMB-BT45B1 Intel Bay Trail	AMB-BT19T2 Intel Bay Trail	AMB-HM76B1FL Intel HM76	AMB-HM76B1 Intel HM76	
22nm	Celeron	N3150	1.6GHz	2MB	FCBGA1170	6W					
22nm	CeleronHaswell i7	i7-4470TE	3.3GHz	8MB	FCBGA1150	45W					
	Haswell i5	i5-4590T	3.0GHz	6MB	FCBGA1150	35W					
	Haswell i5	i5-4570T	3.3GHz	4MB	FCBGA1150	35W					
	Haswell i3	i3-4350T	3.1GHz	4MB	FCBGA1150	35W					
	Haswell i3	i3-4330TE	2.4GHz	4MB	FCBGA1150	35W					
	Haswell i3	i3-4340TE	2.6GHz	4MB	FCBGA1150	35W					
	Ivy Bridge i7	i7-3517UE	1.7GHz	4MB	FCBGA1023	17W			●	●	
	Ivy Bridge i7	i7-3615QE	2.3GHz	6MB	FCBGA1023	45W					
	Ivy Bridge i7	i7-3770	3.4GHz	8MB	FCBGA1155	77W					
	Ivy Bridge i5	i3-3550S	3 GHz	6MB	FCBGA1155	65W					
	Ivy Bridge i3	i3-3217UE	1.6GHz	3MB	FCBGA1023	17W			●	●	
	Celeron	1047UE	1.4GHz	2MB	FCBGA1023	17W			●	●	
	Celeron	J1900	2.42GHz	2MB	FCLGA1170	10W	●	●			
	Atom Quad-Core	N3845	1.91GHz	2MB	FCBGA1170	10W	●	●			
	Celeron	N2807	1.58GHz	1MB	FCBGA1170	4.3W					
Atom Single-Core	D3815	1.46GHz	512KB	FCBGA1170	10W	●	●				
32nm	Sandy Bridge i3	i3-2120	3.3GHz	3MB	FCBGA1155	65W					
	Atom Dual-Core	N2800	1.86GHz	1MB	FCBGA559	6.5W					
	Atom Dual-Core	D2550	1.86GHz	1MB	FCBGA559	10W					
AMD	AMD G-series	T56N	1.6GHz	1MB	BGA413	18W					

Processor number	AMB-BT28S2 Intel N2807	AMB-BT19S1 Intel Bay Trail										
N3150												
i7-4470TE												
i5-4590T												
i5-4570T												
i3-4350T												
i3-4330TE												
i3-4340TE												
i7-3517UE												
i7-3615QE												
i7-3770												
i5-3550S												
i3-3217UE												
1047UE												
J1900		●										
E3845		●										
N2807	●											
E3815		●										
i3-2120												
N2800												
D2550												
T56N												

# Product Matrix

## In-Vehicle Computers



Form Factor	In-Vehicle Computer			
Model Name	AIV-Q170V1FL	AIV-APL1V1FL	AIV-QM97V1FL	AIV-HM76V1FL
<b>Specification</b>				
CPU	Intel® Sky-lake-S i7-6700 TE / i5-6500 TE / i3-6100 TE	Intel® Atom™ x7-E3950 Intel® Atom™ x5-E3930	Intel Core i7 5650U / i5 5350U / i3 5010U	Intel Core i7 3517UM / i3 3217UE / Celeron 1047UE
Memory	2 x DDR4-SO-DIMM support up to 32GB	1 x DDR3L SO-DIMM, support up to 8GB	2 x DDR3L SO-DIMM, up to 16GB	2 x DDR3L SO-DIMM, up to 16GB
<b>Video</b>				
Video Interface	1 x HDMI (With locking bracket) 1 x VGA 1 x DVI-D	1 x VGA port (DB15) 1 x DVI connector	1 x HDMI type A connector 1 x DVI-D connector	2 x HDMI type A connector 1 x Combo connector
<b>Storage</b>				
SATA	2 x SATA III port	2 x SATA II port	1 x SATA III port	1 x SATA III port
SSD			1 x M.2 SSD	
CF	1 x CF		1 x External CF socket	1 x External CF socket
Disk Bay	2 x Anti-shock 2.5" HDD Bay with easy swappable bracket	2 x Anti-shock 2.5" HDD Bay with easy swappable bracket	1 x Anti-shock 2.5" SDD Bay with Anit-vibration / Anit-shock	1 x Anti-shock 2.5" HDD Bay with easy swappable bracket
<b>I/O</b>				
Expansion Slot	3 x mini PCIe	3 x mini PCIe	1 x mini PCIe	2 x mini PCIe
Ethernet	4 x POE GbE LAN	2 x GbE LAN	2 x GbE LAN	2 x GbE LAN
Serial Port	3 x RS232 4 x RS232/422/485	3 x RS232 1 x RS232/422/485	2 x RS232 1 x RS422/485	3 x RS232 1 x RS232/422/485
USB	8 x USB 3.0	4 x USB 3.0	2 x USB 3.0 2 x USB 2.0	3 x USB 3.0 1 x USB 2.0 (Combo)
GPIO	4 In, 4 Out	4 In, 4 Out	4 In, 4 Out	4 In, 4 Out
Audio	3 x Audio jack	1 x MIC in, 1 x Audio out	1 x MIC in, 1 x Audio out	1 x MIC in, 1 x Audio out
Remote Control	1 x Remote control switch	1 x Remote control switch	1 x Remote control switch	1 x Remote control switch
SIM	2 x External SIM Slot	2 x External SIM Slot	1 x External SIM Slot	1 x External SIM Slot
Can Bus (2.0A/2.0B)	YES	YES	YES	YES
iButton			1-Wire interface	1-Wire interface
<b>Power Requirement</b>				
Wide Range Input	DC 9V ~ 36V	DC 9V ~ 36V	DC 9V ~ 32V	DC 9V ~ 32V
Power Output			DC 12V (Combo)	DC 12V (Combo)
<b>Software</b>				
OS Support	Windows 10 Enterprise Linux Kernel 4.4	Windows 10 Enterprise Linux Kernel 4.4	Windows 7 / Windows 8.1 Fedora 21 / Ubuntu 15.04	Windows 7 / Windows Embedded Fedora 14 / Ubuntu 10
<b>Mechanical &amp; Environment</b>				
Dimension	270 x 170 x 63 mm	260 x 195 x 80 mm	290 x 190 x 45 mm	290 x 190 x 35 mm
Weight	6.2 Kg	4 Kg	4 Kg	3 Kg
Operating Temp	-25 ~ 60°C (-13 ~ 140°F)	-25 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)	0 ~ 60°C (32 ~ 140°F)
Vibration/Shock/Safety	Comply IEC 60068-2-64 / Comply IEC 60068-2-27 / CE, FCC Class B, E-Mark 13			
<b>Optional Wireless Module</b>				
3.5G	GPRS/EDGE/WCDMA/HSUPA/HSDPA			
GPS / WiFi / Bluetooth	YES, IEEE 802.11 b/g/n, YES			
<b>Reference</b>				
Page	8	10	12	14

# Product Matrix

## In-Vehicle Monitors



Form Factor	In-Vehicle Monitors	
Model Name	AR-DP071VW	AR-DP080V
Panel Size	7" Wide Screen (16:9)	8" Screen (4:3)
Resolution	640 x 480~1920 x 1080 pixels	640 x 480~1600 x 1024 pixels
Luminance	400 nits (cd/m2)	600 nits (cd/m2)
View Angle(T/B/L/R)	50/70/70/70 deg.	40/60/60/60 deg.
Backlight Lifetime	20,000 hours	20,000 hours
Operating Temp	-30~85°C	-10~60°C
Power Consumption	12W	10W
<b>I/O Combo cable (One-to-VGA / USB / Audio / DC interface)</b>		
Video	VGA (DB15)	VGA (DB15)
Touch Screen	4-Wire Resistive USB interface	4-Wire Resistive USB interface
Audio	3.5mm stereo Jack	3.5mm stereo Jack
DC	DC Jack (12V ~ 24V)	DC Jack (12V)
<b>Reference</b>		
Page	16	17

## In-Vehicle Monitors



Form Factor	In-Vehicle Monitors	
Model Name	AR-DP080VW	AR-DP100V / VD
Panel Size	8" Wide Screen (16:9)	10.4" Screen (4:3)
Resolution	640 x 480~1600 x 1024 pixels	640 x 480 pixels~1024 x 768 pixels
Luminance	400 nits (cd/m2)	300 nits (cd/m2)
View Angle(T/B/L/R)	40/60/60/60 deg.	50/60/75/75 deg.
Backlight Lifetime	20,000 hours	LED
Operating Temp	-30~85°C	-10~ 60°C
Power Consumption	10W	12W
<b>I/O Combo cable (One-to-VGA / USB / Audio / DC interface)</b>		
Video	VGA (DB15)	VGA (DB15) + DVI (Optional)
Touch Screen	4-Wire Resistive USB interface	4-Wire Resistive USB interface
Audio	3.5mm stereo Jack	3.5mm stereo Jack
DC	DC Jack (12V)	DC Jack (12V ~ 24V)
<b>Reference</b>		
Page	18	19



# AIV-Q170V1FL

Fan-less PC Sky-lake S TE Ver CPU with 4 x POE smart power system



## Features

- Support 4 X POE GbE LAN port with RJ45 connector
- Support 2 x swappable 2.5 inch SSD bay
- Support 3 x Mini PCI-e (For 4G & GPS module with 2 x SIM card Socket)



## Specification

### System

CPU	Intel® Sky-lake-S 6th Gen Core™ i7-6700 TE Intel® Sky-lake-S 6th Gen Core™ i5-6500 TE Intel® Sky-lake-S 6th Gen Core™ i3-6100 TE
Chipset	Intel® Q170 chipset
Memory	2 x DDR4-SO-DIMM

### Video

Chipset	Intel® HD Graphics 530
Video Memory	Integrated
Video Interface	1 x HDMI (With locking bracket) 1 x VGA 1 x DVI-D

### Storage

SATA	2 x SATA III port
Disk Bay	2 x swappable 2.5 inch SSD bay
CF	1 x CF

### I/O

Ethernet	2 x GbE, RJ45, Intel i210IT chipset
PoE	4 X POE GbE LAN port with RJ45 connector (802.3at ,total 60W max)
USB	8 X USB 3.0
Serial Port	4 X COM - DB9 (RS232/RS422/485)
CAN Bus	CAN Bus 2.0B / OBD II (J1939) for BOM Option
GPIO	GPIO 4-in / 4-out,
Audio	3 x Audio jack Green: Audio out Blue: Remote switch Pink : Mic in
Mini-PCI-e	3 x Mini PCI-e socket
SIM Card	2 x SIM card Socket

### Others

WatchDog Timer	1~255 sec. software programmable(0=Disable)
TPM	On-board TPM 1.2 / 2.0 for optional
G Sensor	1 x G Sensor board

### Software

OS Support	Windows 10 (64 bit) / Linux kernel to 4.4 or above(64 bit)
------------	--

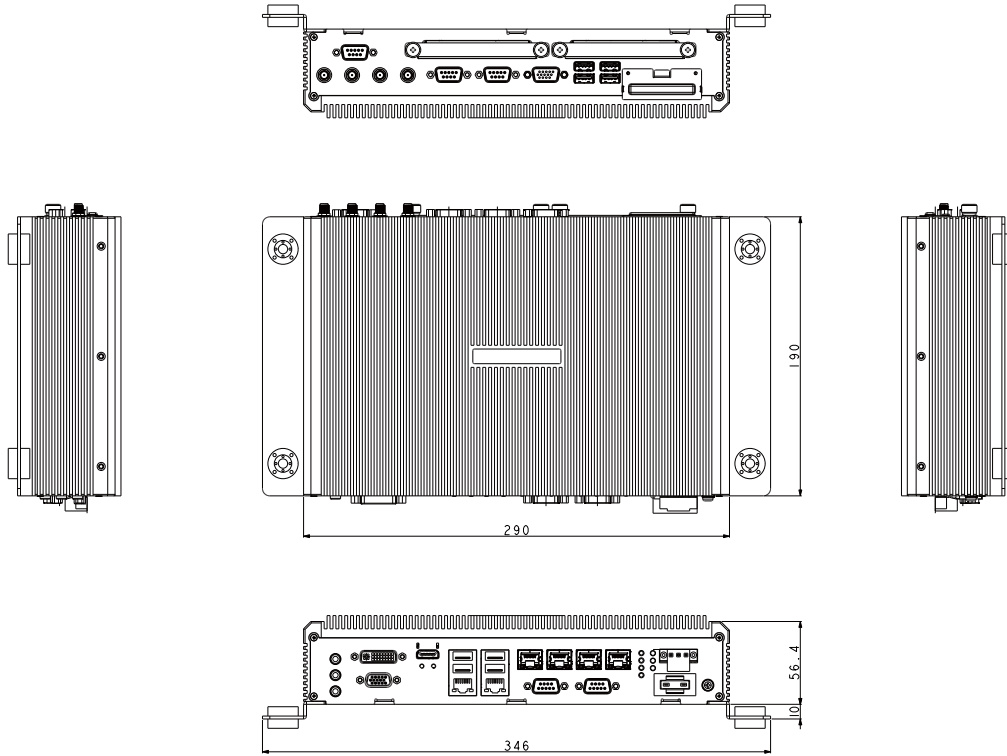
### Power Requirement

Power Input	Power sub system spec:16~75 V power input
-------------	---

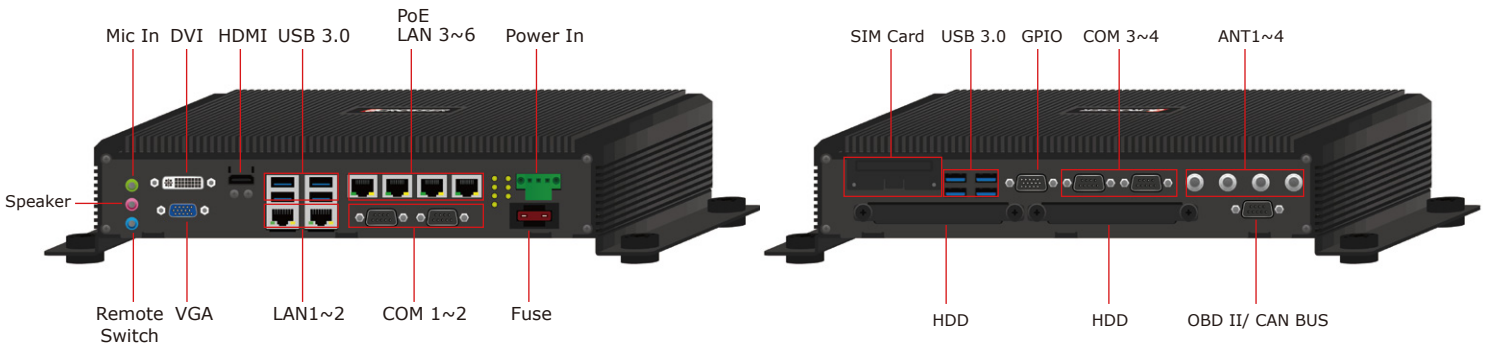
### Mechanical & Environment

Dimension	270mm x 170 mm x 63 mm
Operating Temp.	-25 ~ 60°C
Chassis	Aluminum extrusion heat sink & metal chassis
Thermal Design	Fan less
Weight	6.2 Kg
Storage Temp	-40~80°C (-40~176°F)
Safety	CE / FCC class B / E Mark ,

## Dimension



## I/O Connectors



## Packing List

- 1 x AIV-Q170V1FL
- 1 x System Driver CD
- 1 x Terminal block female 3pin
- 1 x HDMI locking bracket
- 1 x 8 bit GPIO/CAN Cable
- 1 x Remote switch cable

## Ordering Information

AIV-Q170V1FL      AIV-Q170V1FL (CAN BUS 2.0)  
 AIV-Q170V1FL-OBDD      AIV-Q170V1FL-OBDD (OBDD II)

## Optional Module List

- Sierra MC7354 (4G + GPS + Glonass module)
- Sierra MC7304 (4G + GPS + Glonass module)
- Sparklan 251NBT(2T2R) Wi-Fi + BT a/b/g/n
- RTL8812AEACC-01 (2T2R) Wi-Fi + BT a/b/g/n/ac
- G sensor Board (ADXL345)
- 4GB DDR4 2133 SO-DIMM 1Rx8
- 8GB DDR4 2133 SO-DIMM 2Rx8

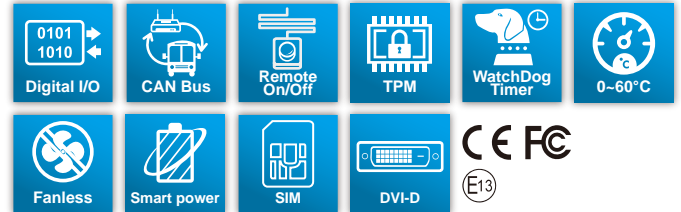
# AIV-APL1V1FL

New Intel Pentium-N4200 Fan Less In-Vehicle Computer



## Features

- Rugged fan-less design
- Support New Intel Pentium N4200 processors
- 1 x DDR3L 1866 MHz SO-DIMM, up to 8GB
- Support CAN 2.0A/2.0B & J1939 protocol(Optional)
- VGA & DVI video output
- Support 4 Channel analog Capture card
- 2 x swappable 2.5" HDD bay
- TPM 1.2 / 2.0
- Variety Wireless Communication



## Others Feature

WatchDog Timer 1~255 sec. software programmable

## Software

OS Support Windows 10 (64 bit)& Linux kernel to 4.4 or above(64 bit)

## Power Requirement

Power Input 9~36 V

## Mechanical & Environment

Dimension 260mm x 195mm x 63mm  
 Operating Temp. -25°C ~ 60°C  
 Vibration IEC 60068-2-64, 5~500Hz, 3GRMS(SSD)  
 Shock IEC 60068-2-27, 50G 500m/s<sup>2</sup> 11MS  
 Storage Temp -40~80°C (-40~176°F)  
 Safety CE, FCC class B, E-Mark

## Smart In-Vehicle Power Management

O/S Anti-Crash Smart O/S boot/shut-down control by power subsystem  
 System boot / Shut-down delay Delay time from 0 seconds to 60 minutes setting in BIOS  
 System boot fail retry 3 times boot fail retry  
 Power on/off switches
 

- System power switch by remote cable switch
- System power input serial connection to car battery and ignition switch

 Car battery protection Low battery voltage monitoring and configurable auto shutdown low battery voltage level

## Specification

### System

CPU	Intel® Pentium™-N4200
Chipset	Intel Apollo lake SoC
Memory	1 x DDR3L 1866 MHz ,SO-DIMM, support up to 8GB

### Video

Graphic Controller	Intel HD Graphics 505
Video Interface	1 x VGA port (DB15) ,1 x DVI

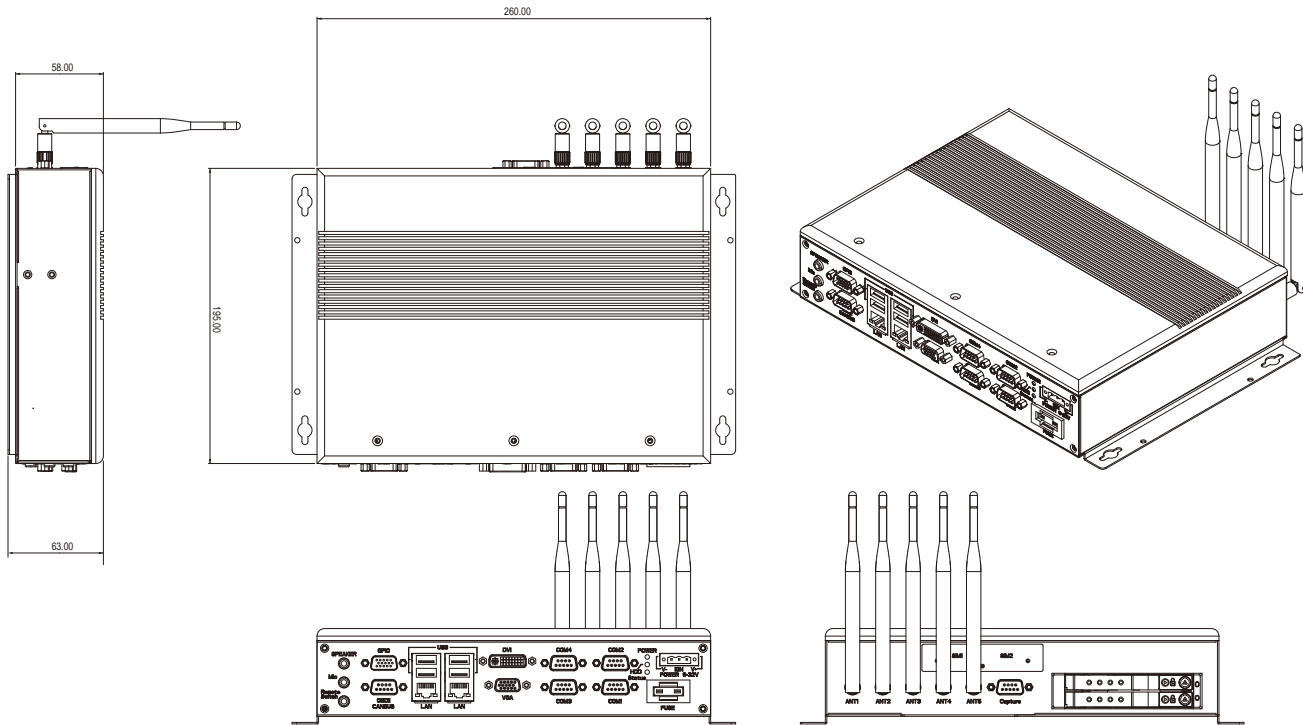
### Storage

SATA	2 x SATA III port
Disk Bay	2 x swappable 2.5" Disk bay with Anti-vibration/ Anti-shock solution for SSD only

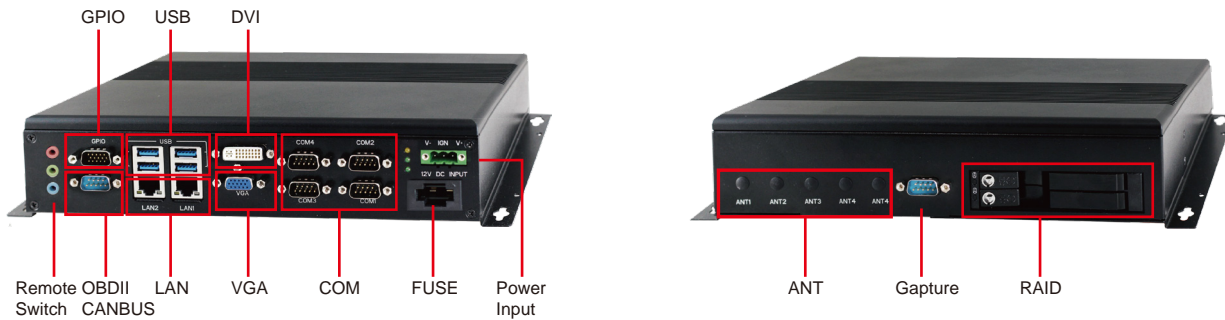
### I/O

Expansion Slot	3 x Mini PCI-e(Reserve for Wi-Fi and 4G LTE)
Ethernet	2 x GbE RJ45, Intel i210AT
Serial Port	1 x RS-232/422/485 3 x RS-232
USB	4 X USB 3.0
GPIO	8-bit GPIO (4 In, 4 Out)
Audio	1 x MIC in 1 x Audio out
Antenna Hole	1 x SMA for GPS 1 x SMA for 4G 2 x SMA for Wi-Fi & Bluetooth
SIM	SIM Slot x 2, SIM card changeable without opening case, latch to protect SIM uncertainly touch
CAN BUS	DB9 connector, support CAN 2.0A/2.0B protocol (J1939 for optional)
TPM	On-board TPM 1.2 / 2.0(Optional)

## Dimension



## I/O Connectors



## Packing List

- 1 x AIV-APL1V1FL
- 1 x User Guide CD with driver
- 1 x GPIO/CAN Cable
- 1 x Terminal block (Plug-DC connector)
- 1 x Remote Switch Cable
- 1 x Antenna for GPS (option)
- 2 x Antenna for Wi-Fi & Bluetooth (option)
- 1 x Antenna for 4G LTE (option)
- 1 x Spare Fuse

## Ordering Information

AIV-APL1V1FL-PT1 AIV-APL1V1FL- Intel Pentium N4200+CAN 2.0  
 AIV-APL1V1FL-PT1OB AIV-APL1V1FL- Intel Pentium N4200+OBD II

## Optional Modules

EC20/EC25	Quectel 4G + GPS + Glonass module
MC7304/MC7354	Sierra 4G + GPS + Glonass module
RTL8812AEACC-01	Realtek (2T2R) Wi-Fi+BT a/b/g/n/ac
251NBT	Sparklan (2T2R) Wi-Fi+BT a/b/g/n
SC330N4	Yuan Analog Capture card 4ch With Testing Cable
G-SenSor	G-SenSor board

# AIV-QM97V1FL

All new Fanless In-Vehicle system, Intel Core i3/i5/i7 Broadwell U with smart power system, GPS/ 4G LTE/ WiFi/ Bluetooth/ M.2 SSD option module



## Features

- Rugged fanless design
- Support Intel 5th generation Core i Broadwell U processors
- 2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
- Support CAN 2.0A/2.0B protocol and i-Button for driver ID
- HDMI & DVI-D output
- Wide variety of wireless communication options
- M.2 SSD & M.2 4G LTE support



## Specification

### System

CPU	Intel Core i3 5010U / i5 5350U / i7 5650U
Chipset	Intel QM97
Memory	2 x DDR3L-1600MHz, SO-DIMM, up to 16GB (non-ECC)

### Video

Graphic Controller	Intel® HD Graphics 6000
Video Memory	DVMT
Video Interface	1 x HDMI type A connector 1 x DVI-D connector

### Storage

SATA	1 x SATA III port with power connector
SSD	1 x M.2 SSD
Disk Bay	1 x swappable 2.5" SSD bay with Anti-vibration / Anti-shock solution

### Communication

Ethernet	2 x Intel GbE chip via RJ-45 connector (Intel i210IT)
USB	2 x USB 3.0, 2 x USB 2.0
Serial Port	2 x RS232 (2 x DB9) 1 x RS422/RS485 (Select by GPIO)

### I/O

Expansion Slot	mini PCIe Socket supported for WiFi+BT.
GPIO	8-bit GPIO (4 In, 4 Out)
Antenna Hole	1 x SMA for GPS, 1 x SMA for 4G LTE, 2 x SMA for WiFi, 1 x SMA for Bluetooth
SIM	SIM Slot x 1, SIM card changeable without opening case
Security	Support i-Button for driver ID
CAN Bus	Support CAN 2.0A/2.0B protocol

### Software

OS Support	Windows 7, Windows 8.1, Fedora 21, Ubuntu 15.04
------------	---

### Others Feature

Audio	Audio Codec (Line-out & MIC)
Hardware Monitor	CPU voltage and temperature
WatchDog Timer	0~255 sec. software programmable
Indicator	Power / HDD/ Status LED

### Power Requirement

Power Input	9~32 V (+/-5%) single voltage input, 3 poles terminal block
-------------	--

### Mechanical & Environment

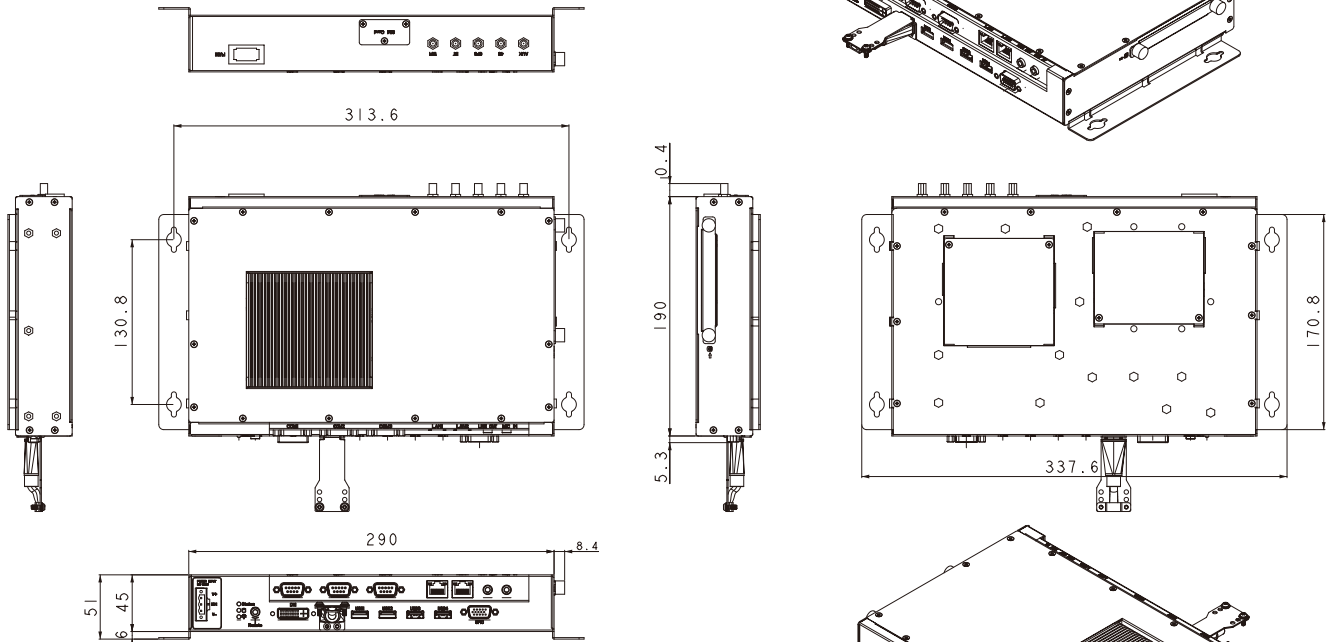
Thermal Design	Fanless
Chassis Material	Metal SPGC (Black printing color)+ Aluminum heatsink
Vibration	IEC 60068-2-64, 5~500Hz, 3GRMS(CF/SSD), Operating with SSD
Shock	IEC 60068-2-27, 50G 500m/s <sup>2</sup> 11MS, Operating with SSD
Dimension	290mm x 190mm x 45mm
Weight	4 kg
Operating Temp.	0~60°C
Storage temp.	-40~80°C
Relative Humidity	0~90% @ 40°C, non-condensing
Safety	CE, FCC class B, E-Mark

### Smart In-Vehicle Power Management

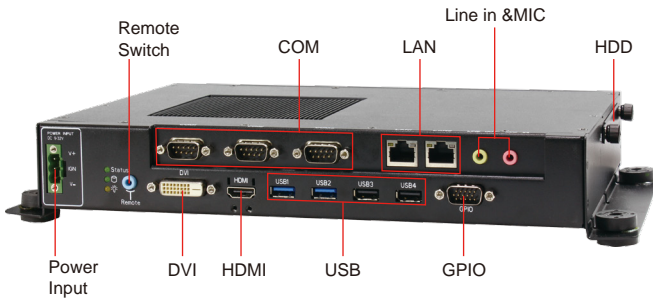
O/S Anti-Crash	Smart O/S boot/shut-down control by power subsystem
System boot / Shut-down delay	Delay time from 0 seconds to 60 minutes setting in BIOS
Power on/off switches	<ul style="list-style-type: none"> <li>• System power switch by remote cable switch</li> <li>• System power input serial connection to car battery and ignition switch</li> </ul>
Car battery protection	Low battery voltage monitoring and configurable auto shutdown low battery voltage level



## Dimension



## I/O Connectors



## Packing List

- 1 x AIV-QM97V1FL
- 1 x User Guide & System Driver CD
- 1 x Screw pack(2.5" HDD bracket: 4pcs)
- 1 x Terminal block female 3pin
- 1 x Spare Fuse 10A
- 1 x GPIO/CAN/Driver ID DB15 Cable
- 1 x Remote Switch Cable
- HDMI locking bracket

## Ordering Information

AIV-QM97V1FLCi3 AIV-QM97V1FLCi3 with Intel Core i3 5010U

AIV-QM97V1FLCi5 AIV-QM97V1FLCi5 with Intel Core i5 5350U

AIV-QM97V1FLCi7 AIV-QM97V1FLCi7 with Intel Core i7 5650U

## Optional Modules

Sierra 7355/7305 4G LTE & GPS module

Sparklan 251N(BT) 802.11 WiFi+BT module

Transcend TS128GMTS800 /M.2 TYPE 2280-D2-B-M / SATA SSD / 128GB

# AIV-HM76V1FL

Fanless In-Vehicle system, Intel Core i7/i3, Celeron + HM76 with smart power system, GPS/4G/WiFi/Bluetooth, card option module



## Features

- Rugged fanless design
- Integrated Intel 3rd generation Core i ULV processors with HM76 chipset
- 2 x DDR3L-1333/1600MHz, SO-DIMM, up to 16GB
- Support CAN 2.0A/2.0B protocol and i-Button for driver ID
- VGA/HDMI/ output
- Variety Wireless Communication
- Combo connector to simplify touch monitor installation



## Specification

### System

CPU	Intel Core i7 3517UE / i3 3217UE / Celeron 1047UE
Chipset	Intel HM76
Memory	2 x DDR3L-1333/1600MHz, SO-DIMM, up to 16GB

### Video

Graphic Controller	Integrated in Processors
Video Memory	DVMT
Video Interface	2 x HDMI type A connector 1 x dedicated combo connector (VGA/USB/audio/power)

### Storage

SATA	1 x SATA III port with power connector
CF	1 x Compact Flash Type I/II slot support UDMA 33
Disk Bay	1 x swappable 2.5" HDD bay with Anti-vibration / Anti-shock solution

### Communication

Ethernet	2 x Intel GbE chip via RJ-45 connector
USB	3 x USB 3.0 connector
Serial Port	3 x RS232, 1 x 422/485 (Select By GPIO)

### I/O

Expansion Slot	2 x mini PCIe (For Optional 4G / Wifi module only)
GPIO	8-bit GPIO (4 In, 4 Out)
Antenna Hole	1 x SMA for GPS, 1 x SMA for 3.5G, 2 x SMA for WIFI 1 x SMA for Bluetooth
SIM	SIM Slot x 1, SIM card changeable without opening case
Security	Support I-Button for driver ID
CAN Bus	Support CAN 2.0A/2.0B protocol

### Software

OS Support	Windows 7(32/64 bit) / Embedded(32 bit) Fedora 17(32/64 bit)14 / Ubuntu 12.10(32/64 bit)
------------	---

### Others Feature

Audio	Audio Codec (Line-out & MIC)
Hardware Monitor	CPU voltage and temperature RTC battery voltage (Voltage, 12V/5V/3.3V)
WatchDog Timer	0~255 sec. software programmable
Indicator	Power / HDD/ Stauts LED

### Power Requirement

Power Input	9~32 V (+/-5%) single voltage input, 3 pole terminal block
Out Put Voltage	12V DC, 120W

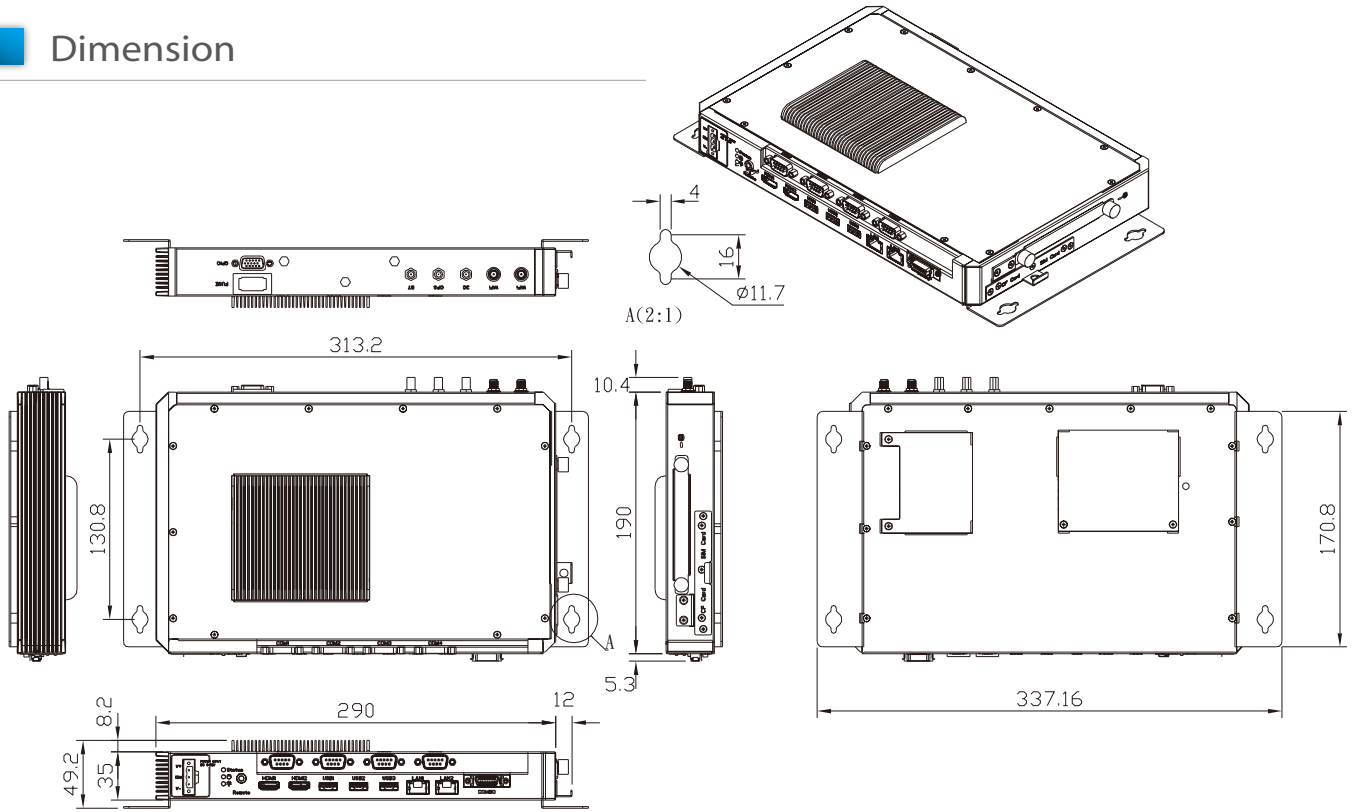
### Mechanical & Environment

Thermal Design	Fanless
Chassis Material	Sheet metal(Silver, printing color with Acrosser logo)
Vibration	IEC 60068-2-64, 5~500Hz, 3GRMS(CF/SSD), Operating with SSD
Shock	IEC 60068-2-27, 50G 500m/s <sup>2</sup> 11MS, Operating with SSD
Dimension	290mm x 190mm x 35mm
Weight	3 kg
Operating Temp.	0~60°C (32~140°F)
Storage temp.	-40~80°C (-40~176°F)
Relative Humidity	0~90% @ 40°C, non-condensing
Safety	CE, FCC class B , E-Mark

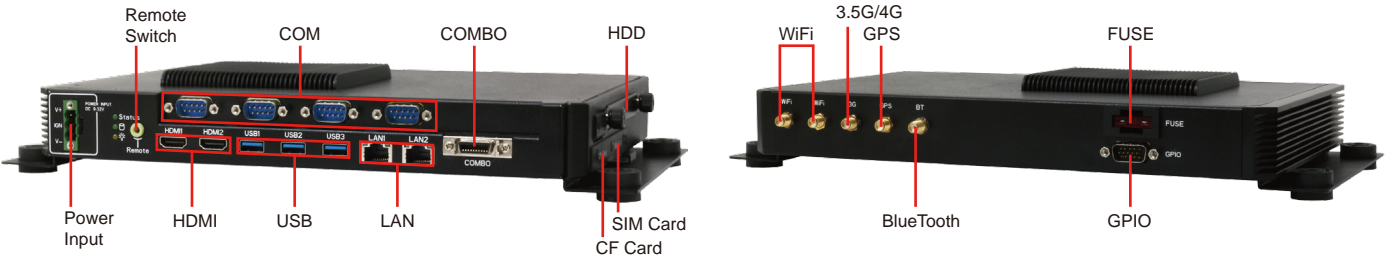
### Smart In-Vehicle Power Management

O/S Anti-Crash	Smart O/S boot/shut-down control by power subsystem
System boot / Shut-down delay	Delay time from 0 seconds to 60 minutes setting in BIOS
System boot fail retry	3 times boot fail retry
Power on/off switches	<ul style="list-style-type: none"> <li>• System power switch by remote cable switch</li> <li>• System power input serial connection to car battery and ignition switch</li> </ul>
Car battery protection	Low battery voltage monitoring and configurable auto shutdown low battery voltage level

## Dimension



## I/O Connectors



## Packing List

- 1 x AIV-HM76V1FL
- 1 x Quick Guide
- 1 x User Guide & System Driver CD
- 1 x Screw pack(2.5"HDD bracket: 4pcs)
- 1 x Terminal block female 3pin(for power input)
- 1 x Spare Fuse 10A
- 1 x GPIO/CAN/Driver ID DB15 Cable
- 1 x Remote Switch Cable
- 1 x One to Many Combo Cable(Combo to VGA/USB/Audio/DC Cable)

## Ordering Information

AIV-HM76V1FLC7	AIV-HM76V1FL with Intel Core i7 3517UE
AIV-HM76V1FLC3	AIV-HM76V1FL with Intel Core i3 3217UE
AIV-HM76V1FLCE1	AIV-HM76V1FL with Intel Celeron 1047UE

## Optional Modules

100070085	Sierra MC8705 with RF cable, Cable Antenna
100070067	WIESON ZYM-5020,RF Cable ,Cable Antenna (L=5M)
100070086	Intel Centrino N6205 802.11 a/b/g/n WiFi module, RF Cable, Antenna x 2
100070066	Qcom QBTM400-01,RF Cable, Antenna

# AR-DP071VW

7-Inch (16:9) Monitor with VGA, USB Touch Screen



## Features

- 7-Inch (16:9) Wide Screen
- LED Backlight with Low Power Consumption
- Resistive Touch Screen
- VESA75 Mounting and Stand
- DC 12~24V Power Input



CE FCC E13

## Specification

### Panel

Panel Size	7-Inch Screen (16:9)
Resolution	Supports 640 x 480 ~ 1920 x 1080 pixels
Luminance (cd/m2)	400 nits
View Angle (H/V)	H:140 / V:120
Backlight Lifetime	20,000 hours
Touch Screen Type	4-wire Resistive

### I/O

Video Interface	1 x VGA
USB	1 x USB for Touch Screen
Audio	1 x Audio Input Jack

### Power Requirement

Power Input	DC 12~24V, with Adapter
-------------	-------------------------

## Software

TouchKit Driver Support	Windows vista / 9X / Me / NT4.0 / 2000 / XP / E.NET / CE 2.12/3.0, Embedded/ Dos, Mac OS 9X / OS X(Intel CPU) Linux Readme / Mandrake / Red Hat / Fedora Core / SuSE / Debian / (K)Ubuntu / Yellow Dog
-------------------------	--

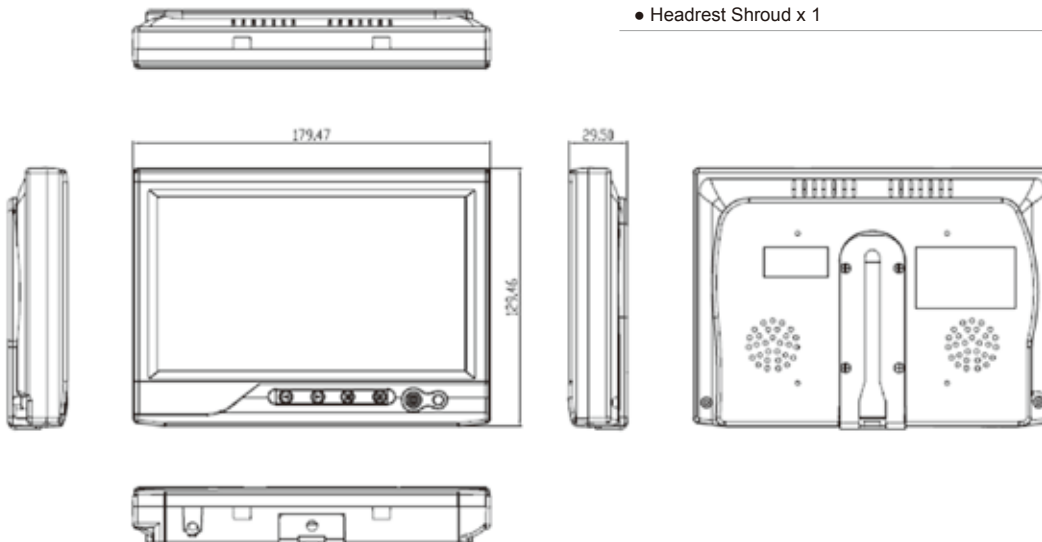
## Mechanical & Environment

Chassis Material	Plastic
Dimension (W x H x D)	179.43mm x 129.43mm x 29.5mm
Mounting	VESA75 mount
Operating Temp.	-30~85°C (-22~185°F)
Storage temp.	-30~85°C (-22~185°F)
Safety	CE, FCC, E13, RoHS

## Packing List

- User Manual x 1
- Metal Stand x 1
- All-in-One Cable x 1
- Remote Controller x 1
- Touch Driver CD x 1
- Touch Stylus Pen x 1
- AC/DC switching Power Supply x 1
- Car Cigarette Lighter Adapter x 1(Option)
- Headrest Shroud x 1

## Dimension



# AR-DP080V

8-Inch(4:3) Display Monitor with VGA, USB Touch Screen



## Features

- 8-Inch(4:3) Wide Screen
- LED Backlight with Low Power Consumption
- Resistive Touch Screen
- VESA75 Mounting and Stand
- DC 12~24V Power Input



## Specification

### Panel

Panel Size	8-Inch Screen (4:3)
Resolution	Supports from 640 x 480~1600 x 1024 pixels
Luminance (cd/m2)	400 nits
View Angle (H/V)	H:110 / V:50
Backlight Lifetime	20,000 hours
Touch Screen Type	4-wire resistive

### I/O

Video Interface	1 x VGA
USB	1 x USB for Touch Screen
Audio	1 x 3.5mm stereo Jack

### Power Requirement

Power Input	DC 12V
Power Consumption	10W

### Software

#### TouchKit Driver Support

Windows: Vista, 9X, Me, NT4.0, 2000, XP, CE.net, CE 2.12, CE 3.0, Embedded, Dos.  
Mac: Mac OS 9X, OS X (Intel CPU).  
Linux: Linux Readme, Mandrake, Red Hat, Fedora Core, SuSE, Debian, Ubuntu, Yellow Dog

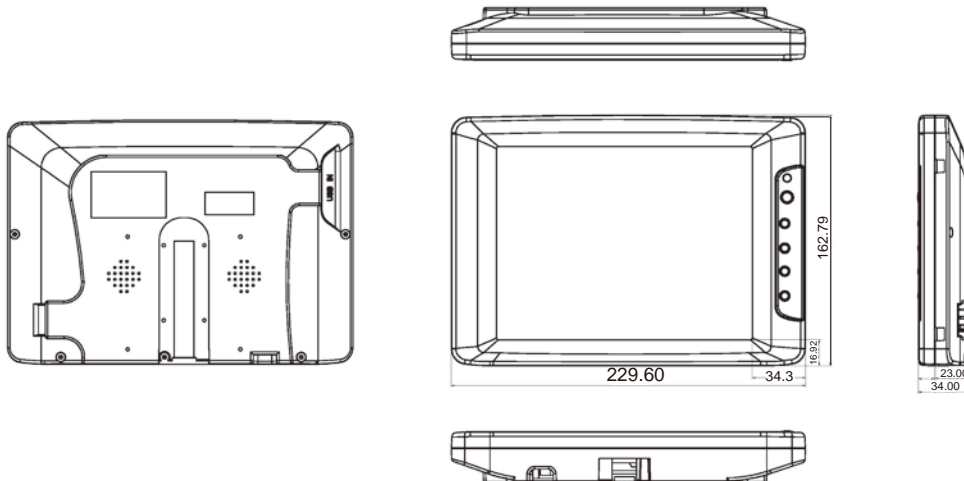
### Mechanical & Environment

Chassis Material	Plastic
Dimension (W x H x D)	229.6mm x 162.8mm x 33.9mm
Mounting	VESA 75, Metal Stand
Operating Temp.	-10~60°C
Storage temp.	-30~70°C
Safety	CE, E-Mark, FCC

### Packing List

- User Manual x 1
- Metal Stand x 1
- All-in-One Cable x 1 (VGA / USB / DC Jack / Audio)
- Remote Controller x 1
- Touch Driver CD x 1
- Touch Stylus x 1
- Car Cigarette Lighter Adapter x 1(Option)
- AC Switching Power Supply x 1

## Dimension





# AR-DP080VW

8-Inch(16:9) Display Monitor with VGA, USB Touch Screen



## Features

- 8-Inch(16:9) Wide Screen
- CCFT Backlight
- Resistive Touch Screen
- VESA75 Mounting and Stand
- DC 12V Power Input



## Specification

### Panel

Panel Size	8-Inch Wide Screen (16:9)
Resolution	Supports from 640 x 480 ~ 1600 x 1024 pixels
Luminance (cd/m2)	500 nits
View Angle (H/V)	H:120 / V:100
Backlight Lifetime	20,000 hours
Touch Screen Type	4-wire Resistive

### I/O

Video Interface	1 x VGA
USB	1 x USB for Touch Screen
Audio	1 x 3.5mm stereo Jack

### Power Requirement

Power Input	DC 12V
Power Consumption	7.2W

## Software

### TouchKit Driver Support

Windows: Vista, 9X, Me, NT4.0, 2000, XP, CE.net, CE 2.12, CE 3.0, Embedded, Dos.  
Mac: Mac OS 9X, OS X (Intel CPU).  
Linux: Linux Readme, Mandrake, Red Hat, Fedora Core, SuSE, Debian, Ubuntu, Yellow Dog

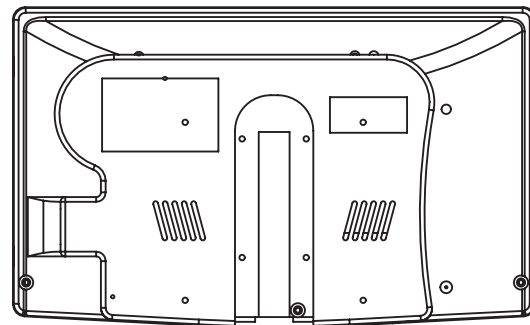
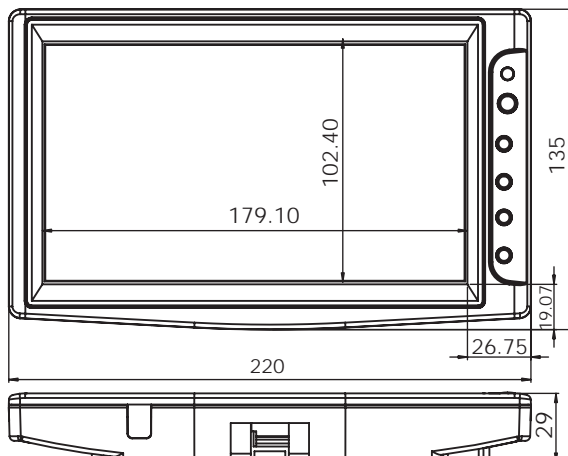
## Mechanical & Environment

Chassis Material	Plastic
Dimension (W x H x D)	220mm x 135mm x 29 mm
Mounting	VESA 75, Metal Stand
Operating Temp.	0~70°C
Storage temp.	-20~70°C
Safety	CE, E-Mark, FCC

## Packing List

- User Manual x 1
- Metal Stand x 1
- All-in-One Cable x 1 (VGA / USB / DC Jack / Audio)
- Remote Controller x 1
- Touch Driver CD x 1
- Touch Stylus x 1
- Car Cigarette Lighter Adapter x 1(Option)
- AC Switching Power Supply x 1

## Dimension



# AR-DP100V/VD

10.4-Inch(4:3) Display Monitor with VGA, Touch Screen



## Features

- 10.4-Inch TFT LCD
- LED Backlight with Low Power Consumption
- Resistive Touch Screen
- VESA75 Mounting and Stand
- DC12-24V Power Input



CE FCC

## Specification

### Panel

Panel Size	10.4-Inch Screen (4:3)
Resolution	800 x 600
Luminance (cd/m <sup>2</sup> )	300 nits
Backlight Lifetime	50,000hrs
Touch Screen Type	4-wire Resistive

### I/O

Video Interface	1 x VGA + 1 x DVI (optional)
USB	1 x USB for Touch Screen
Audio	2 x Audio Input Jack

### Power Requirement

Power Input	DC 12~24V, with Adapter
-------------	-------------------------

### Software

TouchKit Driver Support	Windows vista / 9X / Me / NT4.0 / 2000 / XP / CE.NET/CE 2.12/3.0, Embedded/ DosMac OS 9X / OS X(Intel CPU)Linux Readme / Mandrake / Red Hat / Fedora Core / SuSE / Debian / (K)Ubuntu / Yellow Dog
-------------------------	--

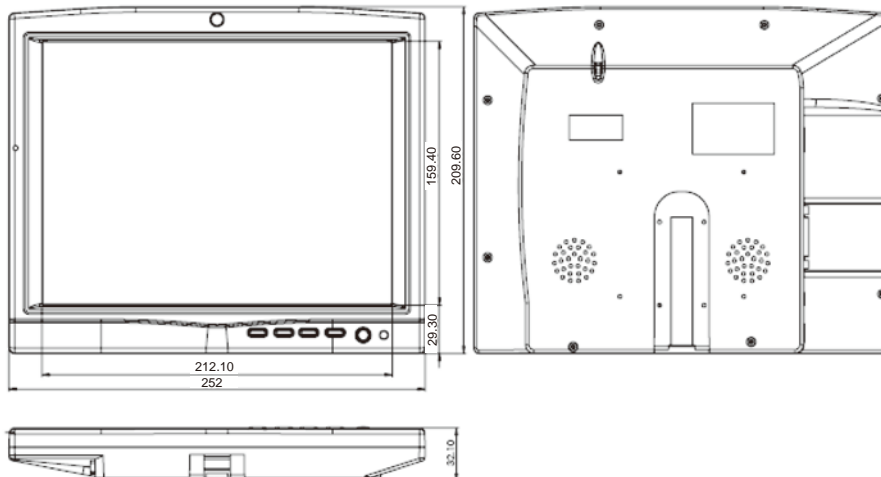
### Mechanical & Environment

Chassis Material	Plastic
Dimension (W x H x D)	252mm x 209.6mm x 32.1mm
Mounting	VESA75 mount
Operating Temp.	-10~60°C
Storage temp.	-20~70°C
Safety	CE, FCC

### Packing List

- User Manual x 1
- VESA Stand x 1
- All in One Cable x 1
- Remote Controller x 1
- Touch Driver CD x 1
- Touch Stylus Pen x 1
- AC/DC switching Power Supply x 1
- Car Cigarette Lighter Adapter x 1(Option)

## Dimension



# Product Matrix

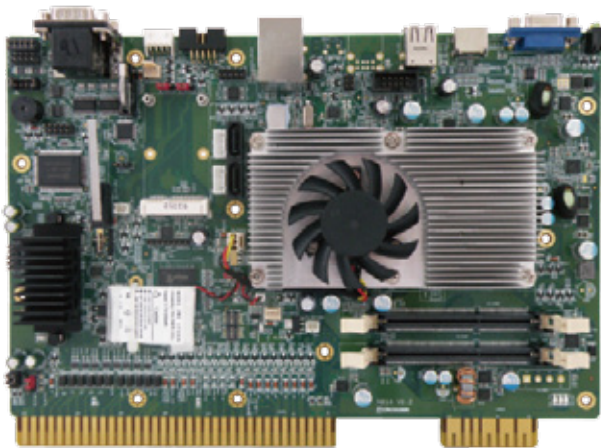
## Gaming Platform



Form Factor	Gaming Platform
Model name	AMB-A55EG1
Board	AMB-A55EG1
CPU	AMD Dual Core T56N 1.6GHz
Chipset	AMD Fusion Control Hub A55E
System Memory	2 x DDR3L-1333MHz, SO-DIMM, up to 8GB
Graphic Controller	Integrated Radeon HD 6320 Open GL 4.0, Direct X11
Display Interface	1 x VGA & 1 x HDMI
Expansion Slot (PCI-E x16)	N/A
USB	4 x USB 2.0 port, 2 x USB 2.0 pin header
Ethernet	1 x GbE
Audio	5.1 channel audio without amplifier
I/O Connector	Golden fingers
I/O Definition	Proprietary
Serial Port	1 x RS232 with DB9 connector 1 x RS232/422/485 DB9 connector 1 x 4-pin ccTalk connector 1 x 10-pin ccTalk connector
Digital I/O	Follow golden fingers definition
Readable DIP switch	N/A
GPIO (TTL level)	N/A
Battery Backup SRAM	256KB (Max 1MB)
EEPROM	N/A
Jurisdiction Chip	N/A
Intrusion Logger	Yes
Secure Real Time Clock	N/A
Smart card reader	N/A
Reel Mechanism control	N/A
Hardware Random Number Generator (RNG)	N/A
Page	26

# AMB-A55EG1

AMD Embedded G-Series T56N all-in-one gaming board with 2 x COM, 6 x USB, 1 x LAN, 2 x ccTalk, golden fingers for 17 protected input & 16 output, battery backup SRAM, 2 x Intrusion Detection.



## Features

GAMB-A55EG1 provides great computing and graphic performance which is suitable for casino gaming and amusement applications. It is designed to comply with the most of gaming regulations such as GLI & BMM.



## Specification

### Specification

CPU	AMD G-Series Dual Core T56N 1.65GHz processor
Chipset	AMD Fusion Control Hub A55E
Memory	2 x DDR3L-1333MHz, SO-DIMM, up to 8GB

### Video

Graphic Controller	Integrated Radeon HD 6320 supports OpenGL 4.0, DirectX 11
Video Memory	shared memory
Video Interface	<ul style="list-style-type: none"> <li>1 x VGA DB15 connector</li> <li>1 x HDMI connector</li> </ul>

### Storage

SATA	2 x SATA II port with SATA II power connector
mSATA	1 x mSATA connector

### Communication

Ethernet	1 x GbE LAN Port
USB	4 x USB 2.0 connector & 2 x USB 2.0 pin header
Serial Port	<ul style="list-style-type: none"> <li>1 x RS232 with DB9 connectors</li> <li>1 x RS232/422/485 DB9 connector</li> <li>1 x 4-pin cc-Talk</li> <li>1 x 10-pin cc-Talk</li> </ul>

### Audio

Output	5.1 channel audio without amplifier (pin header)
Amplifier	6W audio amplifier (golden finger)

### Gaming I/O

Digital Input	Follow golden fingers definition <ul style="list-style-type: none"> <li>14 x Button</li> <li>2 x Coin</li> <li>1 x Hopper</li> </ul>
Digital Output	Follow golden fingers definition <ul style="list-style-type: none"> <li>10 x Lamp</li> <li>5 x Meter</li> <li>1 x Hopper</li> </ul>
Intrusion Detection	<ul style="list-style-type: none"> <li>1 x onboard door switch</li> <li>1 x pin header</li> </ul>
SRAM	battery backup 256KB SRAM (max 1MB)

## Other Feature

Hardware Monitoring	CPU voltage and temperature
WatchDog Timer	Software programmable 1~255 sec.

## Power Requirement

Power Input	<ul style="list-style-type: none"> <li>5V (4.35A~5.8A)</li> <li>12V (3.3A~4.4A)</li> </ul>
Power Consumption	43W

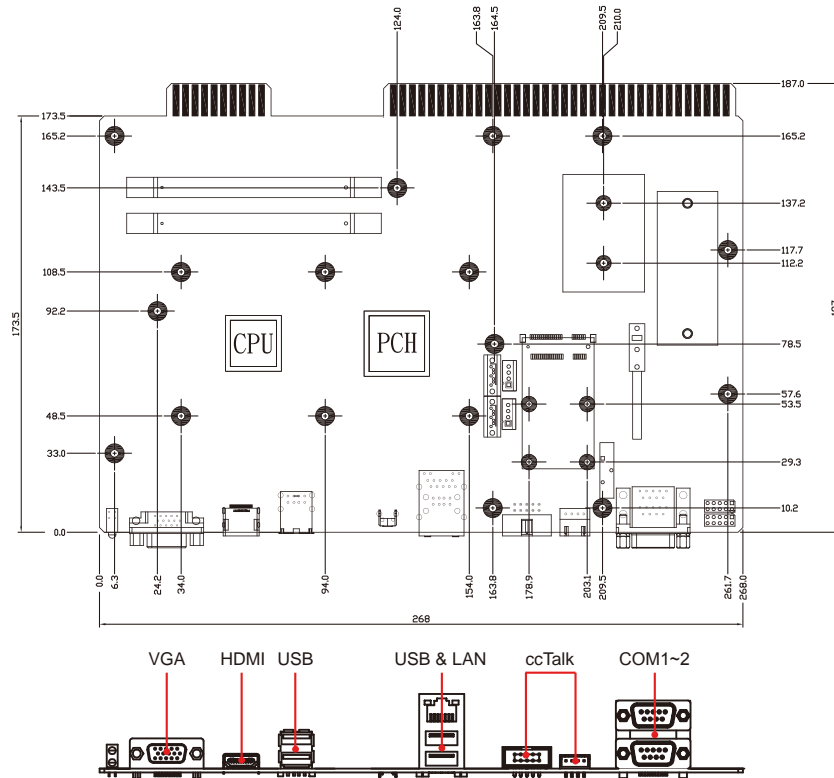
## Software

OS Support	Windows XP, Fedora 14, Ubuntu 10
Software Development Kit	<ul style="list-style-type: none"> <li>Device Driver</li> <li>Application Program Interface (API)</li> <li>Demo Program</li> </ul>

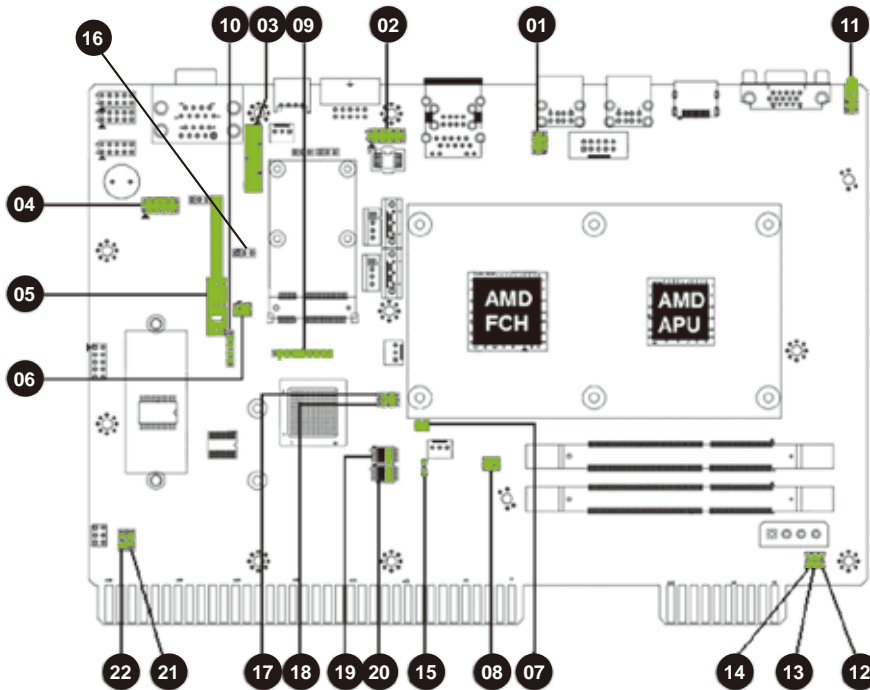
## Mechanical & Environment

Thermal Design	FAN
Dimension	187 mm x 268 mm
Weight	1 KG
Operating Temp.	0~60°C (32~140°F)
Storage temp.	-40~80°C (-4~176°F)
Relative Humidity	0~90% @ 40°C, non-condensing
Safety	CE, FCC compliant

## Dimension



## I/O Connectors



01. Reset Button connector
02. SPI Interface connector
03. CR2032 Battery socket
04. LPC Interface connector
05. Case open Log switch
06. External Log input connector
07. 3.7V 500mAh Re-chargeable battery connector
08. iButton signal connector
09. FPGA firmware recoded Header
10. PIC firmware recoded Header
11. System status indicated
12. 5V Power IN LED
13. 24V Power IN LED
14. 12V Power IN LED
15. Battery charging LED  
ON: Battery charging
16. Clear CMOS
17. SRAM1 data clear
18. SRAM1 data clear
19. METER OUT setting 1
20. METER OUT setting 2 & HOPPER SSR setting
21. (Reserved)
22. Edge connector GPO pins Clamping voltage setting

## Packing List

- 1 x AMB-A55EG1
- 1 x System Driver CD
- 1 x Quick User Guide

## Ordering Information

AMB-A55EG1

AMD Embedded G-Series T56N all-in-one gaming board with 2 x COM, 6 x USB, 1 x LAN, 2 x cctalk, golden fingers for 17 protected input & 16 output, battery backup SRAM, 2 x Intrusion Detection (Door Switch), iButton and Security.



# Product Matrix

## Networking Appliance



Form Factor		2U Rackmount	
Model Name		ANR-C627/622N1	ANR-C627/622N1U
System	CPU type	2 x Intel® Xeon® Scalable Processors	2 x Intel® Xeon® Scalable Processors
Chipset	Chipset	Intel® PCH C627/C622	Intel® PCH C627/C622
Memory	Technology	24 x RDIMM/LRDIMM DDR4-2666/2400	24 x RDIMM/LRDIMM DDR4-2666/2400
	Maximum support	768GB (RDIMM) / 1536GB (LRDIMM)	768GB (RDIMM) / 1536GB (LRDIMM)
Ethernet	SFP+ 10G Fiber	2	2
	RJ45 GbE	-	-
	Bypass	-	-
Expansion	PCIe	1	1
	Mini PCIe	-	-
	Networking Module	8 x Exp. NIM (1G/10G/40G, Fiber / Copper / Bypass)	8 x Exp. NIM (1G/10G/40G, Fiber / Copper / Bypass)
LCM	LCM	Graphic LCM	Graphic LCM
Storage	HDD	4 x 2.5" SATA-III Hot-swappable (RAID 0/1/5/10)	2 x U.2 NVMe Hot-swappable (RAID 0/1)
	CF / CFast / mSATA	CFast & mSATA	CFast & mSATA
I/O	Console	RJ45 & micro-USB	RJ45 & micro-USB
	Video out	VGA	VGA
	USB	2 x USB 3.0 (front-side), 2 x USB 2.0 (rear-side)	2 x USB 3.0 (front-side), 2 x USB 2.0 (rear-side)
Dimension		440mm x 670mm x 89mm	440mm x 670mm x 89mm
Thermal		PWM Smart Cooling Fan	PWM Smart Cooling Fan
Reference page		28	30

## Networking Appliance



Form Factor		1U Rackmount	
Model Name		ANR-C236N1 series	ANR-APL1N1FL series
System	CPU type	Intel® Xeon® E3-1275v6 Intel® 7th Gen. KabyLake-S Core i7 / i5 / i3	Intel® Apollo Lake SoC J-series / N-series / E-series
Chipset	Chipset	Intel® PCH C236	-
Memory	Technology	4 x UDIMM DDR4-2400, ECC/non-ECC	1 x SO-DIMM DDR3L-1866
	Maximum support	64GB	8GB
Ethernet	SFP+ 10G Fiber	2/0	-
	RJ45 GbE	12/8	6
	Bypass	4/2	3
Expansion	PCIe	1	1
	Mini PCIe	-	-
	Networking Module	1 x Exp. NIM (1G/10G/40G, Fiber / Copper / Bypass)	-
LCM	LCM	16 x 2 characters LCD module with 4 buttons	16 x 2 characters LCD module with 4 buttons
Storage	HDD	2 x 2.5" / SATA III (Hot-swappable)	1 x 2.5" / SATA III
	CF / CFast / mSATA	1 x CFast & 1 x mSATA	CF / CFast (Option)
I/O	Console	RJ45	RJ45
	Video out	HDMI	VGA (Internal pin-header)
	USB	2 x USB 3.0 (front-side), 2 x USB 2.0 (rear-side)	2 x USB 3.0
Dimension		440mm x 500mm x 44mm	440mm x 266mm x 44mm
Thermal		PWM Smart Cooling Fan	Fanless
Reference page		32	34

# Product Matrix

## Networking Appliance



Form Factor		1U Rackmount	
Model Name		ANR-IB75N2/A/B	ANR-J190/J180N2-C612
System	CPU type	Intel® 3rd Gen. Core i7/i5/i3 & Pentium	Intel® Bay Trail J1900 SoC, 4-core @2.0GHz. Intel® Bay Trail J1800 SoC, 2-core @2.4GHz
Chipset	Chipset	Intel® PCH B75	-
Memory	Technology	2 x UDIMM DDR3L-1600	1 x SO-DIMM DDR3L-1600
	Maximum support	16GB	8GB
Ethernet	SFP GbE	0/2/4	-
	RJ45 GbE	8/8/8	6
	Bypass	2/2/2	2
Expansion	PCI-E	-	1
	PCI	-	-
	Mini PCI	-	-
LCM	LCM	16 x 2 characters LCD module with 4 buttons	-
Storage	HDD	2 x 2.5" / SATA III	1 x 2.5" / SATA II
	CF / CFast / mSATA	CF	CF
I/O	Console	RJ45	RJ45
	Video out	VGA (Internal pin-header)	VGA (Internal pin-header)
	USB	2 x USB 2.0	2 x USB 2.0
Dimension		440mm x 371.5mm x 44mm	440mm x 250mm x 45mm
Thermal		Cooling Fan	Cooling Fan
Reference page		36	38

## Networking Appliance



Form Factor		Desktop	Microbox
Model Name		AND-DNV3N1 series	AND-APL1N1FL series
System	CPU type	Intel® Denverton® SoC 2~16 core (option)	Intel® Apollo Lake SoC J-series/N-series/E-series
Chipset	Chipset	-	-
Memory	Technology	4 x UDIMM DDR4-2400	1 x SO-DIMM DDR3L-1866
	Maximum support	64GB	8GB
Ethernet	SFP GbE	1	-
	RJ45 GbE	14	6
	Bypass	1	3
Expansion	PCIe	-	-
	Mini PCIe	1	1
	Networking Module	1 x Exp. NIM (1G/10G/40G, Fiber / Copper / Bypass/NB-IoT)	-
LCM	LCM	-	-
Storage	HDD	1 x 2.5" SATA-III	1 x 2.5" SATA-III
	CF / CFast / mSATA	CFast	CF / CFast (Option)
I/O	Console	RJ45, micro-USB	RJ45
	Video out	VGA	VGA (Internal pin-header)
	USB	2 x USB 3.0 (front-side), 2 x USB 2.0 (rear-side)	1 x USB 3.0 (front-side), 2 x USB 3.0 (rear-side)
Dimension		360mm x 320mm x 44mm	280mm x 209mm x 44mm
Thermal		PWM Smart Cooling Fan	Fanless
Reference page		40	42

# Product Matrix

## Networking Appliance



Form Factor		Microbox	
Model Name		AND-J190/J180N2-C612	AND-G420N1
System	CPU type	Intel® Bay Trail J1900 SoC, 4-core @2.0GHz. Intel® Bay Trail J1800 SoC, 2-core @2.4GHz	AMD G-Series GX-420MC Quad-core, clock speed 2.00GHz
Chipset	Chipset	-	-
Memory	Technology	1 x SO-DIMM DDR3L-1600	2 x SO-DIMM DDR3L-1600
	Maximum support	8GB	16GB
Ethernet	SFP GbE	-	-
	RJ45 GbE	6	6
	Bypass	2	2
Expansion	PCIe	-	-
	Mini PCIe	1	1
	Networking Module	-	-
Storage	HDD	1 x 2.5" SATA-II	1 x 2.5" SATA-II
	CF / CFast / mSATA	CF	CF
I/O	Console	RJ45	RJ45
	Video out	VGA (Internal pin-header)	-
	USB	1 x USB 3.0(front-side), 2 x USB 2.0(rear-side)	2 x USB 3.0,
Dimension		235mm x 152mm x 44.5mm	242mm x 149.5mm x 44mm
Thermal		Cooling Fan	Cooling Fan
Reference page		44	46

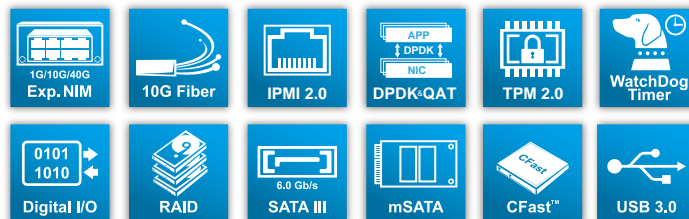
# ANR-C627N1 ANR-C622N1

2U Rackmount IoT Gateway/Network Server Intel® PCH C627/C622 + Purley Platform, 8 Exp. NIM, & 1+1 Redundant PSU



## Features

- Intel® C627/C622 Platform
- 2 x Intel® Xeon® Scalable Processors
- 24 x RDIMM/LRDIMM DDR4-2666/2400
- 8 x Exp. NIM (1G/10G/25G/40G, Fiber/Copper/LAN Bypass)
- 1 x Management port
- 2 x 10G Fiber (SFP+)
- 4 x 2.5" SATA-III Hot-swappable (RAID 0/1/5/10)
- 1 x mSATA & 1 x CFast
- Hot-swappable smart cooling fan
- 1+1 Redundant Platinum PSU (800W)



## Others

Battery	Lithium Battery, 3V 220mAH (CR2032)
Hardware Monitoring	CPU Volt. CPU & SYS Temp. FAN Speeds
Security & Mgmt.	TPM 2.0 (Infineon chipset) IPMI 2.0 (ASPEED AST2500 BMC) Chassis Intrusion Detection
DPDK & QAT	Support DPDK & QAT

## Power Requirement

Power Supply Unit	1+1 Redundant Platinum PSU (800W) 100-240VAC
-------------------	--

## Software

OS Support	Linux Kernel 4.4 or above, (64-bit)
------------	-------------------------------------

## Mechanical & Environment

Dimensions	440 (W) x 89 (H) x 670 (D) mm
Operating Temp.	0~ 40°C (32~104°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Certifications	CE, FCC Class A, RoHS 2, cULus

## Model Name

ANR-C627N1	2U Rackmount IoT Gateway/Network Server .Intel® PCH C627/C622 + Purley platform .8 x Exp. NIM (1G/10G/25G/40G, Fiber/Copper/LAN Bypass)
ANR-C622N1	.1 x Management port .2 x 10G Fiber (SFP+) .4 x 2.5" SATA-III Hot-swappable (RAID 0/1/5/10) .1+1 Redundant Platinum PSU (800W)

## Specification

### System

CPU	<b>Intel® Xeon® Scalable Processors</b> Intel® Xeon® Platinum 8168 (24C, 2.7GHz) Intel® Xeon® Gold 6132 (14C, 2.6GHz) Intel® Xeon® Gold 5119T (14C, 1.9GHz) Intel® Xeon® Gold 5115 (10C, 2.4GHz) Intel® Xeon® Silver 4116T (12C, 2.1GHz) Intel® Xeon® Silver 4114T (10C, 2.2GHz)
Chipset	Intel® PCH C627 (QAT:100Gbps) Intel® PCH C622 (QAT:n/a)
Memory	24 x RDIMM/LRDIMM DDR4-2666/2400
BIOS	AMI
WatchDog Timer	Software programmable 0~255 sec.

### Video

Video Interface	VGA
-----------------	-----

### Ethernet

Chipset	1 x Intel® I210
1G	1 x GbE Copper (RJ-45) via BMC (Mgmt.) via I210 (option)
10G/40G	2 x 10G Fiber (SFP+)
LAN bypass	Support with Exp. NIM

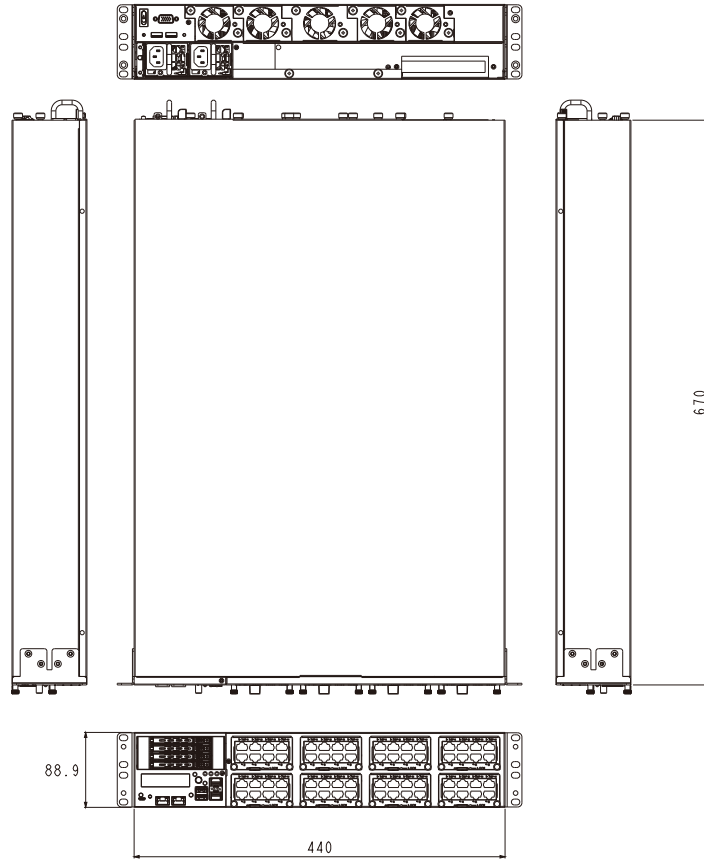
### Storage

HDD Bay	4 x 2.5" SATA-III Hot-swappable (RAID 0/1/5/10)
mSATA	1 x mSATA socket
CFast	1 x CFast socket

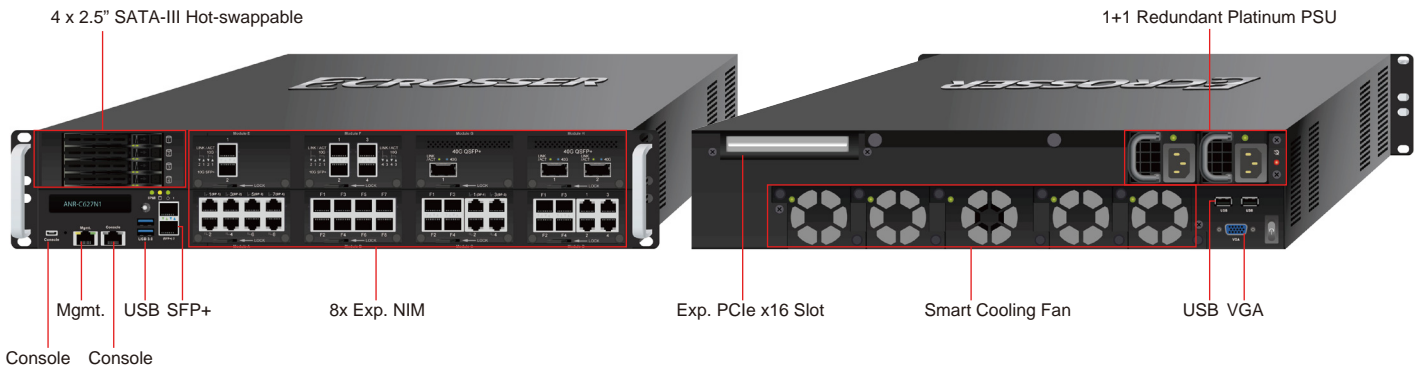
### I/O

Console port	1 x Serial console (RJ-45) 1 x USB console (micro-USB)
USB port	2 x USB 3.0 (front-side) 2 x USB 2.0 (rear-side)
LCM	Graphic LCM
GPIO	8-bit GPIO (4-In, 4-Out), on-board pin header
Exp. NIM	8 x Exp. NIM Hot-swappable (1G/10G/25G/40G, Fiber/Copper/LAN Bypass)
Exp. PCIe slot	1 x Exp. PCIe Gen3 x16 slot (FHFL)

## Dimensions



## I/O Connectors



**ANR-C627N1**  
**ANR-C622N1**

## Packing List

- ANR-C62xN1 system x 1
- SATA cable x 4
- CD utility x 1
- RJ45 console cable (RJ45 <-> DB9) x 1
- USB console cable (Micro-B <-> Type A) x 1
- USA / EU / JPN / UK / AS / NZS / SA / India power cord x 2
- Rack bracket x 1
- Box packing x 1
- Screw pack x 1
- Slide Rail x 1

## Ordering Information

ANR-C627N1	2U Rackmount IoT Gateway/Network Server, Intel® PCH C627 + Purley platform, 8x Exp. NIM, 1xMgmt., 2 SFP+, 4 SATA-III, 1+1 Redundant Platinum PSU
ANR-C622N1	2U Rackmount IoT Gateway/Network Server, Intel® PCH C622 + Purley platform, 8x Exp. NIM, 1xMgmt., 2 SFP+, 4 SATA-III, 1+1 Redundant Platinum PSU

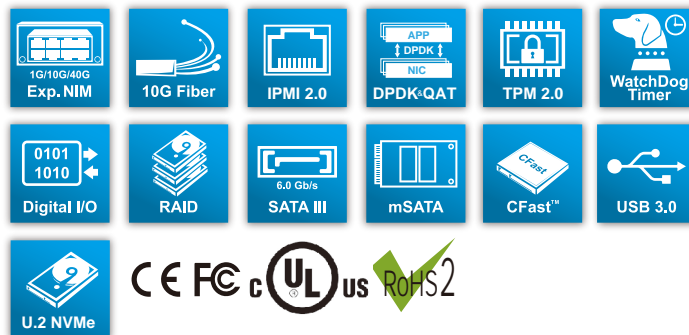
# ANR-C627N1U ANR-C622N1U

2U Rackmount IoT Gateway/Network Server Intel® PCH C627/C622 + Purley Platform, 8 Exp. NIM, 1+1 Redundant PSU & U.2 NVMe



## Features

- Intel® C627/C622 Platform
- 2 x Intel® Xeon® Scalable Processors
- 24 x RDIMM/LRDIMM DDR4-2666/2400
- 8 x Exp. NIM (1G/10G/25G/40G, Fiber/Copper/LAN Bypass)
- 1 x Management port
- 2 x 10G Fiber (SFP+)
- 2 x U.2 NVMe Hot-swappable (RAID 0/1)
- 1 x mSATA & 1 x CFast
- Hot-swappable smart cooling fan
- 1+1 Redundant Platinum PSU (800W)



## Specification

### System

CPU	<b>Intel® Xeon® Scalable Processors</b> Intel® Xeon® Platinum 8168 (24C, 2.7GHz) Intel® Xeon® Gold 6132 (14C, 2.6GHz) Intel® Xeon® Gold 5119T (14C, 1.9GHz) Intel® Xeon® Gold 5115 (10C, 2.4GHz) Intel® Xeon® Silver 4116T (12C, 2.1GHz) Intel® Xeon® Silver 4114T (10C, 2.2GHz)
Chipset	Intel® PCH C627 (QAT:100Gbps) Intel® PCH C622 (QAT:n/a)
Memory	24 x RDIMM/LRDIMM DDR4-2666/2400
BIOS	AMI
WatchDog Timer	Software programmable 0~255 sec.

### Video

Video Interface	VGA
-----------------	-----

### Ethernet

Chipset	1 x Intel® I210
1G	1 x GbE Copper (RJ-45) via BMC (Mgmt.) via I210 (option)
10G/40G	2 x 10G Fiber (SFP+)
LAN bypass	Support with Exp. NIM

### Storage

HDD Bay	2 x U.2 NVMe Hot-swappable (RAID 0/1)
mSATA	1 x mSATA socket
CFast	1 x CFast socket

### I/O

Console port	1 x Serial console (RJ-45) 1 x USB console (micro-USB)
USB port	2 x USB 3.0 (front-side) 2 x USB 2.0 (rear-side)
LCM	Graphic LCM
GPIO	8-bit GPIO (4-In, 4-Out), on-board pin header
Exp. NIM	8 x Exp. NIM Hot-swappable (1G/10G/25G/40G, Fiber/Copper/LAN Bypass)
Exp. PCIe slot	1 x Exp. PCIe Gen3 x16 slot (FHFL)

## Others

Battery	Lithium Battery, 3V 220mAH (CR2032)
Hardware Monitoring	CPU Volt. CPU & SYS Temp. FAN Speeds
Security & Mgmt.	TPM 2.0 (Infineon chipset) IPMI 2.0 (ASPEED AST2500 BMC) Chassis Intrusion Detection
DPDK & QAT	Support DPDK & QAT

## Power Requirement

Power Supply Unit	1+1 Redundant Platinum PSU (800W) 100-240VAC
-------------------	--

## Software

OS Support	Linux Kernel 4.4 or above, (64-bit)
------------	-------------------------------------

## Mechanical & Environment

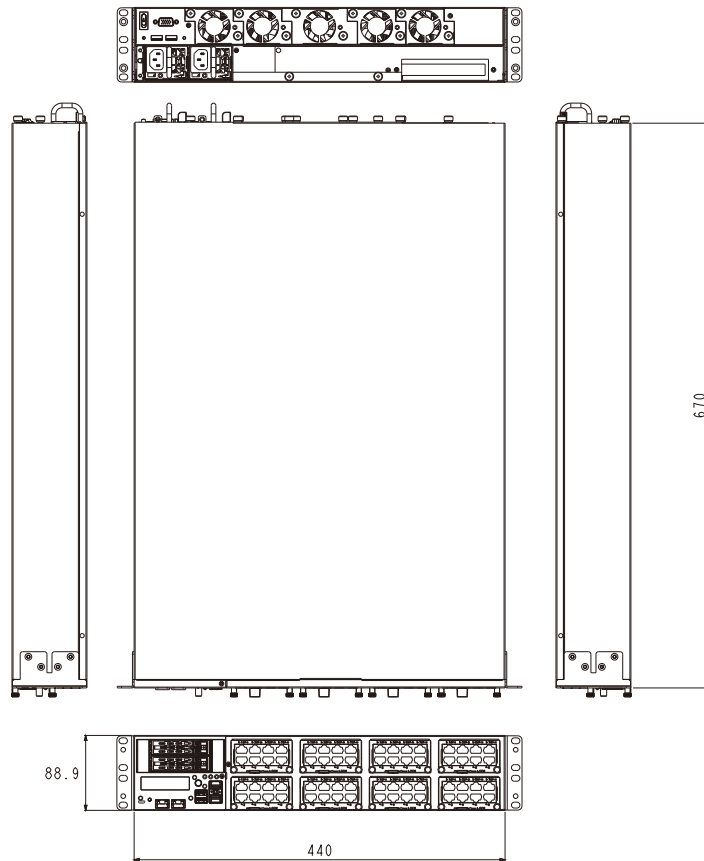
Dimensions	440 (W) x 89 (H) x 670 (D) mm
Operating Temp.	0~ 40°C (32~104°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Certifications	CE, FCC Class A, RoHS 2, cULus

## Model Name

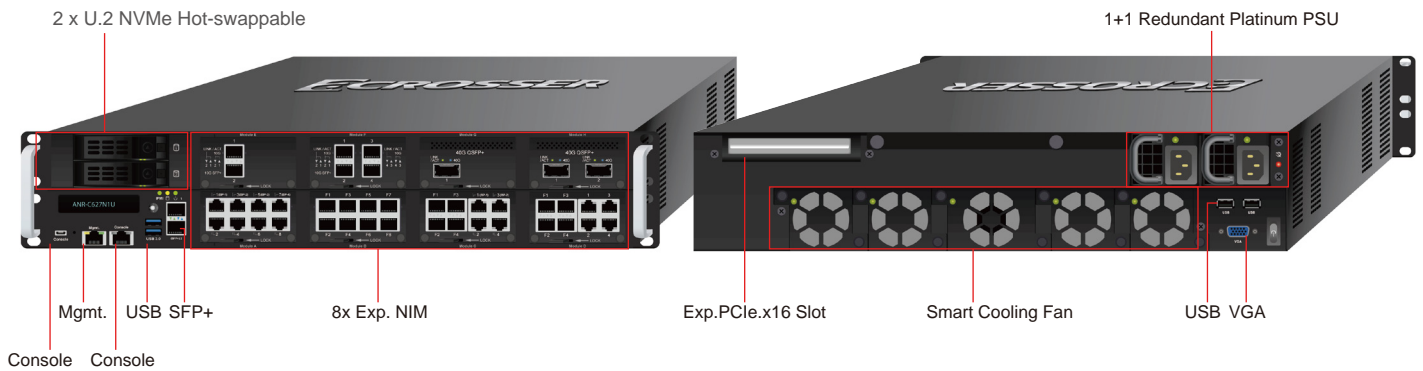
	2U Rackmount IoT Gateway/Network Server Intel® PCH C627/C622 + Purley platform
ANR-C627N1U	.8 x Exp. NIM (1G/10G/25G/40G, Fiber/Copper/LAN Bypass)
ANR-C622N1U	.1 x Management port .2 x 10G Fiber (SFP+) .2 x U.2 NVMe Hot-swappable (RAID 0/1) .1+1 Redundant Platinum PSU (800W)



## Dimensions



## I/O Connectors



**ANR-C627N1U**  
**ANR-C622N1U**

### Packing List

- ANR-C62xN1U system x 1
- SATA cable x 2
- SFF-8643 x2
- CD utility x 1
- RJ45 console cable (RJ45 <-> DB9) x 1
- USB console cable (Micro-B <-> Type A) x 1
- USA / EU / JPN / UK / AS / NZS / SA / India power cord x 2
- Rack bracket x 1
- Box packing x 1
- Screw pack x 1
- Slide Rail x 1

### Ordering Information

ANR-C627N1U	2U Rackmount IoT Gateway/Network Server, Intel® PCH C627 + Purley platform, 8x Exp. NIM, 1xMgmt., 2 SFP+, 2 U.2 NVMe, 1+1 Redundant Platinum PSU
ANR-C622N1U	2U Rackmount IoT Gateway/Network Server, Intel® PCH C622 + Purley platform, 8x Exp. NIM, 1xMgmt., 2 SFP+, 2 U.2 NVMe, 1+1 Redundant Platinum PSU

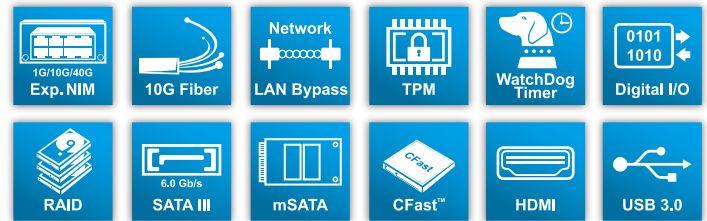
# ANR-C236N1- series

Networking 1U Rackmount Intel® PCH C236 + Kabylake Platform, 1 Exp. NIM, 2 SFP+, 12 GbE LANs & 1+1 Redundant PSU



## Features

- Intel® C236 Platform
- Intel® Xeon® E3-1275 v6
- Intel® 7<sup>th</sup> Gen CPU Kabylake-S Core™ i7/i5/i3
- 4 x UDIMM DDR4-2400, ECC/non-ECC, (up to 64GB)
- 1 x Exp. NIM (1G/10G/40G Fiber/Copper/LAN Bypass)
- 2 x SFP+ (10G Fiber)
- 12 x GbE Copper (4-pair bypass) & 1 Mgmt. port
- 2 x 2.5" Hot-swappable (RAID 0/1), 1 x mSATA & 1 x CFAST
- 3 x Smart cooling fan
- 1+1 Redundant PSU



## Others

Battery	Lithium Battery, 3V 220mAH (CR2032)
Hardware Monitoring	CPU Volt. CPU & SYS Temp. FAN Speeds
Security & Mgmt.	TPM 1.2 (default) / 2.0 (Optional) IPMI 2.0 Compliance (by project) Chassis Intrusion Detection

## Power Requirement

Power Supply Unit	1+1 Redundant PSU (250-300W) 100-240VAC
-------------------	---

## Software

OS Support	Linux Kernel 4.4 or above, (64-bit)
------------	-------------------------------------

## Mechanical & Environment

Dimensions	440 (W) x 44 (H) x 500 (D) mm
Operating Temp.	0~ 40°C (32~104°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Certifications	CE, FCC Class A, RoHS 2, cULus

## Model Name

ANR-C236N1-K2D0T	Networking 1U Rackmount, Intel® C236 PCH + Kabylake platform, .1x Exp. NIM (1G/10G/40G, Fiber/Copper/LAN Bypass) .12x GbE LANs (4-pair bypass) + 1x Mgmt. .2x SFP+ (10G Fiber) .1+1 Redundant PSU
ANR-C236N1-K2D00	Networking 1U Rackmount, Intel® C236 PCH + Kabylake platform, .1x Exp. NIM (1G/10G/40G, Fiber/Copper/LAN Bypass) .12x GbE LANs (4-pair bypass) + 1x Mgmt. .1+1 Redundant PSU
ANR-C236N1-K1D00	Networking 1U Rackmount, Intel® C236 PCH + Kabylake platform, .1x Exp. NIM (1G/10G/40G, Fiber/Copper/LAN Bypass) .12x GbE LANs (4-pair bypass) + 1x Mgmt. .Single PSU,

## Specification

### System

CPU	Intel® Xeon® E3-1275 v6 Intel® 7 <sup>th</sup> Gen CPU Kabylake-S Core™ i7-7700 Intel® 7 <sup>th</sup> Gen CPU Kabylake-S Core™ i5-7500 Intel® 7 <sup>th</sup> Gen CPU Kabylake-S Core™ i3-7101E
Chipset	Intel® PCH C236
Memory	4 x 288-pin UDIMM DDR4-2400, ECC/non-ECC, (up to 64GB)
BIOS	AMI
WatchDog Timer	Software programmable 0~255 sec.

### Video

Video Interface	HDMI 1.4
-----------------	----------

### Ethernet

Chipset	Intel® I210/I350 (10/100/1000Mbps), LAN[1:8] / LAN[9:12] Intel® X710-BM2 (10G Fiber), SFP+[1:2]
Connector	12x GbE Copper (RJ-45) 2x 10G Fiber (SFP+)
LAN bypass	4-pair

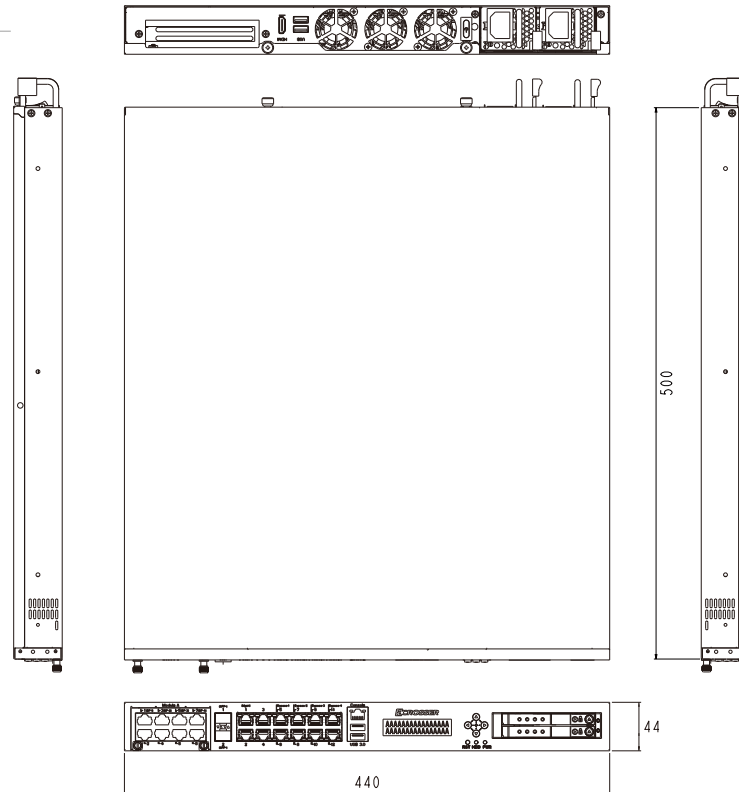
### Storage

HDD Bay	2 x 2.5" SATA-III Hot-swappable (RAID 0/1)
mSATA	1 x mSATA socket (support full-size module)
CFAST	1 x CFAST socket

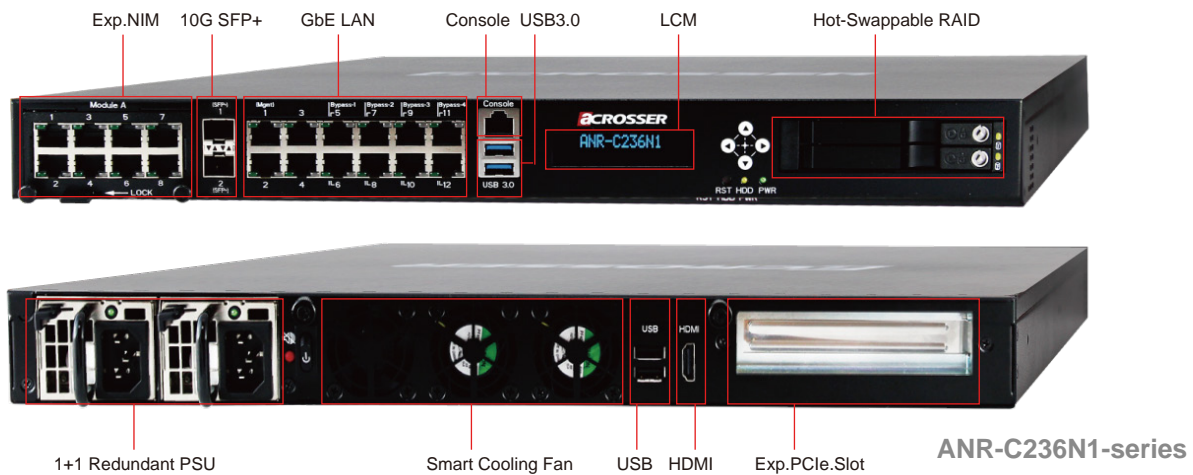
### I/O

Console port	1 x Serial console (RJ-45)
USB port	2 x USB 3.0 (front-side) 2 x USB 2.0 (rear-side)
LCM	16 x 2 characters LCM with 4-key button
GPIO	8-bit GPIO (4-In, 4-Out), on-board pin header
Exp. NIM	1 x Exp. NIM (1G/10G/40G, Fiber/Copper/LAN Bypass)
Exp. PCIe slot	1 x Exp. PCIe slot
OPMA slot	1 x OPMA slot (for IPMI 2.0 module, by project)

## Dimensions



## I/O Connectors



## Packing List

- ANR-C236N1 series system x 1
- SATA cable x 2
- CD utility x 1
- Console cable (RJ-45 <-> DB9) x 1
- USA / EU / JPN / UK / AS / NZS / SA / India power cord x 2
- Rack bracket x 1
- Box packing x 1
- Screw pack x 1
- Slide Rail x 1

## Ordering Information

ANR-C236N1-K2D0T	Networking 1U Rackmount Intel® C236 PCH + Kabylake platform 1 Exp. NIM, 12 GbE LANs + 1 Mgmt., 2 SFP+ 1+1 Redundant PSU
ANR-C236N1-K2D00	Networking 1U Rackmount Intel® C236 PCH + Kabylake platform, 1 Exp. NIM, 12 GbE LANs + 1 Mgmt., 1+1 Redundant PSU
ANR-C236N1-K1D00	Networking 1U Rackmount Intel® C236 PCH + Kabylake platform 1 Exp. NIM, 12 GbE LANs + 1 Mgmt., Single PSU

# ANR-APL1N1FL series

Intel® Apollo Lake SoC series Networking 1U Rack Mount Fanless Solution,  
6 x GbE LANs with 3-pair Bypass



## Features

- Intel® Apollo Lake SoC J-series/N-series/E-series
- 1 x SO-DIMM DDR3L-1866 MHz, up to 8GB
- 6 x GbE, 2 x USB 3.0
- 1 x PCIe Expansion Slot, 1 x Mini PCIe Socket
- 8 x GPIO
- 1 x LCM



## Specification

### System

CPU	<ul style="list-style-type: none"> <li>• Intel® Apollo Lake SoC J3455 CPU</li> <li>• Intel® Apollo Lake SoC J3355 CPU</li> <li>• Intel® Apollo Lake SoC N4200 CPU</li> <li>• Intel® Apollo Lake SoC N3350 CPU</li> <li>• Intel® Apollo Lake SoC E3950 CPU</li> <li>• Intel® Apollo Lake SoC E3940 CPU</li> <li>• Intel® Apollo Lake SoC E3930 CPU</li> </ul>
Chipset	Intel® Apollo Lake SoC
Memory	1 x SO-DIMM DDR3L-1866 MHz, up to 8GB

### Video

Graphic Controller	Intel® HD Graphics
Video Interface	1 x VGA (1 x internal header)

### Storage

SATA	1 x SATAIII / mSATA (Optional)
CF	1 x CF Card / CFast (Optional)

### I/O

Ethernet	6 x GbE, Intel® I210-AT Ethernet Controllers
Expansion Slot	1 x PCIe x 8 Slot (x1 Signal) 1 x Mini PCIe Slot
Serial Port	1 x Console Port (RJ45)
USB	2 x USB 3.0
GPIO	8-bit Digital I/O
LCM	16 x 2 characters LCM with 4-key button

### Hardware Feature

Hardware Monitoring	<ol style="list-style-type: none"> <li>1) CPU Voltage</li> <li>2) CPU Temperature</li> <li>3) System Temperature</li> <li>4) RTC Battery Voltage</li> </ol>
WatchDog Timer	Software programmable 1~255 sec.

### Power Requirement

Power Input	60W Open Frame Power Supply
-------------	-----------------------------

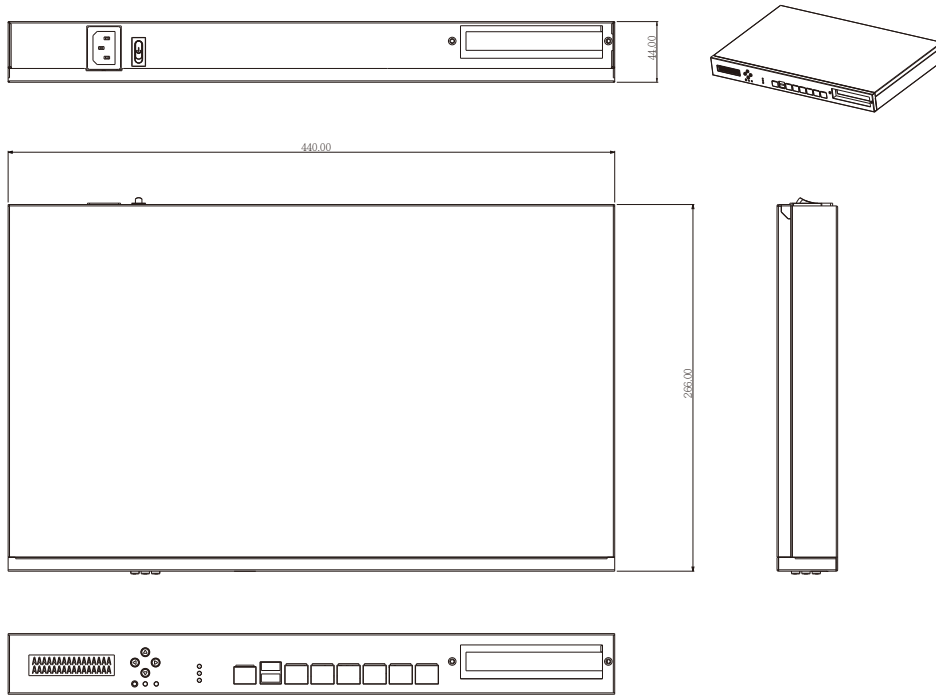
### Software

OS Support	<ul style="list-style-type: none"> <li>• Windows 10 IoT Enterprise LTSC Entry</li> <li>• Linux Kernel 4.4 &amp; above</li> </ul>
------------	--

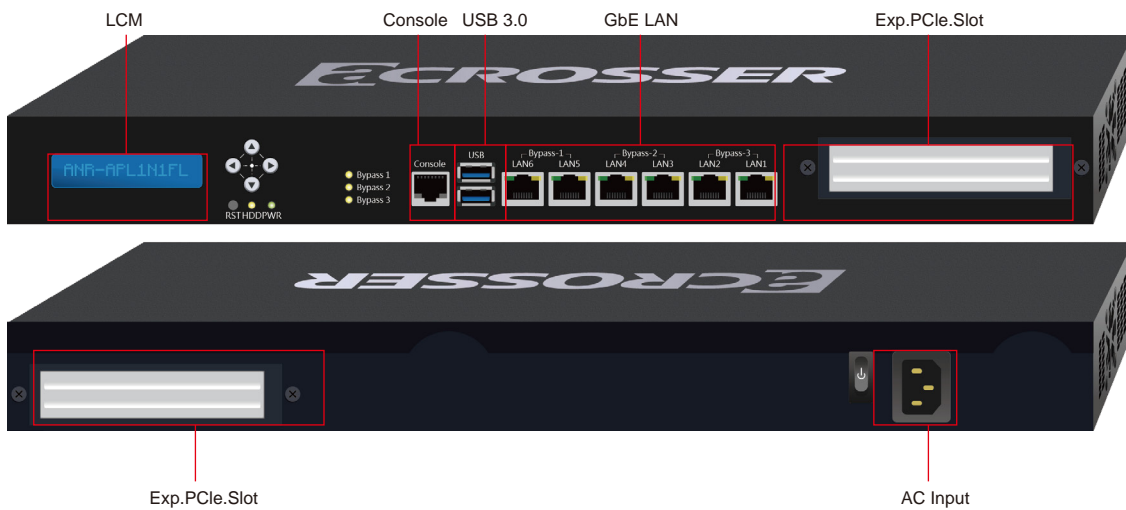
### Mechanical & Environment

Security	TPM 2.0
Dimension	440 x 266 x 44mm
Operating Temp.	0~40°C (32~104°F)
Storage Temp.	-20~80°C (-4~176°F)
Safety	CE, FCC class A

## Dimension



## I/O Connectors



## Packing List

- ANR-APL1N1FL system
- 1 x Driver CD
- 1 x Quick Guide
- 1 x Console Cable (DB9)
- 1 x SATA Cable
- 1 x SATA Power Cable

## Ordering Information

ANR-APL1N1FL series

1U Rack Mount Fanless Solution with Intel® Apollo Lake SoC J-series/N-series/E-series, GbE, USB 3.0, SO-DIMM DDR3L-1866, SATA III, CF, PCIe Expansion Slot, Mini PCIe

## Option

- 2GB DDR3L-1866 memory (non-ECC SO-DIMM)
- 4GB DDR3L-1866 memory (non-ECC SO-DIMM)
- 8GB DDR3L-1866 memory (non-ECC SO-DIMM)

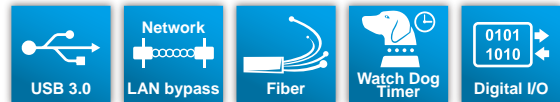
# ANR-IB75N2/A/B

1U Rackmount Intel PCH B75 Networking, 8 GbE LANs



## Features

- Intel B75 Platform
- Supports LGA1155 Intel® Core™ i7/i5/i3 processor / Pentium CPU
- 1 x SATAIII, 1 x SATAII
- 2 x USB 3.0
- Option1: Intel GbE LAN x 8
- Option2: Intel GbE LAN x 8 + 2 Fiber
- Option3: Intel GbE LAN x 8 + 4 Fiber



CE FCC

## Specification

### System

CPU	Intel 3rd Gen. Core i / Pentium LGA1155 Processors
Chipset	Intel B75
Memory	2 x DDR3L-1333/1600MHz, UDIMM, up to 16GB
BIOS	AMI
WatchDog Timer	Software programmable 0~255 sec.

### Video

Video Interface	VGA(on board pin header)
-----------------	--------------------------

### Ethernet

Chipset	ANR-IB75N2: Intel I210-AT(GbE) x8 ANR-IB75N2A: Intel I210-AT(GbE) x8 Intel 82576EB x2 (Fiber port) ANR-IB75N2B: Intel I210-AT(GbE) x8 Intel 82576EB x4 (Fiber port)
Connector	ANR-IB75N2: 8 x RJ45 for Copper Ethernet ANR-IB75N2A: 8 x RJ45 for Copper Ethernet 2 x SFP Slot ANR-IB75N2B: 8 x RJ45 for Copper Ethernet 4 x SFP Slot
LAN bypass	2-pair

### Storage

SATA	1 x SATA III , 1 x SATA II
Compact Flash	1 x Compact Flash Type II socket supports UDMA
HDD Bay	2 x 2.5" HDD bay

### I/O

Console port	1 x RJ45 for console
USB port	2 x USB 3.0 ports
LCM	16 x 2 characters LCD module with 4 buttons
GPIO	8-bit GPIO (4 In, 4 Out) on board pin header

## Power Requirement

Power Requirement	Internal 250W 80 PLUS(Bronze) power supply, input range 100V AC 60Hz ~ 230V AC 50Hz
-------------------	---

## Software

OS Support	Win 7 32/64 bit, WES7 32bit, Fedora 14 32/64bit, Ubuntu 10.04 32/64bit
------------	--

## Mechanical & Environment

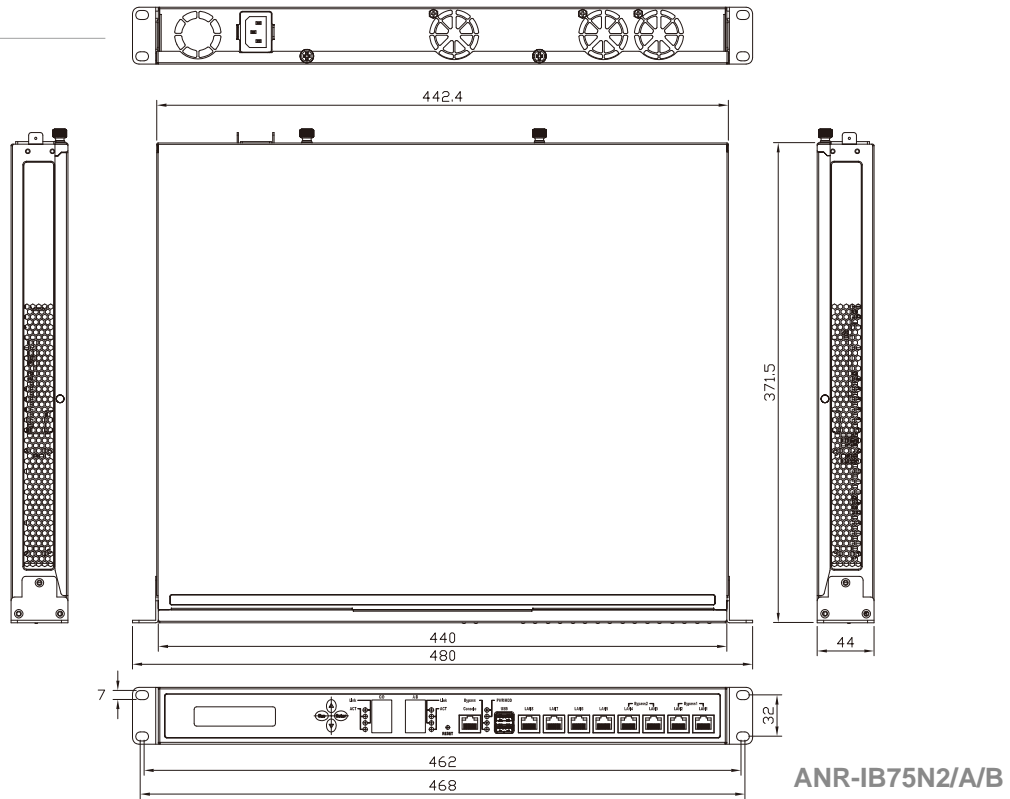
Dimension	440 mm x 371.5 mm x 44mm
Operating Temp.	0~40°C (32~104°F)
Storage temp.	-20~80°C (-4~176°F)
Relative Humidity	0~90% @ 40°C, non-condensing
Safety	CE, FCC class A

## Model Name

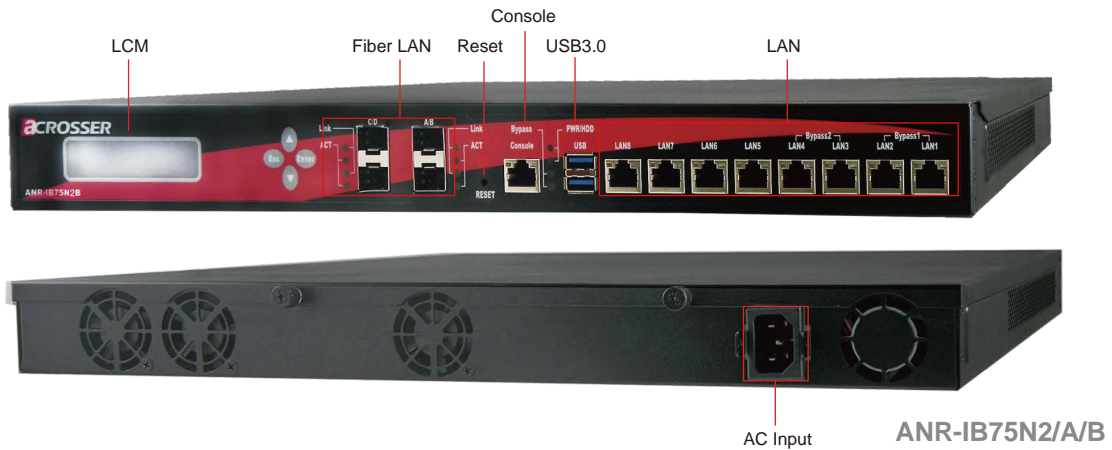
ANR-IB75N2	Networking Rackmount Server with PCH B75, 8 x RJ45 GbE LAN (2-pair bypass)
ANR-IB75N2A	Networking Rackmount Server with PCH B75, 8 x RJ45 GbE LAN (2-pair bypass) and 2 x Fiber expansion feature
ANR-IB75N2B	Networking Rackmount Server with PCH B75, 8 x RJ45 GbE LAN (2-pair bypass) and 4 x Fiber expansion feature



## Dimension



## I/O Connectors



## Packing List

- ANR-IB75N2(A/B) system x 1
- Quick manual x 1
- SATA cable x 2
- CD Utility x 1
- Console Cable(RJ45) x 1
- USA or Europe or Japan or UK power cord x 1
- Rack bracket x 2
- Box Packing x 1
- Screw for bracket (for Rack + HDD bracket) x 14
- Power cord hook x 1

## Ordering Information & CPU support list

ANR-IB75N2(A/B)i71	3rd Generation Intel Core i7 Processors i7-3770
ANR-IB75N2(A/B)i51	3rd Generation Intel Core i5 Processors i5-3550S
ANR-IB75N2(A/B)i31	3rd Generation Intel Core i3 Processors i3-3220
ANR-IB75N2(A/B)PG1	Intel Pentium Processor G2120

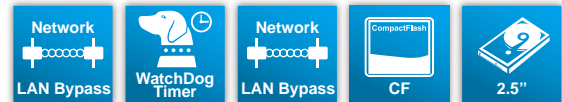
# ANR-J190/J180N2-C612

Intel® Celeron® Bay Trail J1900/J1800 Networking 1U Rackmount,  
6 x GbE LANs



## Features

- Intel® Celeron® Bay Trail J1900/J1800
- 1 x 204-pin DDR3L-1600 MHz, 1 x SO-DIMM Slot, Up to 8GB
- 6 x GbE, 2 x USB
- 1 x Mini PCIe Expansion
- 8 x GPIO
- 1 x COM (internal header)



CE FC

## Power Requirement

Power Input	Internal 250W power supply, input range 100V AC 60Hz ~ 240V AC 50Hz
-------------	---

## Software

OS Support	1. Windows 7 (32/64-bit) 2. Linux Kernel 3.11 (32/64-bit)
------------	--

## Mechanical & Environment

Dimension	440 x 250 x 45 mm
Operating Temp.	0~40°C
Storage temp.	-20~80°C

## Specification

### System

CPU	1. Intel® Celeron® Bay Trail J1900, Quad-core, clock speed 2.00GHz 2. Intel® Celeron® Bay Trail J1800, Dual-core, clock speed 2.41GHz
Memory	1 x 204-pin SO-DIMM socket support 1600MHz DDR3L up to 8GB
BIOS	AMI UEFI
WatchDog Timer	Software programmable 0~255 sec.

### Video

Graphic Controller	Integrated graphics support for processors with Intel Graphics Technology
Video Interface	1 x VGA (1 x internal header)

### Ethernet

Chipset	6 x Intel GbE chip
Connector	6 x RJ45 with LED
Bypass LAN	Yes (2-pair: LAN3&LAN4, LAN5&LAN6)

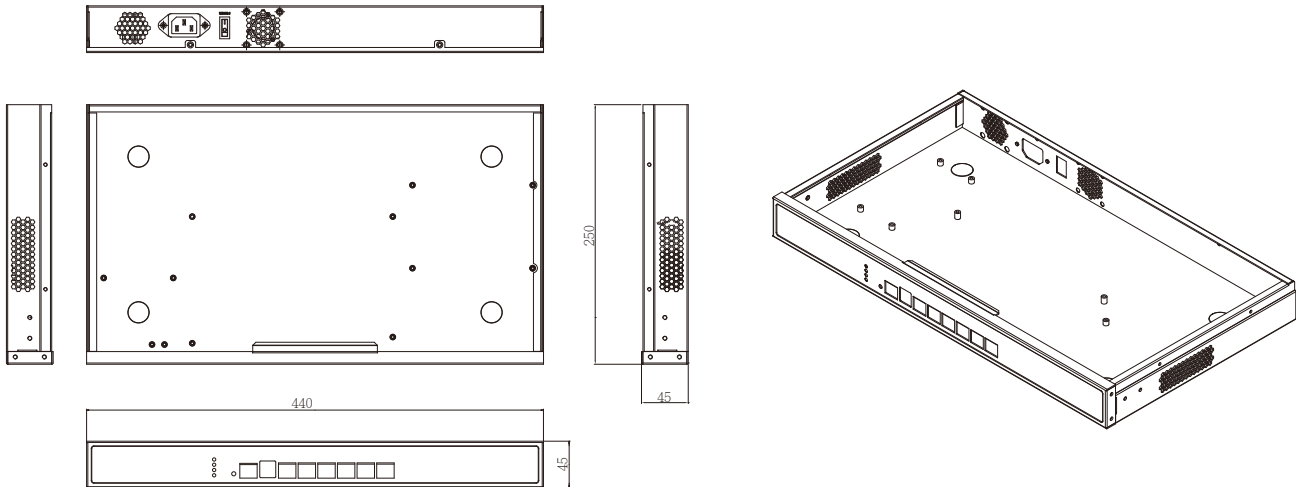
### Storage

SATA	1 x SATAII port
Compact Flash	1 x Compact Flash Type II socket
HDD Bay	1 x 2.5" HDD Bay

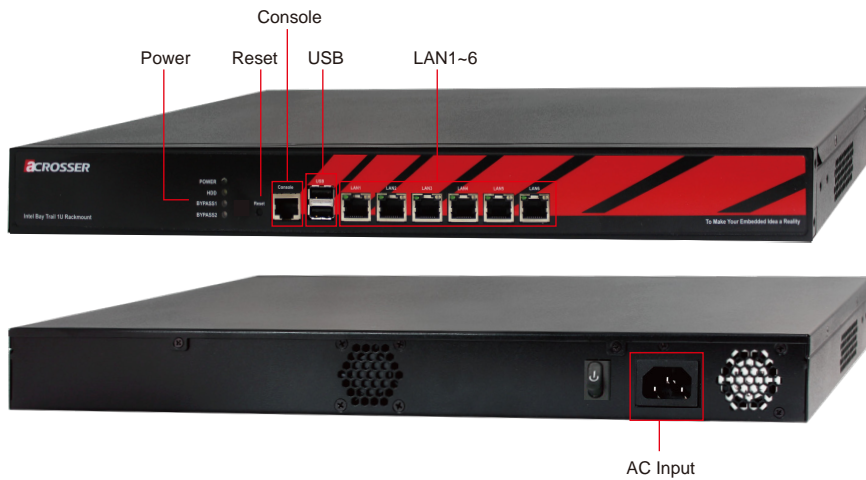
### I/O

Expansion	1 x Mini PCIe socket
Console Port	1 x Console (1 x RJ45)
USB	2 x USB 2.0

## Dimension



## I/O Connectors



### Packing List

- 1 x ANR-J190/J180N2-C612 system
- 1 x Driver CD
- 1 x Console Cable (DB9)
- 1 x SATA Cable
- 1 x SATA Power Cable
- 2 x Bracket Ears
- 1 x Power Cord (Option for USA/UK/EU/JPN/AU/RSA/IND)

### Option

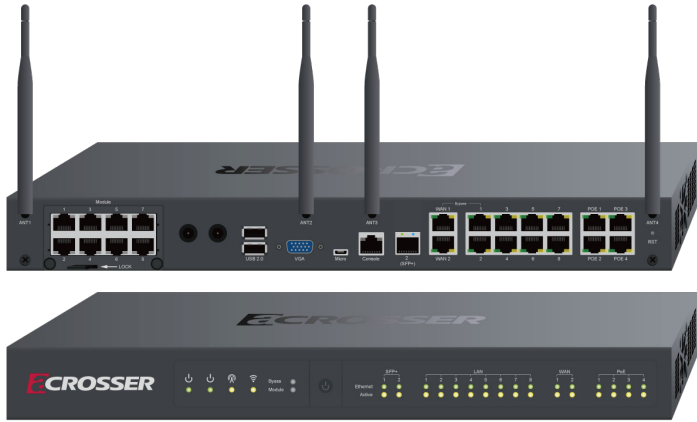
- |                 |   |
|-----------------|---|
| ANR-J190N2-C612 | 2GB DDR3L-1600 memory (non-ECC SO-DIMM) |
| ANR-J180N2-C612 | 4GB DDR3L-1600 memory (non-ECC SO-DIMM) |
|                 | 8GB DDR3L-1600 memory (non-ECC SO-DIMM) |

### Ordering Information

- |                 |  |
|-----------------|--|
| ANR-J190N2-C612 | Intel® Celeron® Bay Trail J1900/J1800 Networking               |
| ANR-J180N2-C612 | 1U Rackmount, DDR3L, GbE, USB 2.0, SATA II, CF, Mini PCIe PCIe |

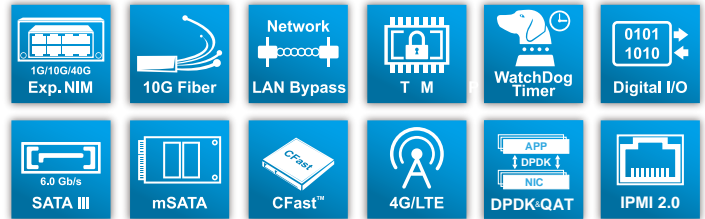
# AND-DNV3N1

Intel® Denverton Platform, 1 Exp. NIM, & PoE Desktop Networking Appliance



## Features

- Intel® Denverton C3000 Platform
- 2~16 core SoC options
- 4 x UDIMM DDR4
- 1 x Exp. NIM (1G/10G/25G/40G Fiber/Copper/LAN Bypass, NB-IoT)
- 1 x Mgmt. port
- 1 x 2.5" SSD, 1 x mSATA & 1 x CFast
- smart cooling fan
- 1+1 AC adapter



## Others

Battery	Lithium Battery, 3V 220mAh (CR2032)
Hardware Monitoring	CPU Volt. CPU & SYS Temp. FAN Speeds
Security & Mgmt.	TPM 2.0 (Infineon chipset) IPMI 2.0 (ASPEED AST2500 BMC)
QAT & DPDK	Support QAT & DPDK

## Power Requirement

Power Supply Unit	1+1 AC Adapter (90W) 100-240VAC
-------------------	---------------------------------

## Software

OS Support	Linux Kernel 4.4 or above, (64-bit)
------------	-------------------------------------

## Mechanical & Environment

Dimensions	360 (W) x 44 (H) x 320 (D) mm
Operating Temp.	0~ 40°C (32~104°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Certifications	CE, FCC Class A, RoHS 2, cULus

## Model Name

AND-DNV3N1	Desktop Networking Appliance .Intel® Denverton-NS platform .1 x Exp. NIM (1G/10G/25G/40G,Fiber/Copper/LAN Bypass, LTE, NB-IoT) .1 x Management port .1+1 AC Adapter
------------	---

## Specification

### System

CPU	Intel® Atom® C3958 Processor (16 core) Intel® Atom® C3758 Processor (8 core) Intel® Atom® C3558 Processor (4 core) Intel® Atom® C3338 Processor (2 core)
Chipset	Intel® Denverton SoC
Memory	4 x UDIMM DDR4-2400
BIOS	AMI
WatchDog Timer	Software programmable 0~255 sec.

### Video

Video Interface	VGA
-----------------	-----

### Ethernet

Chipset	Intel® I210
Connector	10 x GbE Copper (RJ-45)(8 x switch, 2 x WAN) 1 x GbE/10GbE Fiber (SFP/SFP+ depends on CPU) Optional 4 x GbE PoE Copper (RJ-45)
LAN bypass	One Pair

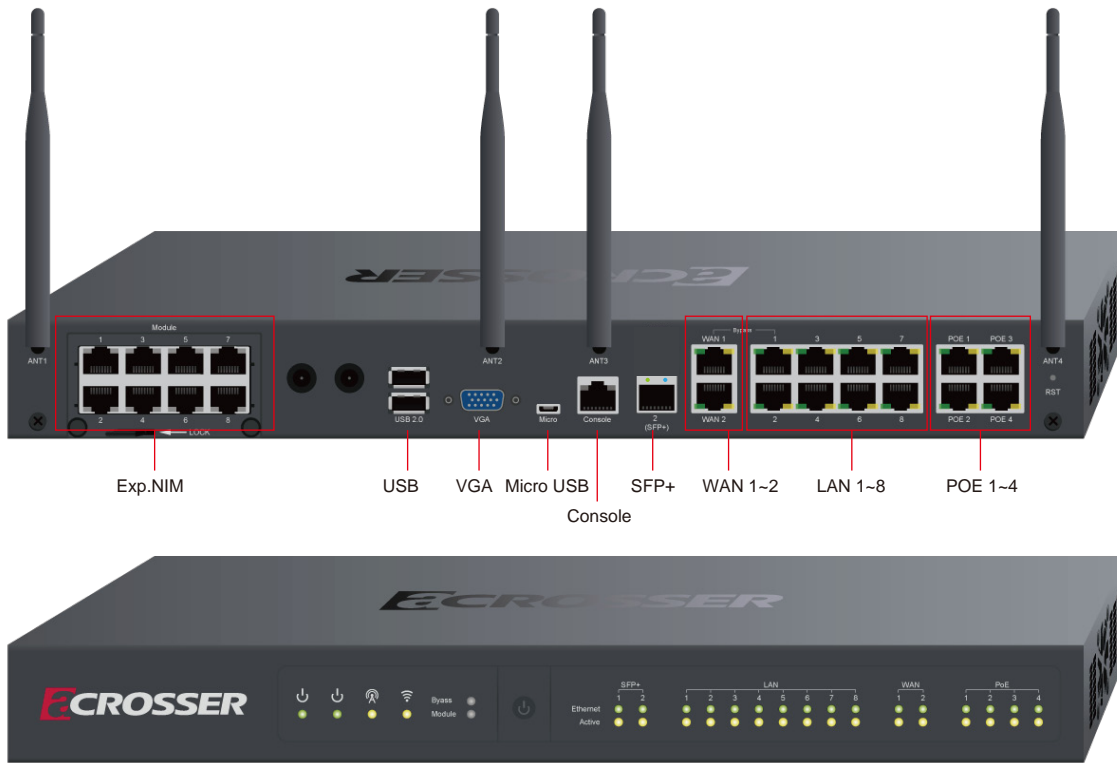
### Storage

HDD Bay	1 x 2.5" SATA-III port
mSATA	1 x mSATA socket (support full-size module)
CFast	1 x CFAST socket

### I/O

Console port	1 x Serial console (RJ-45) 1 x USB console (micro-USB)
USB port	2 x USB 2.0 (rear-side)
Antenna port	4 x SMA for WLAN (IEEE 802.11a/b/g/n/ac & LTE)
GPIO	8-bit GPIO (4-In, 4-Out), on-board pin header
Exp. NIM	1 x Exp. NIM Hot-swappable (1G/10G/25G/40G, Fiber/Copper/LAN Bypass, NB-IoT)
Expansion	1 x mini PCIe socket 1 x M.2 Ekey socket

## I/O Connectors



AND-DNV3N1

### Packing List

- AND-DNV3N1 series system x 1
- SATA cable x 2
- CD utility x 1
- Console cable (RJ-45 to DB9) x 1
- USB Console Cable (micro B-TypeA) x 1
- USA / EU / JPN / UK / AS / NZS / SA / India power cord x 2
- Rack bracket x 1
- Box packing x 1
- Screw for bracket (for rack + HDD bracket) x 14

### Ordering Information

AND-DNV3N1	Networking 1U Rackmount w/ Intel® C236 PCH, 1 Exp. NIM, 12 GbE LANs + 1 Mgmt., 2 SFP+ , Redundant PSU
------------	---

# AND-APL1N1FL series

Intel® Apollo Lake SoC series Networking Microbox Fanless Solution,  
6 x GbE LANs with 3-pair Bypass



## Features

- Intel® Apollo Lake SoC J-series/N-series/E-series
- 1 x SO-DIMM DDR3L-1866 MHz, up to 8GB
- 6 x GbE, 3 x USB 3.0
- 1 x PCIe Expansion Slot, 1 x Mini PCIe Socket
- 8 x GPIO



## Power Requirement

Power Input 12V / 60W Adapter

## Software

OS Support
 

- Windows 10 IoT Enterprise LTSC Entry
- Linux Kernel 4.4 & above

## Mechanical & Environment

Security TPM 2.0  
 Dimension 280 x 209 x 44mm  
 Operating Temp. 0~40°C (32~104°F)  
 Storage Temp. -20~80°C (-4~176  
 Safety CE, FCC class A

## Specification

### System

CPU	<ul style="list-style-type: none"> <li>• Intel® Apollo Lake SoC J3455 CPU</li> <li>• Intel® Apollo Lake SoC J3355 CPU</li> <li>• Intel® Apollo Lake SoC N4200 CPU</li> <li>• Intel® Apollo Lake SoC N3350 CPU</li> <li>• Intel® Apollo Lake SoC E3950 CPU</li> <li>• Intel® Apollo Lake SoC E3940 CPU</li> <li>• Intel® Apollo Lake SoC E3930 CPU</li> </ul>
Chipset	Intel® Apollo Lake SoC
Memory	1 x SO-DIMM DDR3L-1866 MHz, up to 8GB

### Video

Graphic Controller	Intel® HD Graphics
--------------------	--------------------

Video Interface 1 x VGA (1 x internal header)

### Storage

SATA	1 x SATAIII / mSATA (Optional)
CF	1 x CF Card / CFAST (Optional)

### I/O

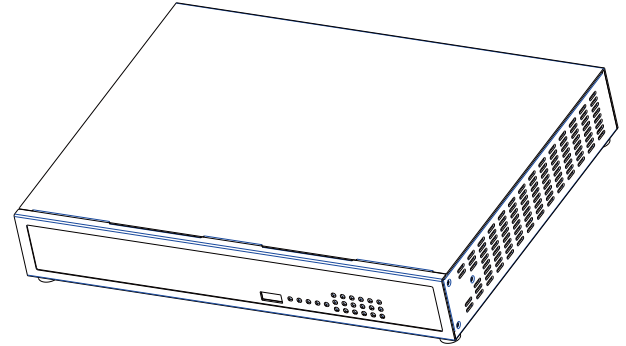
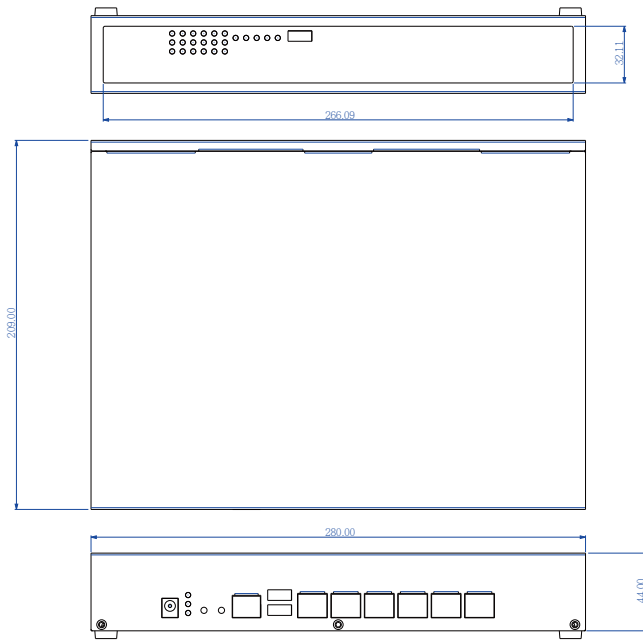
Ethernet	6 x GbE, Intel® I210-AT Ethernet Controllers
Expansion Slot	1 x PCIe x 8 Slot (x1 Signal) 1 x Mini PCIe Slot
Serial Port	1 x Console Port (RJ45)
USB	3 x USB 3.0
GPIO	8-bit Digital I/O

### Hardware Feature

Hardware Monitoring	<ol style="list-style-type: none"> <li>1) CPU Voltage</li> <li>2) CPU Temperature</li> <li>3) System Temperature</li> <li>4) RTC Battery Voltage</li> </ol>
WatchDog Timer	Software programmable 1~255 sec.



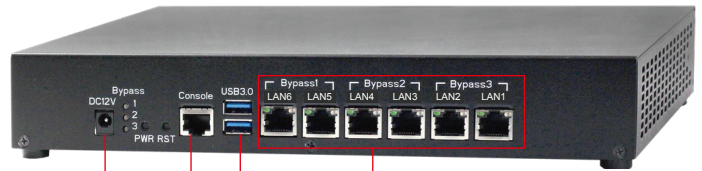
## Dimension



## I/O Connectors



USB 3.0



DC IN Console USB3.0 6 x Intel GbE LAN

## Packing List

- AND-APL1N1FL system
- 1 x Driver CD
- 1 x Quick Guide
- 1 x Console Cable (DB9)
- 1 x SATA Cable
- 1 x SATA Power Cable

## Ordering Information

AND-APL1N1FL series

Microbox Fanless Solution with Intel® Apollo Lake SoC J-series/N-series/E-series, GbE, USB 3.0, SO-DIMM DDR3L-1866, SATA III, CF, PCIe Expansion Slot, Mini PCIe

## Option

- 2GB DDR3L-1866 memory (non-ECC SO-DIMM)
- 4GB DDR3L-1866 memory (non-ECC SO-DIMM)
- 8GB DDR3L-1866 memory (non-ECC SO-DIMM)

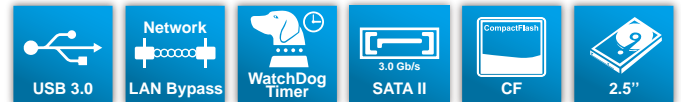
# AND-J190/J180N2-C612

Intel® Celeron® Bay Trail J1900/J1800 Networking Microbox,  
DDR3L, GbE, USB 3.0, SATA II, CF, Mini PCIe



## Features

- Intel® Celeron® Bay Trail J1900/J1800
- 1 x 204-pin DDR3L-1600 MHz, 1 x SO-DIMM Slot, Up to 8GB
- 6 x GbE, 3 x USB
- 1 x Mini PCIe Expansion
- 1 x COM (1 x internal header)
- 8 x GPIO



## Specification

### System

CPU	1. Intel® Celeron® Bay Trail J1900, Quad-core, clock speed 2.0GHz 2. Intel® Celeron® Bay Trail J1800, Dual-core, clock speed 2.41GHz
Memory	1 x 204-pin SO-DIMM socket support 1600MHz DDR3L up to 8GB
BIOS	AMI UEFI
WatchDog Timer	Software programmable 1~255 sec.

### Video

Graphic Controller	Integrated graphics support for processors with Intel Graphics Technology
Video Interface	1 x VGA (1 x internal header)

### Ethernet

Chipset	6 x Intel GbE chip
Connector	6 x RJ45 with LED
Bypass LAN	Yes (2-pair: LAN3&LAN4, LAN5&LAN6)

### Storage

SATA	1 x SATAII port
Compact Flash	1 x Compact Flash Type II socket
HDD Bay	1 x 2.5" HDD Bay

### I/O

Expansion	1 x Mini PCIe socket
Console Port	1 x Console (1 x RJ45)
USB	1 x USB 3.0, 2 x USB 2.0
Antenna Hole	2 x SMA for Wi-Fi (IEEE 802.11a/b/g/n/ac)

### Power Requirement

Power Input	DC in 12V / 60W Adapter
-------------	-------------------------

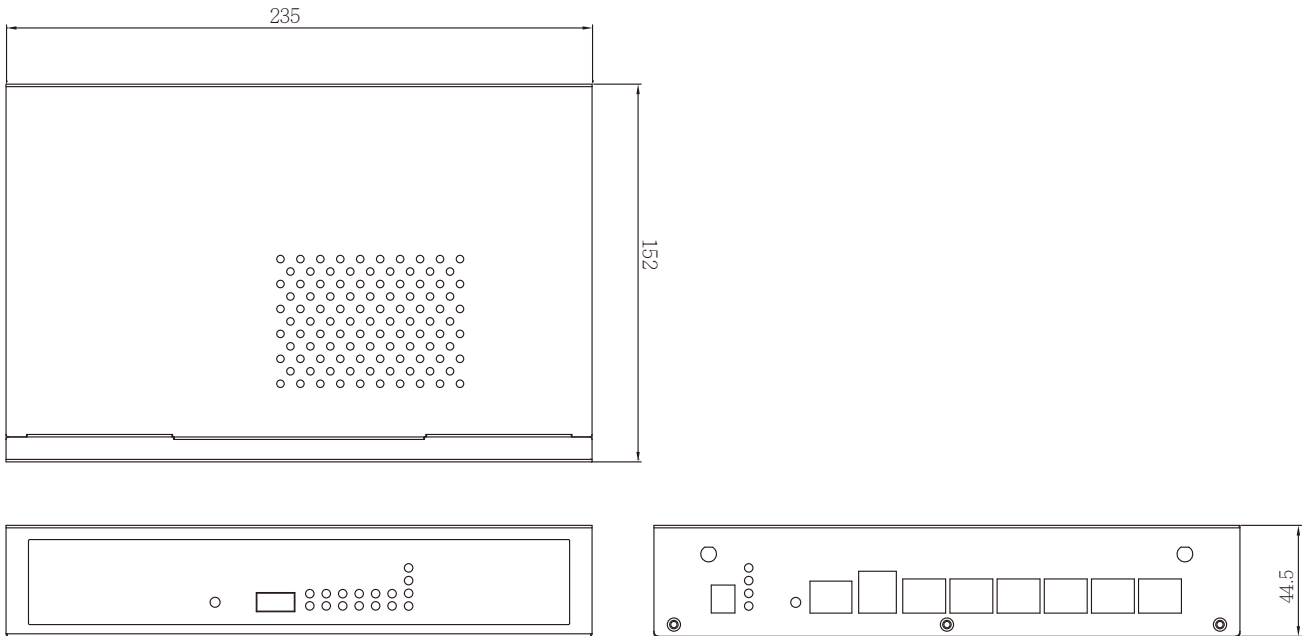
### Software

OS Support	1. Windows 7 (32/64-bit) 2. Linux Kernel 3.11 (32/64-bit)
------------	--

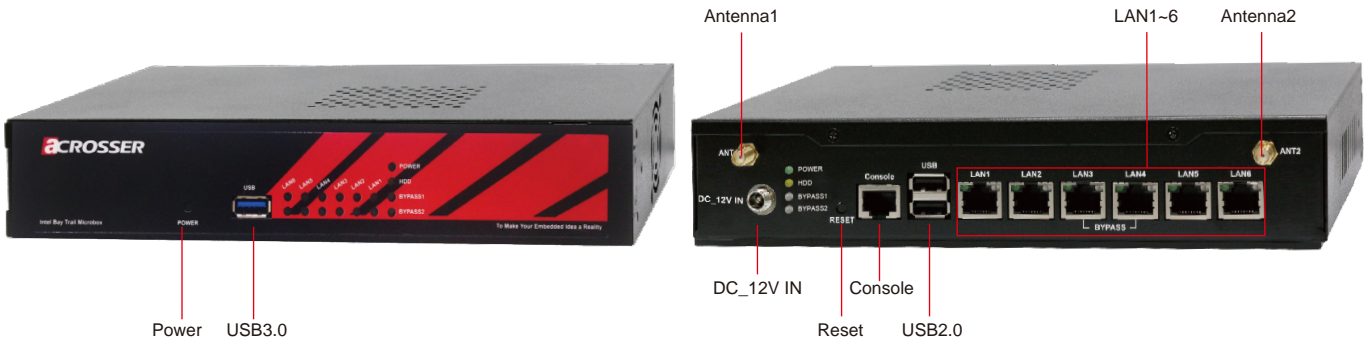
### Mechanical & Environment

Dimension	235 x 152 x 44.5 mm
Operating Temp.	0~40°C
Storage temp.	-20~80°C

## Dimension



## I/O Connectors



## Packing List

- 1 x AND-J190/J180N2-C612 system
- 1 x Driver CD
- 1 x Console Cable (DB9)
- 1 x SATA Cable
- 1 x SATA Power Cable
- 1 x Power Adaptor
- 1 x Power Cord (Option for USA/UK/EU/JPN/AU/RSA/IND)

## Option

- |                 |   |
|-----------------|---|
| AND-J190N2-C612 | 2GB DDR3L-1600 memory (non-ECC SO-DIMM) |
| AND-J180N2-C612 | 4GB DDR3L-1600 memory (non-ECC SO-DIMM) |
|                 | 8GB DDR3L-1600 memory (non-ECC SO-DIMM) |

## Ordering Information

- |                 |   |
|-----------------|---|
| AND-J190N2-C612 | Intel® Celeron® Bay Trail J1900/J1800 Networking              |
| AND-J180N2-C612 | Microbox, DDR3L, GbE, USB 2.0/USB 3.0, SATA II, CF, Mini PCIe |

# AND-G420N1

Networking Microbox, AMD® G-Series GX-420MC,  
6 x Intel® GbE LAN (2-pair bypass)



## Features

- AMD® G-Series GX-420MC, 4-core@2.0GHz, 2MB L2
- 2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
- 6 x Intel® GbE LAN
- 2 x USB 3.0
- 2 x USB 2.0 (internal pin header)
- 1 x Console (RJ45)
- 8 x GPIO (4-In, 4-Out) internal pin header



CE FCC

## Power Requirement

Power Input 1 x DC 12V/60W input

## Software

OS Support Ubuntu 14.04 (32/64-bit), Linux Kernel 3.13 (32/64-bit)  
Fedora 20 (32/64-bit), Linux Kernel 3.11 (32/64-bit)

## Mechanical & Environment

Dimension 242 x 149.5 x 44mm  
Operating Temp. 0~40°C (32~104°F)  
Storage Temp. -20~80°C (-4~176°F)  
Relative Humidity 0 to 90% @40°C, non-condensing  
EMC & Safety CE, FCC class A

## Specification

### System

CPU	AMD G-Series GX-420MC Quad-core, clock speed 2.00GHz
Memory	2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
BIOS	AMI® UEFI BIOS
WatchDog Timer	Software programmable 0~255 sec. (0=Disable Timer)

### Ethernet

Chipset	6 x Intel® I210-AT GbE chip
Connector	6 x RJ45 with LED
LAN Bypass	2-pair(LAN1&LAN2, LAN3&LAN4)

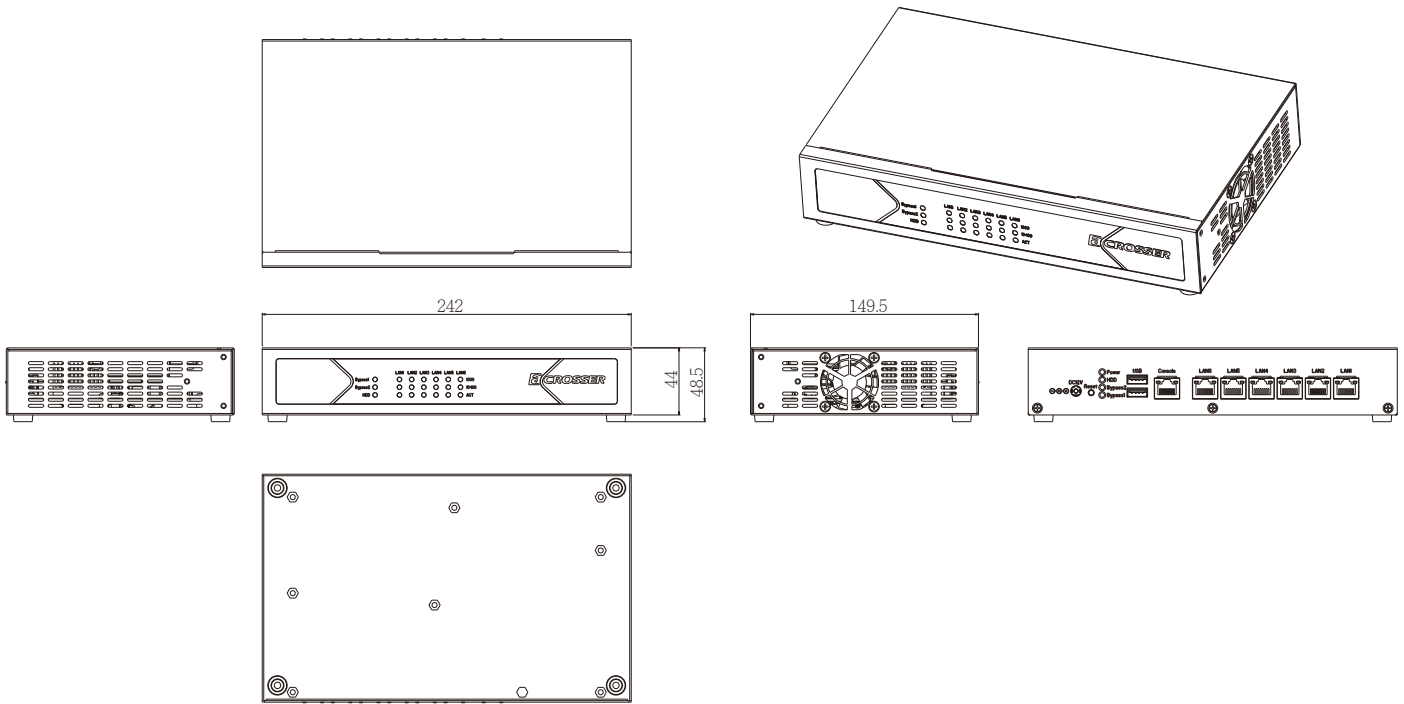
### Storage

SATA	1 x SATAII port
Compact Flash	1 x Compact Flash Type-II socket (Support UDMA)
HDD Bay	1 x 2.5" HDD Bay

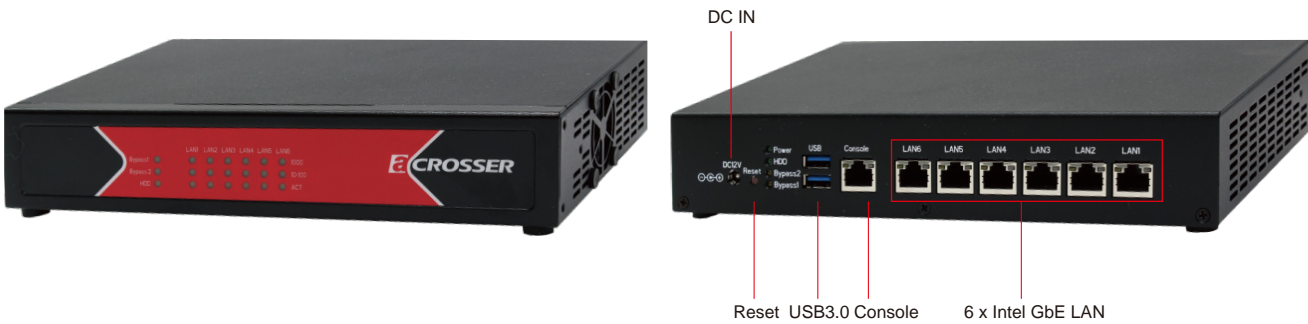
### I/O

Console Port	1 x Console (RJ45)
USB	2 x USB 3.0
USB	2 x USB 2.0 (internal pin header)
GPIO	8-bit GPIO (4-In, 4-Out) internal pin header

## Dimension



## I/O Connectors



## Packing List

- 1 x AND-G420N1 System
- 1 x Console Cable
- 1 x Quick User Manual
- 1 x CD with Driver and Manual
- 1 x Power Adaptor
- 1 x Power Cord (Option for US/EU/UK/JPN)
- 1 x Screw Pack
- 1 x Pull-tab Opener

## Ordering Information

AND-G420N1

Networking Microbox, AMD® G-Series GX-420MC,  
6 x Intel GbE LAN (2-pair bypass)

# Product Matrix

## Embedded SBC



Form Factor	Mini-ITX	
Model Name	AMB-BT45B1 Series	AMB-BT19T2 Series
CPU	Intel Atom E3845 / E3815	Intel Celeron J1800 / J1900
Chipset	Intel Bay Trail SoC	Intel Bay Trail SoC
Memory	2 x DDR3L-1333MHz, SO-DIMM, up to 8GB (AMB-BT19B1 / AMB-BT45B1 / AMB-BT45B1W) 1 x DDR3L-1066MHz, SO-DIMM, up to 4GB (AMB-BT15B1)	1 x DDR3L-1333MHz, SO-DIMM, up to 8GB
Graphics	Intel HD Graphics	Intel HD Graphics
Video Interface	1 x VGA, 1 x HDMI, 1 x 24-bit LVDS	1 x VGA, 1 x HDMI, 1 x 24-bit LVDS
E-IDE(44pin) / IDE(40pin)	- / -	- / -
SATA	1 x SATA II	1 x SATA II, 1 x mSATA
CF	-	-
Expansion Slot	1 x mini PCIe, 1 x SIM Slot	1 x mini PCIe
Ethernet	1 x GbE LAN	1 x GbE LAN
USB	6 x USB 2.0	9 x USB 2.0
GPIO	8-bit Digital I/O	8 x GPIO
Serial Port	2 x RS-232/485, 4 x RS-232	4 x RS232 + 1 x RS232/RS485 + 1 x RS232/TTL
Parallel Port	1	1
Audio	Realtek A LC888	Realtek ALC662
WatchDog Timer	1 ~ 255 seconds	1 ~ 255 seconds
Hardware Monitor	YES	YES
Page	50	52

## Embedded SBC



Form Factor	COM Express type 7	COM Express type 6
Model Name	AMB-XD15MT	AMB-HM76B1FL/76B1
CPU	Xeon® D1548(8 Core, 2.0/2.6GHz, 12MB cache, TDP 45W)	Intel Core i7/ i3/ Celeron
Chipset	Intel Xeon D SoC	Intel HM76
Memory	2 x DDR4-2400MHz, SO-DIMM, up to 32GB Default configuration: 2 x 8GB	2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
Graphics	-	Intel HD / HD 4000
Video Interface	-	1 x Analog RGB Display, 1 x HDMI Port 1 x Dual Channel LVDS, 3 x Display Port 1 x SDVO/Display Port
E-IDE(44pin) / IDE(40pin)	-	-
SATA	2	4
CF	-	-
Expansion Slot	24 x PCI-e 3.0 Lanes, 7 x PCI-e 2.0 Lanes	1 x PCIe x16 Gen.3, 6 x PCIe x1
Ethernet	2 x 10 GbE LAN	1 x GbE
USB	4 x USB 3.0, 4 x USB 2.0	4 x USB 3.0, 8 x USB 2.0
GPIO	8-bit Digital I/O, 4-bit DI and 4-bit DO	8-bit Digital I/O, 4-bit DI and 4-bit DO
Serial Port	2 x COM Interface (TX/RX only)	2 x COM Interface (TX/RX only)
Parallel Port	-	-
Audio	-	Intel HD Audio Channel
WatchDog Timer	0 ~ 255 seconds	0 ~ 255 seconds
Hardware Monitor	YES	YES
Page	54	55



# Product Matrix

## Embedded SBC



Form Factor	3.5"	
Model Name	AMB-BT28S2	AMB-BT19S1
CPU	Intel Celeron N2807 2.16GHz	Intel® Celeron® J1900 2.42 GHz
Chipset	Intel Bay Trail SoC	Intel Bay Trail SoC
Front Side Bus	-	-
Memory	1 x DDR-1333MHz, SO-DIMM, up to 4GB	1 x DDR3L-1333MHz, SO-DIMM, up to 8GB
Graphics	Intel HD Graphic	Intel HD Graphic
Video Interface	1 x VGA, 1 x LVDS, 1 x HDMI	1 x VGA, 1 x 24-Bit LVDS
E-IDE(44pin) / IDE(40pin)	-	- / -
SATA	1 x SATA II, 1 x mSATA	1 x SATA II, 1 x mSATA
CF	-	-
Floppy	-	-
Expansion Slot	2 xmini PCIe	2 xmini PCIe
Ethernet	1 x GbE LAN	2 x GbE LAN
USB	4	7
GPIO	8-bit Digital I/O	8-bit Digital I/O
Serial Port	2 x RS-232	COM1(DB9), COM1~COM5(RS232) COM6(RS232/485)
Parallel Port	-	-
Audio	Realtek A LC888	Realtek ALC888
WatchDog Timer	1 ~ 60 seconds	1 ~ 255 seconds
Hardware Monitor	YES	YES
Page	56	57

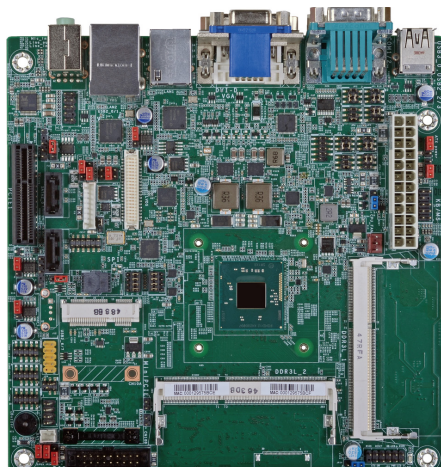
## Embedded SBC



Form Factor	ISA Half-Size	
Model Name	AMB-VDX3H1	AR-B8172
CPU	Onboard DM&P Vortex86DX3 1GHz	Onboard DM&P Vortex86DX 800MHz
Chipset	-	-
Front Side Bus	-	-
Memory	Onboard 1GB DDR3 SDRAM	Onboard 256MB DDR2 SDRAM
Graphics	Integrated	XGI Z9s
Video Interface	1 x VGA	1 x VGA
E-IDE(44pin) / IDE(40pin)	1 x IDE(44pin) support Ultra DMA33/66/100	1 x IDE(44-pin)
SATA	1 x Sata	-
CF	1 x Compact Flash Type I/II socket	1 x Compact Flash Type I/II socket
Floppy	-	1
Expansion Slot	1 x PC/104	1 x PC/104
Ethernet	1 x RJ45 10/100Mbps LAN	1 x RJ45 10/100Mbps LAN
USB	4(USB 2.0)	4
GPIO	16-bit Digital I/O	16-bit Digital I/O
Serial Port	2 x RS-232, 2 x RS-232/422/485	1 x RS-232, 1 x RS-232/422/485
Parallel Port	1 x LPT	1 x LPT
Audio	-	-
WatchDog Timer	0 ~ 255 seconds	0 ~ 255 seconds
Hardware Monitor	YES	YES
Page	58	59

# AMB-BT45B1/W (Wide Temperature)

Intel Bay Trail SoC, 1 x VGA, 1 x DVI, 1 x LVDS, 2 x GbE, 6 x COM, 1 x USB3.0, 6 x USB2.0, 1 x PCIe x4, 1 x mini PCIe



## Features

- Intel Bay Trail SoC, low power consumption.
- 2 x DDR3L-1066/1600MHz, SO-DIMM, up to 8GB
- 1 x USB3.0, 6 x USB2.0, 1 x PCIe x4, 1 x mini PCIe
- Wide Temperature(AMB-BT45B1W : -40~85°C)



## Power Requirement

Power Input	1 x ATX 24-Pin ATX power connector
Power State	S0, S1, S3, S4
Power Consumption	TBD

## Software

OS Support	Window 7 (32bit/64bit), windows 8.1 ( 32bit/64 bit)
------------	---

## Mechanical & Environment

Dimension	170mm x 170mm (6.69" x 6.69" )
Weight	TBD
Operating Temp.	<ul style="list-style-type: none"> <li>• -20~70°C - (AMB-BT45B1)</li> <li>• -40~85°C - (AMB-BT45B1W)</li> <li>• 0~60°C - (AMB-BT19B1)</li> <li>• 0~60°C - (AMB-BT15B1)</li> </ul>
Storage Temp.	-40~85°C
Relative Humidity	5 to 90% , non-condensing
Safety	CE, FCC class A

## Packing List

- 1 x AMB-BT45B1 main board
- 1 x Driver CD
- 1 x Quick Guide
- 1 x IO Shield
- 1 x SATA Cable
- 1 x Heatsink

## Ordering Information

AMB-BT45B1	Intel Atom E3845, Quad Core, 2M cache, 1.91GHz, 10W (2 x LAN, 2 x COM)
AMB-BT45B1W	Intel Atom E3845, Quad Core, 2M cache, 1.91GHz, 10W (2 x LAN, 6 x COM)
AMB-BT15B1	Intel Atom Atom E3815, Single Core, 0.5M cache, 1.46GHz, 5W (2 x LAN, 6 x COM)

## Optional Cable

- USB port cable (2.54mm)
- COM port cable
- Serial ATA data cable

## Specification

### Specification

CPU	Intel Atom E3845, Quad Core, 2M Cache, 1.91GHz, 10W (AMB-BT45B1/ AMB-BT45B1W)
Chipset	Intel Bay Trail SoC
Memory	<ul style="list-style-type: none"> <li>• 2 x DDR3L-1600MHz, SO-DIMM, (AMB-BT19B1/AMB-BT45B1/AMB-BT45B1W) up to 8GB system memory</li> <li>• 1 x DDR3L-1066MHz, SO-DIMM, (AMB-BT15B1) up to 4GB system memory</li> </ul>

### Video

Graphic Controller	Intel® HD Graphics
Video Memory	Shared Memory
Video Interface	<ul style="list-style-type: none"> <li>• 1 x VGA (DB15) resolution up to 2560x1600 @ 60Hz</li> <li>• 1 x DVI-D resolution up to 1920x1080 @ 60Hz</li> <li>• 1 x LVDS (24 Bit Dual channel LVDS, resolution up to 1920x1200 @ 60Hz)</li> </ul>

### Storage

SATA	2 x SATA II ports
------	-------------------

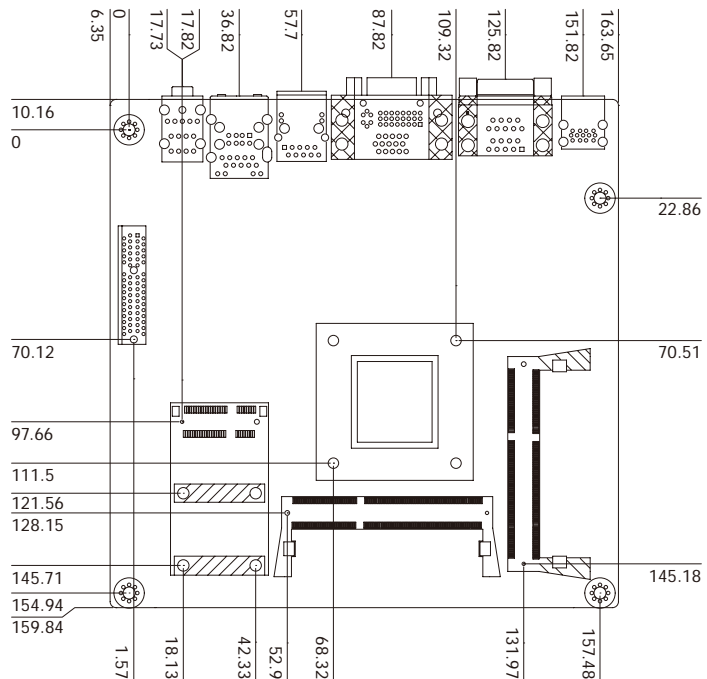
### I/O

Ethernet	2 x GbE, Intel I210AT PCIe Ethernet controllers
Expansion Slot	<ul style="list-style-type: none"> <li>• 1 x PCIe x 4 slot (x1 Signal)</li> <li>• 1 x mini PCIe slot</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>• 1 x RS232/485 (DB9)</li> <li>• 1 x RS232 (DB9)</li> <li>• 1 x RS232/485 (Pin Header)</li> <li>• 3 x RS232 (Pin Header)</li> </ul>
USB	3 x USB 2.0 port on rear I/O 1 x USB 3.0 Port on rear I/O 3 x USB 2.0 pin header
GPIO	8-bit Digital I/O
Audio	Realtek ALC888 5.1-channel High Definition Audio 1xLine in, 1x Line out

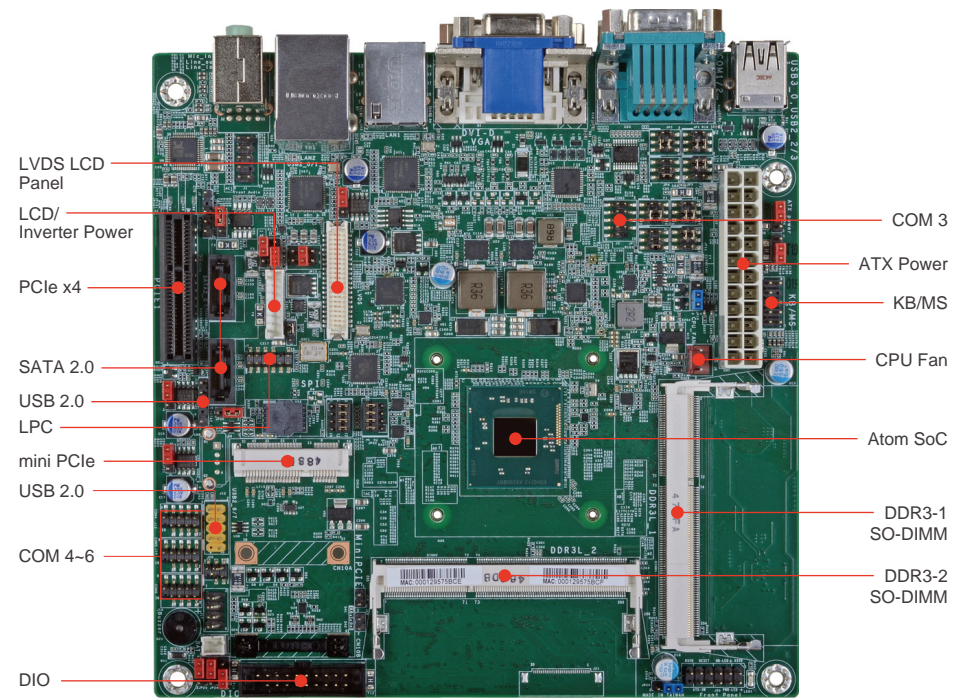
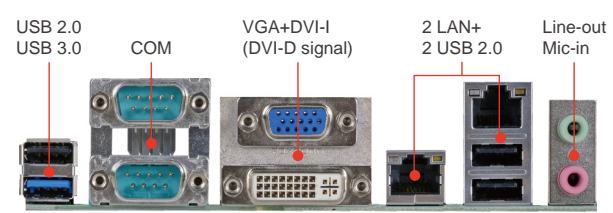
### Hardware Feature

Hardware Monitoring	1.CPU voltage 2.CPU and System Temperature 3.System fan speed
WatchDog Timer	Software programmable 1~255 Sec.

# Dimension

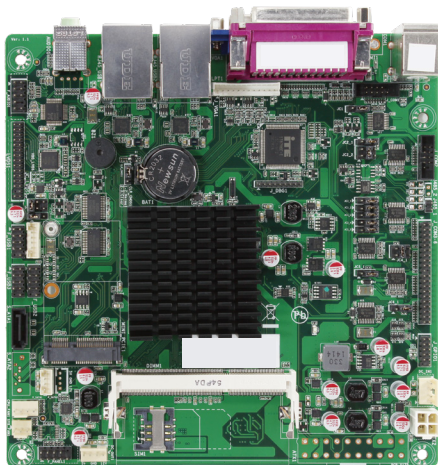


# I/O Connectors



# AMB-BT19T2

Intel Bay Trail SoC, 1 x VGA, 1 x HDMI, 1 x LVDS, 2 x GbE, 6 x COM, 9 x USB 2.0, 1 x mini PCIe, 1 x SATA II, 1 x mSATA



## Features

- Intel Bay Trail SoC, low power consumption.
- 1 x DDR3L-1333MHz, SO-DIMM, up to 8GB
- 9 x USB 2.0
- 4 x RS232, 1 x RS232/485, 1 x RS232/TTL
- 2 x GbE LAN, 1 x mini PCIe, 1 x SIM slot
- 1 x SATAII, 1 x mSATA
- 12V Input
- Fanless design



CE FC

## Specification

### Specification

CPU	1. Intel® Celeron® J1800, Dual-Core, 1M Cache, 2GHz (2.41GHz), 10W(AMB-BT18T2)
Chipset	Intel Bay Trail SoC
Memory	1 x DDR3L-1333MHz, SO-DIMM, up to 8GB
BIOS	AMI UEFI BIOS
Real Time Clock	1 x System RTC

### Video

Graphic Controller	Intel® HD Graphics
Video Interface	<ul style="list-style-type: none"><li>• 1 x VGA, resolution up to 2560x1600 @ 60Hz</li><li>• 1 x HDMI, resolution up to 1920x1080 @ 60Hz</li><li>• 1 x LVDS (24 Bit Dual channel LVDS, resolution up to 1920x1200 @ 60Hz)</li></ul>

### Storage

SATA	1 x SATA II Port + 1 x mSATA
------	------------------------------

### I/O

Ethernet	2 x GbE LAN
Expansion Slot	1 x mini PCIe
Ethernet Chip	2 x Realtek GbE LAN Chip (8105E/8111E)
Serial Port	4 x RS232 + 1 x RS232/RS485 + 1 x RS232/TTL
Parallel Port	1 x Parallel Port
USB	9 x USB2.0 ( 4XReal I/O + 5 x Pin Header.)
Audio	Realtek ALC662 5.1-channel High Definition Audio 1 x Line-out, 1 x MIC-in
GPIO	8 x GPIO
Keyboard	1 x PS/2 connector for Key Board/Mouse
SIM	1 x SIM slot

### Power Requirement

Power Input	2 x 4-Pin AT power connector
Power Output	DC 12V/5V power output Connector, System Fan & CPU Fan connector

### Software

OS Support	Window 7 (32bit/64bit), windows 8.1( 32bit/64 bit), windows10
------------	---

### Mechanical & Environment

Dimension	170mm x 170mm (6.69" x 6.69" )
Operating Temp.	0~60°C
Storage Temp.	-20~75°C
Safety	RoHS

### Packing List

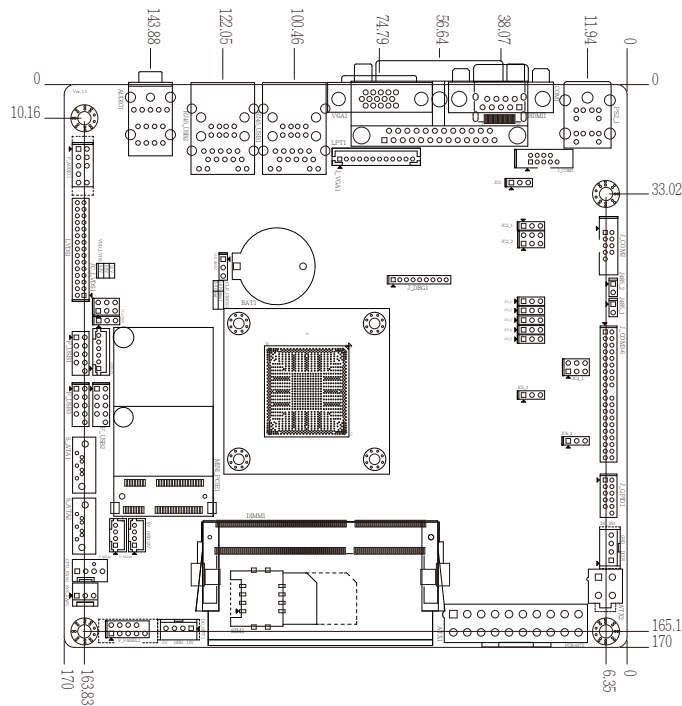
- AMB-BT18T2
- Quick User Guide
- Driver CD
- SATA Cable
- SATA Power Cable
- 3 x COM Cable
- VGA Cable

### Ordering Information

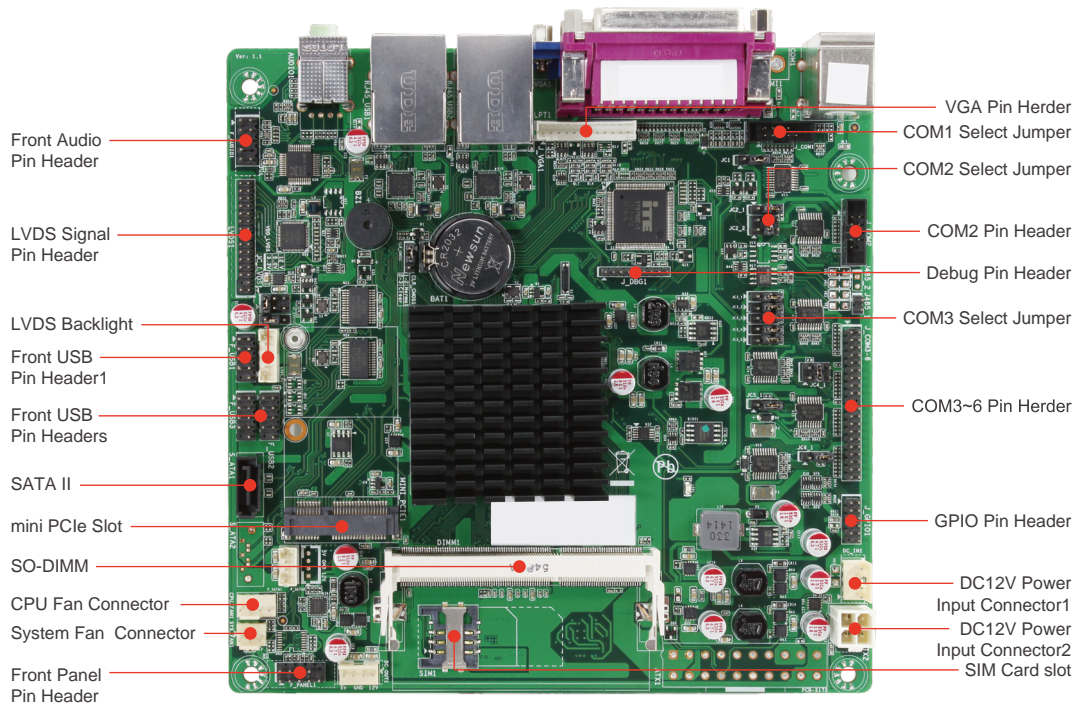
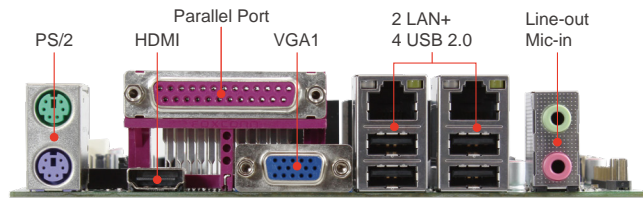
AMB-BT19T2	Intel Celeron J1800, Dual Core, 1M cache, 2GHz (2.41GHz), 1 x VGA, 1 x HDMI, 1 x LVDS, 2 x GbE, 6 x COM, 9 x USB2.0, 1 x mini PCIe, 1 x SATA, 1 x mSATA
------------	---



# Dimension

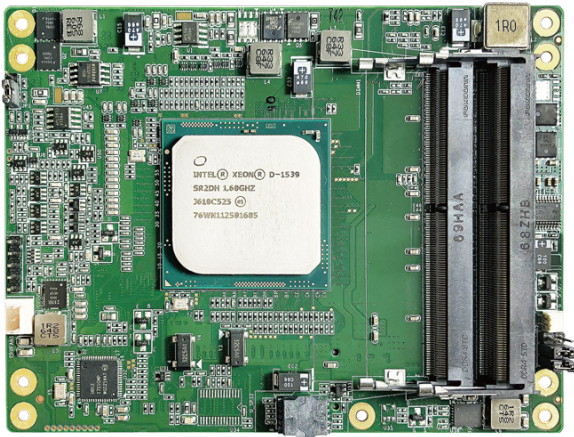


# I/O Connectors



# ACM-XD15MT

Intel Xeon D COM Express Basic Type 7 Module



## Features

- Newest platform and highest performance COM Express Basic Type 7
- The Intel Xeon D Processor
- Xeon® D1548 2.0/2.6GHz 12MB(8 core)
- Support Two DDR4 ECC SODIMM , up to 32GB
- 32 PCI-e Lanes
- 2 x 10 GbE KR & NC-SI



## Specification

### System

CPU	Xeon® D1548 (8 Core, 2.0/2.6GHz, 12MB cache, TDP 45W)
Chipset	Integrated in SoC processor
Memory	2 x 2400 DDR4 SODIMM(Support ECC function) up to 32GB Default configuration: 2 x 8GB
BIOS	AMI
WatchDog Timer	Software programmable 1~255 sec

### Storage (Support by Carrier Board)

SATA	• 2 x SATA III with 6Gb/s
------	---------------------------

### I/O (Support by Carrier Board)

Ethernet Chip	1 x Intel I210AT GbE Lan, supports PXE Boot 2 x 10 GbE with KR interface & NC-SI
Expansion Interface	24 x PCI-e 3.0 Lanes • 1 x PCI-e 3.0 x16 (or 2 x PCI-e x 8) • 1 x PCI-e 3.0 x 8 7 x PCI-e 2.0 Lanes • 6 x PCI-e 2.0 x1(AB connector) • 1 x PCI-e 2.0 x1(CD connector)
Serial Interface	2 x COM port Interface (TX/RX only)
USB	4 x USB 3.0, 8 x USB 2.0
GPIO	8-bit Digital I/O, 4-bit DI and 4-bit DO
Audio Codec	Intel HD Audio Channel

### Software

OS Support	• Linux Kernel 4.9 & above
------------	----------------------------

## Mechanical & Environment

Dimension	125 mm x 95 mm (4.92" x 3.74") COM Express Basic
Weight	TBD
Operating Temp.	0~60°C (32~140°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90%, non-condensing
Safety	CE, FCC compliant

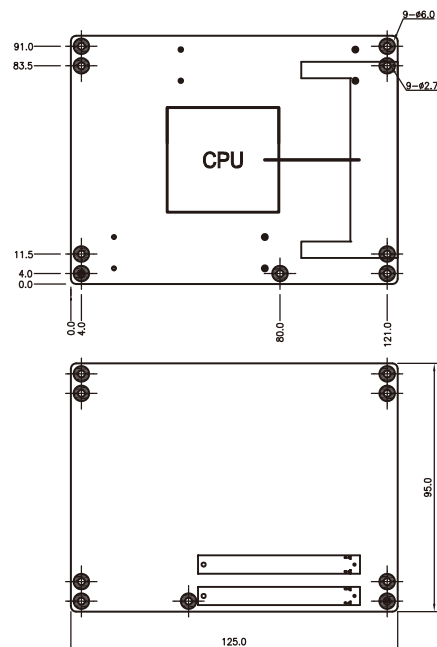
## Packing List

- 1 x ACM-XD15MT
- 1 x CD Title
- 1 x Quick Guide

## Ordering Information

ACM-XD15MT	Intel Xeon D 1548 , COM Express Basic Type 7 Module
------------	---

## Dimension



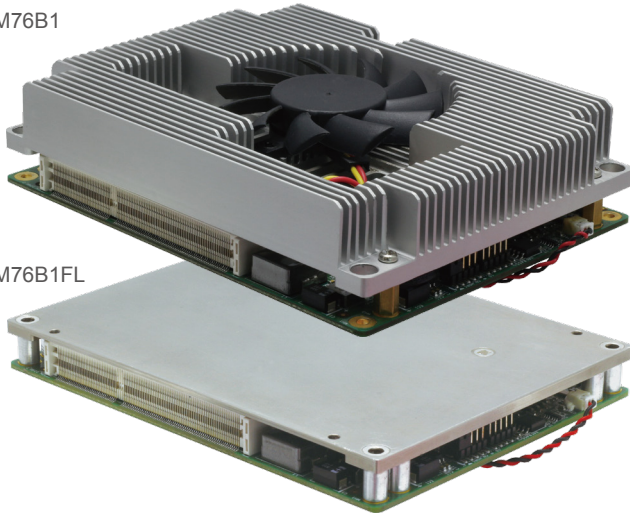


# AMB-HM76B1/FL

COM Express Intel HM76 Basic Type 6 Module

HM76B1

HM76B1FL



## Features

- COM Express Basic Type 6 Module
- The 3rd generation Intel Core platform + Intel HM76 Chipset
- Intel Core i7/i3/Celeron CPU
- 2 x DDR3L-1600MHz, SO-DIMM, up to 16GB



## Specification

### System

CPU	<ul style="list-style-type: none"> <li>• Intel Core i7 3517UE (Dual Core, 1.7GHz, 4MB cache, TDP 17W)</li> <li>• Intel Core i3 3217UE (Dual Core, 1.6GHz, 3MB cache, TDP 17W)</li> <li>• Intel Core Celeron 1047UE (Dual Core, 1.4GHz, 2MB cache, TDP 17W)</li> </ul>
Chipset	Intel HM76
Memory	2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
BIOS	AMI 32Mbit SPI BIOS
WatchDog Timer	Software programmable 0~255 seconds

### Video (Support by Carrier Board)

Graphic Controller	Intel HD / HD 4000
Video Interface	<ul style="list-style-type: none"> <li>• 1 x Analog RGB Display Output Resolution up to 2048x1536 pixels with 32-bit@75Hz</li> <li>• 1 x HDMI Port Output Resolution up to 1920x1200@60Hz</li> <li>• 1 x Dual Channel LVDS Output</li> <li>• 3 x DisplayPort Output</li> <li>• 1 x SDVO/DisplayPort Output</li> </ul>

### Storage (Support by Carrier Board)

SATA	<ul style="list-style-type: none"> <li>• 2 x SATA III with 6Gb/s</li> <li>• 2 x SATA II with 3Gb/s</li> </ul>
------	---

### I/O (Support by Carrier Board)

Ethernet Chip	Intel 82574L GbE LAN supports iAMT 8.0 and PXE Boot
Expansion Interface	<ul style="list-style-type: none"> <li>• 1 x PCIe x16 Gen.3</li> <li>• 6 x PCIe x1</li> </ul>
Serial Interface	2 x COM port Interface (TX/RX only)
USB	4 x USB 3.0, 8 x USB 2.0
GPIO	8-bit Digital I/O, 4-bit DI and 4-bit DO
Audio Codec	Intel HD Audio Channel

### Power Requirement

Power Input	<ul style="list-style-type: none"> <li>• 1 x 24-pin ATX Power Connector</li> <li>• 1 x 4-pin ATX 12V Power Connector</li> </ul>
Power Consumption	TBD

### Software

OS Support	<ul style="list-style-type: none"> <li>• Windows 7 32 / 64-bit</li> <li>• Linux 3.3 (Fedora 17) 32 / 64-bit</li> <li>• Linux 3.5 (Ubuntu 12.10) 32 / 64-bit</li> </ul>
------------	--

## Mechanical & Environment

Dimension	125 mm x 95 mm (4.92" x 3.74"), COM Express Type 6 Module Board
Operating Temp.	0~60°C (32~140°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90%, non-condensing
Safety	CE, FCC class A

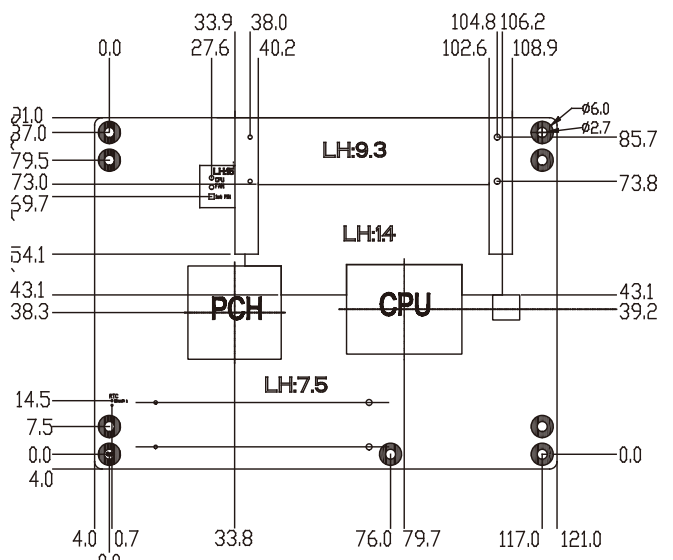
### Packing List

- 1 x Quick Guide
- 1 x AMB-HM76B1 Module Board Set
- 1 x CD Title
- 5 x Screws For Carrier Board (only for system package)

### Ordering Information

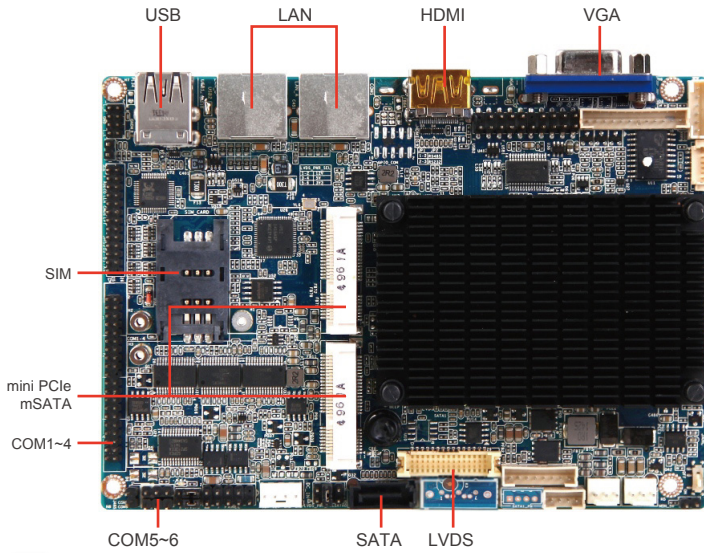
AMB-HM76B1/FL i71	Intel HM76 with Core i7-3517UE COM Express Basic Type 6 Module
AMB-HM76B1/FL i31	Intel HM76 with Core i3-3217UE COM Express Basic Type 6 Module
AMB-HM76B1/FL CE1	Intel HM76 with Core Celeron 1047UE COM Express Basic Type 6 Module
ACM-B4080	ATX Form-factor Carrier Board for COM Express Basic

## Dimension



# AMB-BT28S2

Intel® Celeron N2807 3.5" SBC



## Features

- Intel Celeron N2807 (1M Cache, 2.16GHz)
- VGA/LVDS/DVI, Dual Display support,
- 2 x Intel GbE, 6 x COM
- 1x USB3.0, 5 x USB2.0
- 2 x miniPCIe, 1 x LPT
- 1 x SATA 3.0, 1 x mSATA



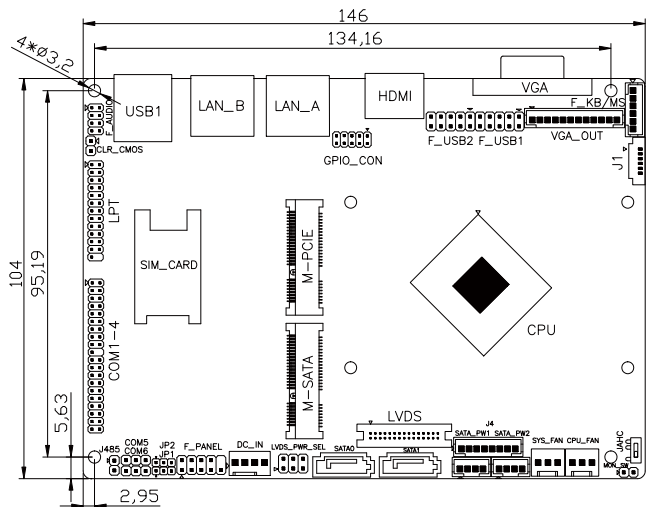
## Mechanical & Environment

Dimension	3.5" 146 x 104 mm
Operating Temp.	60°C
Storage temp.	75°C
Safety	RoHS

## Packing List

- 1 x AMB-BT28S2
- 1 x Quick User Guide
- 1 x Driver CD
- 1 x SATA Cable
- 1 x Power adaptor cable
- 1 x 1 to 4 COM cable

## Dimension



## Specification

### System

CPU	Intel® Celeron N2807, Dual core, 2.16GHz, TDP 4.3W
Memory	1 x So-DIMM DDR3L 1066/1333MHz DIMM socket, Support up to 4GB system memory
BIOS	AMI SPI BIOS
Cooler Module	Fanless heatsink

### Video

Graphic Controller	Intel® HD Graphics
Video Interface	<ul style="list-style-type: none"> <li>• 1 x VGA</li> <li>• 1 x LVDS</li> <li>• 1 x HDMI</li> <li>• support Dual display</li> </ul>

### Storage

SATA	<ul style="list-style-type: none"> <li>• 2 x SATAIII</li> <li>• 1 x mSATAIII</li> </ul>
------	---

### I/O

Expansion Slot	2 x miniPCIe <ul style="list-style-type: none"> <li>• Full length for mSATA</li> <li>• Half/Full length for PCIe/USB/3G</li> </ul>
Ethernet	• 2 x RJ45 Gbe LAN
Ethernet Chip	• 2 x Intel I211 LAN
Serial Port	<ul style="list-style-type: none"> <li>• 1 x RS232/422/485 header</li> <li>• 5 x RS232 header</li> </ul>
Parallel Port	• 1 x LPT header
USB	<ul style="list-style-type: none"> <li>• 1 x USB3.0 / 1 x USB 2.0</li> <li>• 4 x USB 2.0 header</li> </ul>
Audio	Realtek High Definition Audio Decoder(5.1) Digital audio via HDMI port
GPIO	8 bit Digital I/O
Keyboard	keyboard/mouse header

### Power Requirement

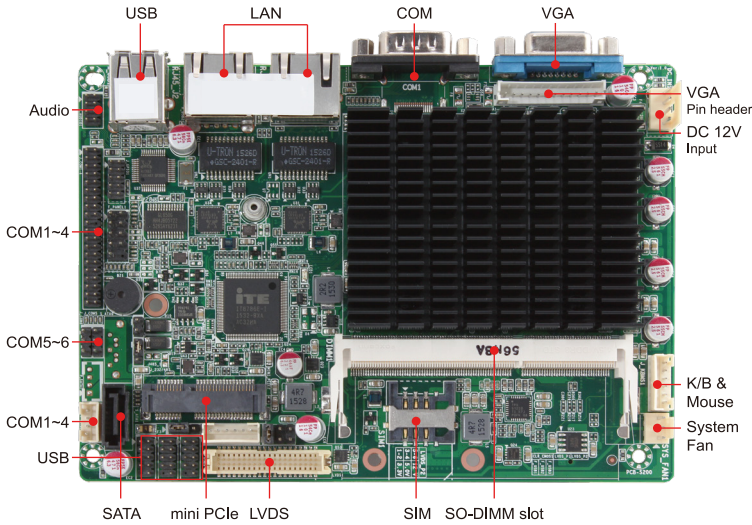
Power Input	12V ~ 19V DC
Power Output	2 x FAN Power connector

### Software

OS Support	Windows 7 (32 bit/64 bit), Windows 8.1 (32 bit/64 bit), Linux(by request)
------------	---

# AMB-BT19S1

3.5" SBC Intel Bay Trail SoC, 1 x VGA, 1 x LVDS, 2 x GbE, 6 x COM, 8 x USB, 2 x mini PCIe, 1 x SATA II, 1 x mSATA



## Features

- Intel Bay Trail SoC, low power consumption.
- 1 x DDR3L-1333MHz, SO-DIMM, up to 8GB
- 8 x USB (2 x USB 3.0, 6 x USB 2.0), 6 x COM
- 2 x GbE LAN, 2 x mini PCIe, 1 x SIM slot
- 1 x SATA II, 1 x mSATA
- 12V Input
- Fanless design



## Specification

### Specification

CPU	1. Intel® Celeron® J1800, Dual-Core, 1M Cache, 2GHz (2.41GHz), 10W(AMB-BT18S1)
	2. Intel® Celeron® J1900, Quad-Core, 2M Cache, 2GHz (2.41GHz), 10W(AMB-BT19S1)
	3. Intel® Atom™ E3815, Single-Core, 0.5M Cache, 1.46GHz, 5W (AMB-BT15S1)
	4. Intel® Atom™ E3845, Quad-Core, 2M Cache, 1.91GHz, 10W (AMB-BT45S1)
Chipset	Intel Bay Trail SoC
Memory	1 x DDR3L-1333MHz, SO-DIMM, up to 8GB (AMB-BT19S1)
BIOS	AMI UEFI BIOS

### Video

Graphic Controller	Intel® HD Graphics
Video Memory	Shared Memory
Video Interface	<ul style="list-style-type: none"> <li>• 1 x VGA (Resolution up to 2560 x 1600 @ 60Hz)</li> <li>• 1 x LVDS (24-Bit Dual channel LVDS, Resolution up to 1920x1200 @ 60Hz)</li> </ul>

### Storage

SATA	1 x SATA II Port + 1 x mSATA
------	------------------------------

### I/O

Ethernet	2 x GbE LAN(Optional)
Expansion Slot	2 x mini PCIe
Ethernet Chip	2 x Realtek GbE LAN Chip
Serial Port	<ul style="list-style-type: none"> <li>• COM1(DB9 connector)</li> <li>• COM6(RS232/485)</li> <li>• COM1~COM5 x RS232 2.0 pitch pin header</li> </ul>
USB	<ul style="list-style-type: none"> <li>• 8 x USB(2 x USB 3.0, 6 x USB 2.0)</li> </ul>
GPIO	8 bit Digital I/O
Audio	Realtek ALC888 5.1-channel High Definition Audio 1 x Line in, 1 x Line out
Keyboard	1 x PS/2 Header for Key Board/Mouse
SIM	1 x SIM slot

### Power Requirement

Power Input	4-Pin power connector
Power Output	1 x System FAN 3-Pin Power connector

### Software

OS Support	Windows 7 (32 bit/64 bit), Windows 8.1 (32 bit/64 bit) Linux (by request)
------------	--

## Mechanical & Environment

Dimension	146 x 105 mm (5.7" x 4")
Operating Temp.	0~60°C
Storage Temp.	-20~75°C
Safety	RoHS

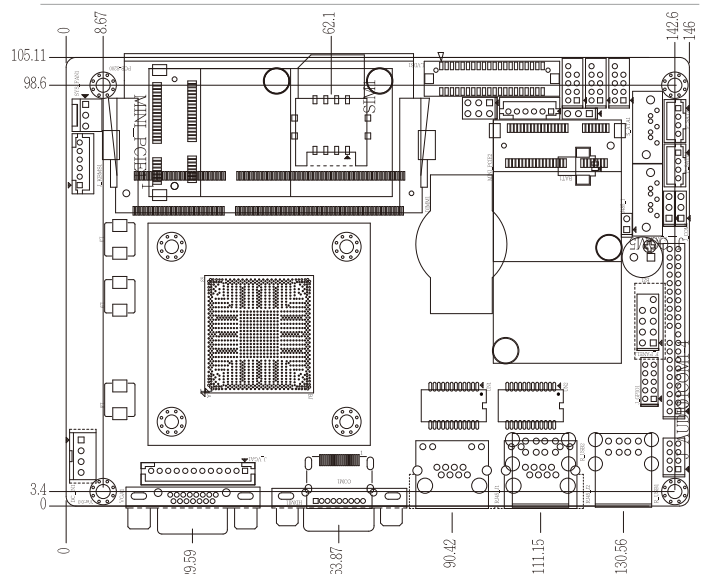
### Packing List

- AMB-BT19S1
- Quick User Guide
- Driver CD
- SATA Cable

### Ordering Information

AMB-BT18S1	Intel Celeron J1800, Dual Core, 1M cache, 2GHz (2.41GHz), 10W (2 x LAN, 6 x COM)
AMB-BT19S1	Intel Celeron J1900, Quad Core, 2M cache, 2GHz (2.41GHz), 10W (2 x LAN, 6 x COM)
AMB-BT15S1	Intel Atom E3815, Single Core, 0.5M cache, 1.46GHz, 5W (2 x LAN, 6 x COM)
AMB-BT45S1	Intel Atom E3845, Quad Core, 2M cache, 1.91GHz, 10W (2 x LAN, 6 x COM)

## Dimension



# AMB-VDX3H1

Fanless ISA Bus DM&P Vortex86DX3 Dual core 1GHz SBC



## Features

- Fanless Design
- Onboard DM&P Vortex86DX3 800MHz 1GHz dual core
- Onboard 1GB DDR3 SDRAM
- IDE, CF, Sata
- PC/104 & ISA Interface
- 4 x COM, 4 x USB 2.0, VGA, 1 xRJ45 10/100 Mbps LAN



## Specification

### System

CPU	Onboard DM&P Vortex86DX3 1GHz, dual core
Memory	Onboard DDR3 1GB SDRAM
BIOS	AMI
WatchDog Timer	Software programmable 0~255 sec.(0=disable)

### Video

Graphic Controller	Integrated
Video Memory	shared with main memory(16/32MB)
Video Interface	1 x VGA (DB15)

### Storage

IDE	1 x IDE (44-pin)
SATA	1 x SATA
CF	1 x CF Card (Colay with IDE signal)

### I/O

Ethernet	1 xRJ45 10/100 Mbps LAN
Expansion Slot	1 x PC/104, 1 x ISA gold finger
Serial Port	• 2 x RS-232 (1 x DB9) • 2 x RS-232/422/485 (Pin header)
USB	4 x USB 2.0 (4 x pin header)
GPIO	16-bit Digital I/O
Parallel Port	1 x LPT (1 x pin header)
Keyboard/Mouse	• 1 x PS/2 • 1 x JST

### Power Requirement

Power Input	AT:5V + 12V input
-------------	-------------------

### Software

OS Support	Windows XP, Wince 6.0, Windows 7 (32 bits)DOS,
------------	--

## Mechanical & Environment

Dimension	185mm x 122mm (7.29" x 4.81")
Operating Temp.	0~60°C (32~140°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Safety	CE, FCC compliant

## Packing List

- 1 x AMB-VDX3H1
- 1 x Quick user guide
- 1 x Driver CD

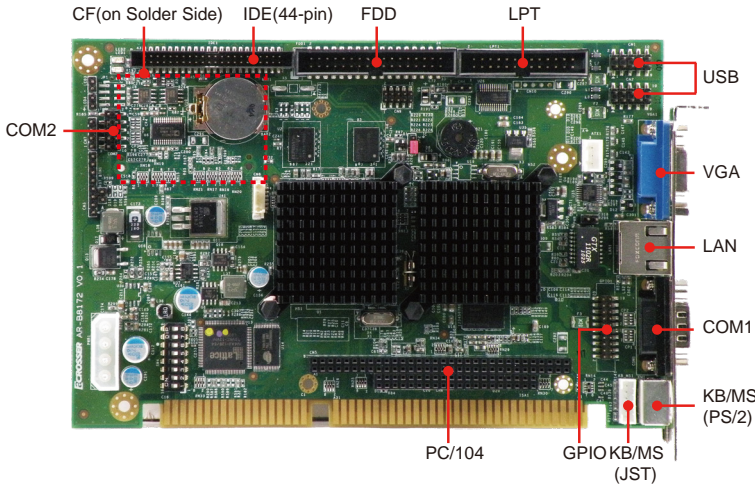
## Ordering Information

AR-B8172	1 x AMB-VDX3H1
ACC-VDX3H1:	• 1 x IDE cable (44-pin) • 1 x PS/2 keyboard and mouse cable • 1 x 2 ports USB cable with bracket • 1 x COM + LPT cable with bracket
Accessory	



# AR-B8172

Fanless ISA Bus DM&P Vortex86DX 800MHz SBC



## Features

- Fanless Design
- Onboard DM&P Vortex86DX 800MHz
- Onboard 256MB DDR2 SDRAM
- IDE, CF
- PC/104 Interface
- 2 x COM, 4 x USB 2.0, VGA, 1 x 10/100 MB



## Specification

### System

CPU	Onboard DM&P Vortex86DX 800MHz
Memory	Onboard DDR2 256MB SDRAM
BIOS	AMI
WatchDog Timer	Software programmable 1~255 sec.

### Video

Graphic Controller	XGI Z9s
Video Memory	64MB
Video Interface	1 x VGA (DB15)

### Storage

IDE	1 x IDE (44-pin)
CF	1 x Compact Flash Type I/II socket
FDD	1 x Floppy disk drive 3.5"

### I/O

Ethernet	1 x 100MB RJ45 with LED, DM&P Vortex86DX
Expansion Slot	1 x PC/104
Serial Port	<ul style="list-style-type: none"> <li>• 1 x RS-232 (DB9)</li> <li>• 1 x RS-232/422/485 (Pin header)</li> </ul>
USB	4 x USB 2.0 (4 x pin header)
GPIO	16-bit Digital I/O
Parallel Port	1 x LPT (1 x pin header)
Keyboard/Mouse	<ul style="list-style-type: none"> <li>• 1 x PS/2</li> <li>• 1 x JST</li> </ul>

### Power Requirement

Power Input	AT : 5V + 12V input
-------------	---------------------

### Software

OS Support	Windows XP, DOS
------------	-----------------

## Mechanical & Environment

Dimension	185mm x 122mm (7.29" x 4.81")
Operating Temp.	0~60°C (32~140°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Safety	CE, FCC compliant

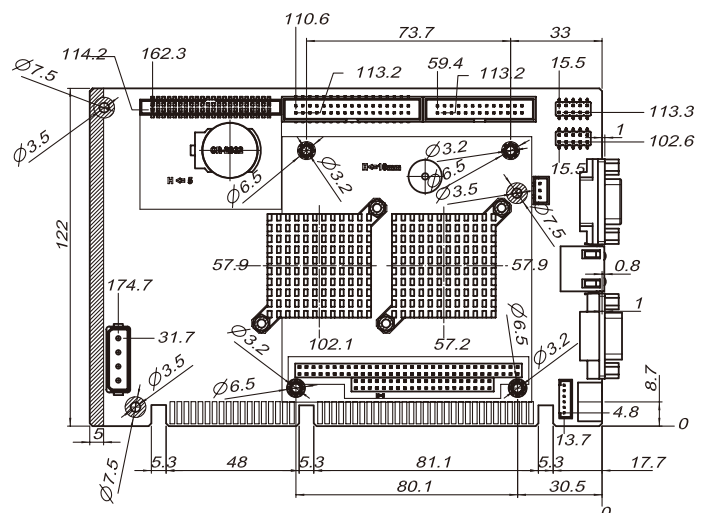
## Packing List

- 1 x AR-B8172
- 1 x Quick user guide
- 1 x Driver CD

## Ordering Information

AR-B8172	1 x AR-B8172
Accessory	ACC-8172: <ul style="list-style-type: none"> <li>• 1 x IDE cable (44-pin)</li> <li>• 1 x PS/2 keyboard and mouse cable</li> <li>• 1 x 2 ports USB cable with bracket</li> <li>• 1 x COM + LPT cable with bracket</li> <li>• 1 x FDD cable</li> </ul>

## Dimension



# Product Matrix

## Embedded System



Form Factor		Fanless Embedded System
Model		AES-HM76Z1FL
Chipset		Intel HM76
CPU Type		Intel Core i7/ i3/ Celeron Processor
Memory	Type	2 x DDR3L-1333/1600MHz, SO-DIMM
	Installed / Max. Capacity	1GB / 16GB
Video	VGA	1
	HDMI	2
	LVDS	-
	TV-Out	-
Ethernet		2 x GbE RJ45
Storage	IDE	-
	SATA	1 x SATA III
	Flash	1 x CF
	Serial Port	2 x RS-232 2 x RS-422/485
	USB Port (ext/int)	3
	Expansion Slot	1 x mini PCIe
Operating Temp.		0~45°C (32~113°F)
Page		62

## Embedded System



Form Factor		Fanless Embedded System
Model		AES-APL1E1FL
Chipset		Intel Apollo lake
CPU Type		Pentium N4200 Processor
Memory	Type	2 x DDR3L 1866 MHz, SO-DIMM
	Installed / Max. Capacity	1GB / 8GB
Video	VGA	1
	HDMI	1
	LVDS	-
	TV-Out	-
Ethernet		2 x GbE RJ45
Storage	IDE	-
	SATA	2 x SATA II
	Flash	-
	Serial Port	1 x RS-232/422/485 3 x RS-232
	USB Port (ext/int)	4
	Expansion Slot	3 x mini PCIe
Operating Temp.		-25~60°C (-13~140°F)
Page		64



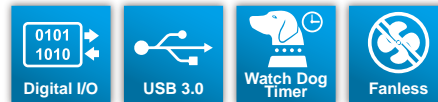
# AES-HM76Z1FL

Fanless and Ultra Slim Intel HM76 Embedded System



## Features

- Fanless and ultra slim design
- Support Intel Ivy Bridge CPU with HM76 chipset
- 2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
- Support SATA III and CF storage
- HDMI/VGA/USB/Audio/GPIO output interface
- Serial ports by RS-232 and RS-422/485
- 2 x GbE, 1 x SIM, and 1 x mini PCIe(for 3G/WiFi)



CE FCC

## Specification

### System

CPU	Intel Core i7 3517UE 1.7GHz Intel Core i3 3217UE 1.6GHz Intel Celeron Processor 1047UE 1.4GHz Intel Celeron Processor 927UE 1.5GHz
Chipset	Intel HM76
Memory	2 x DDR3L-1600MHz, SO-DIMM, up to 16GB
BIOS	AMI
Hardware Monitoring	CPU voltage and temperature
WatchDog Timer	Software programmable 1~255 sec.

### Video

Graphic Controller	Integrated within HM76
Video Interface	• 2 x HDMI (HDMI Type A connector) • 1 x VGA (Combo connector)

### Ethernet

Ethernet	• 2 x GbE (RJ45 with LED) • Realtek RTL8111F
----------	---

### Storage

SATA	1 x SATA III port with SATA power connector
CF	1 x Compact Flash Type II socket

### I/O

Expansion	1 x mini PCIe socket(For 3.5G/WiFi)
SIM	1 x SIM slot (SIM card changeable without opening case)
USB	• 3 x USB 3.0 (USB 3.0 Type A connector) • 2 x USB 2.0 (1 for Mini PCIe / 1 for Combo connector)
Serial Port	• 2 x RS-232 (DB9 connector) • 2 x RS-422/485 (DB15 connector, shared with GPIO)
Audio	• 1 x Line-Out (Combo connector) • Realtek ALC662
GPIO	• 8 x GPI (DB15 connector, shared with RS-422/485) • 8 x GPO (DB15 connector, shared with RS-422/485)

### Power Requirement

Power Input	60W Power Adaptor (DC Jack)
Power Requirement	12VDC Single Voltage Input

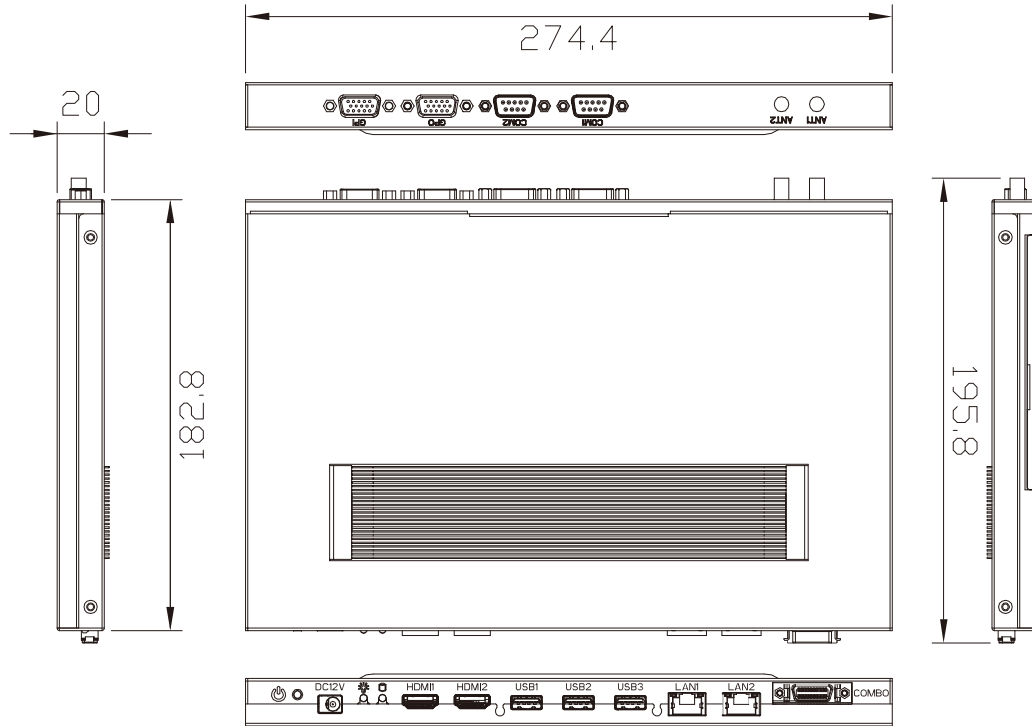
### Software

OS Support	Windows 7 (32), Windows 7 Embedded (32bit), Fedora 17 (32/64bit), Ubuntu 12.10 (32/64bit)
------------	--

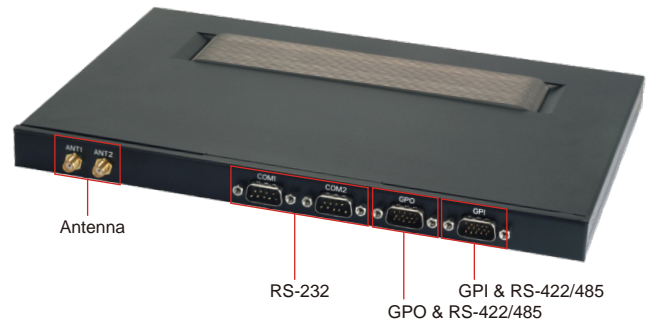
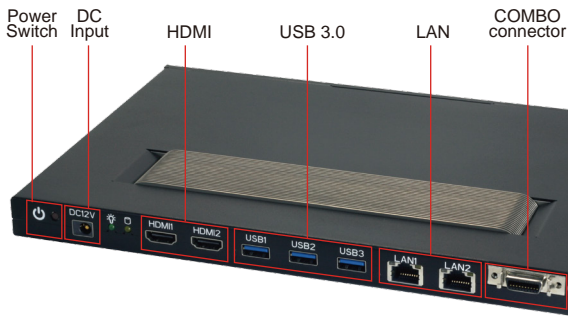
### Mechanical & Environment

Thermal Design	Fanless (Heatsink)
Dimension	272 mm x 183 mm x 20 mm
Operating Temp.	0~45°C (32~113°F)
Storage temp.	-40~80°C (-40~176°F)
Relative Humidity	0~90%, non-condensing
Safety	CE, FCC class A

## Dimension



## I/O Connectors



## Packing List

- 1 x AES-HM76Z1FL
- 1 x Quick Manual
- 1 x Utility CD
- 1 x Combo Cable
- 2 x GPIO Cable
- 1 x 60W Power Adapter
- 1 x Power Cord (Option for USA or Europe or Japan or UK)

## Ordering Information

AES-HM76Z1FLi71	AES- HM76Z1FL with Intel Core i7 3517UE 1.7GHz
AES-HM76Z1FLi31	AES- HM76Z1FL with Intel Core i3 3217UE 1.6GHz
AES-HM76Z1FLCE1	AES- HM76Z1FL with Intel Celeron 1047UE 1.4GHz
AES-HM76Z1FLCE2	AES- HM76Z1FL with Intel Celeron 927UE 1.5GHz

## Optional Modules

WiFi Module Kit	WiFi module, RF cable, Antenna
3.5G Module Kit	3.5G module, RF cable, Antenna

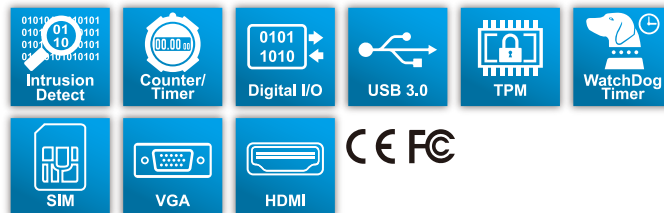
# AES-APL1E1FL

Intel Pentium N4200 (Fan Less Embedded System Computer)



## Features

- Rugged fan-less design
- Support New Intel Pentium / N4200 processors
- 2 x DDR3L 1866 MHz SO-DIMM, up to 8GB
- VGA & HDMI video output
- 2 x swappable 2.5" HDD bay
- TPM 1.2 / 2.0
- Variety Wireless Communication



## Others Feature

WatchDog Timer 1~255 sec. software programmable

## Power Requirement

Power Input 12 V

## Software

OS Support Windows 10 (64 bit)& Linux kernel to 4.4 or above(64 bit)

## Mechanical & Environment

Dimension 260 mm x 195 mm x 62 mm

Operating Temp. -25~60°C

Vibration 5~500Hz, 2GRMS

Shock 30G ,6MS

Storage temp. -40~80°C (-40~176°F)

Safety CE, FCC class B,

## Power Management

Power on/off switches Power Button  
RESET Button

## Specification

### System

CPU	Intel® Pentium™-N4200
Chipset	Intel Apollo lake SoC

### Video

Graphic Controller	Intel HD Graphics 505
Video Interface	1 x VGA port (DB15) ,1 x HDMI

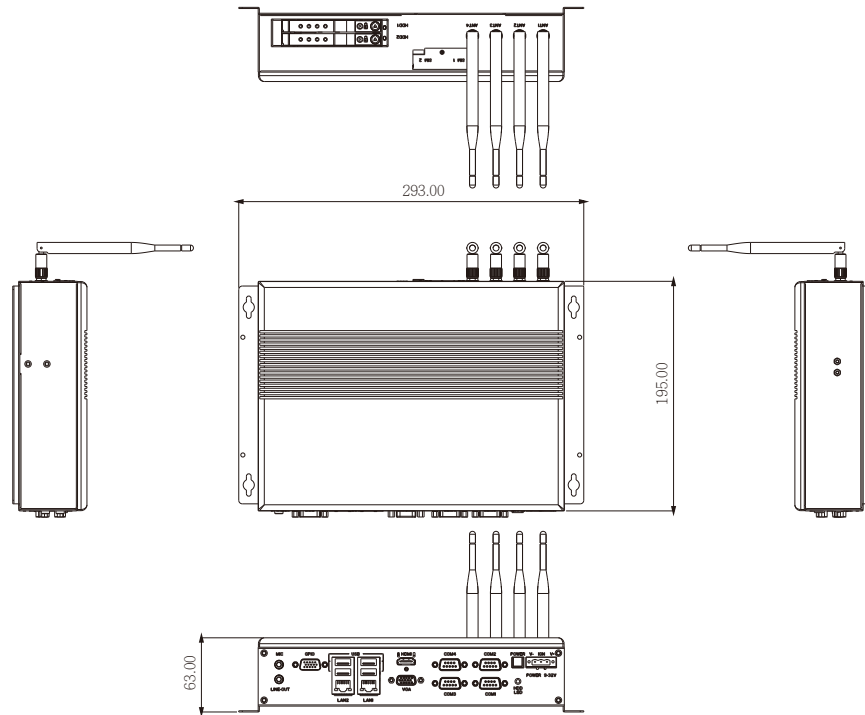
### Storage

SATA	2 x SATA II port
Disk Bay	2 x 2.5" Disk bay with Anti-vibration/Anti-shock solution for SSD only

### I/O

Expansion Slot	3 x Mini PCI-e(Reserve for Wi-Fi and 4G LTE)
Ethernet	2 x GbE RJ45, Intel i210AT
Serial Port	1 x RS-232/422/485 3 x RS-232
USB	4 X USB 3.0
GPIO	8-bit GPIO (4 In, 4 Out)
Audio	1 x MIC in 1 x Audio out
Antenna Hole	1 x SMA for GPS 1 x SMA for 4G 2 x SMA for Wi-Fi & Bluetooth
SIM	SIM Slot x 2, SIM card changeable without opening case, latch to protect SIM uncertainly touch
TPM	On-board TPM 1.2 / 2.0(Optional)

## Dimension



## I/O Connectors



## Packing List

- 1 x AES-APL1E1FL
- 1 x User Guide CD with driver
- 1 x Utility CD
- 1 x GPIO Cable
- 1 x Antenna for GPS (option)
- 2 x Antenna for Wi-Fi & Bluetooth (option)
- 1 x Antenna for 4G LTE (option)

## Ordering Information

AES-APL1E1FL-PT1 AES-APL1E1FL - intel Pentium N4200

## Optional Modules

EC20/EC25	Quectel 4G + GPS + Glonass module
MC7304/MC7354	Sierra 4G + GPS + Glonass module
RTL8812AEACC-01	Realtek (2T2R) Wi-Fi+BT a/b/g/n/ac
251NBT	Sparklan (2T2R) Wi-Fi+BT a/b/g/n

# Table of Contents

## Panel PC

CPU	LCD Size	Feature	Casing	Model Name	Page
Intel Bay Trail Atom Celeron N2930	7"	Industrial Panel PC	Aluminum Front / Metal Chassis	AR-PA807(P)FL	68
Intel Bay Trail Atom Celeron N2930	8"	Industrial Panel PC	Aluminum Front / Metal Chassis	AR-PA808(P)FL	68
Intel Bay Trail Atom Celeron N2930	10"	Industrial Panel PC	Aluminum Front / Metal Chassis	AR-PA810(P)FL	70
Intel Bay Trail Atom Celeron N2930	12"	Industrial Panel PC	Aluminum Front / Metal Chassis	AR-PA812(P)FL	70
Intel Bay Trail Atom Celeron N2930	15"	Industrial Panel PC	Aluminum Front / Metal Chassis	AR-PA815(P)FL	72
Intel Bay Trail Atom Celeron N2930	17"	Industrial Panel PC	Aluminum Front / Metal Chassis	AR-PA817(P)FL	72
Freescale I.MX6 DualLite	10"	Industrial Panel PC	Stainless steel enclosure	APC-MX610FL/GFL/PFL	74
Freescale I.MX6 DualLite	12"	Industrial Panel PC	Stainless steel enclosure	APC-MX612FL/GFL/PFL	74
Freescale I.MX6 DualLite	15"	Industrial Panel PC	Stainless steel enclosure	APC-MX615FL/GFL/PFL	74
Intel Celeron N2930	10"	Industrial Panel PC	Stainless steel enclosure	APC-MX810FL/GFL/PFL	76
Intel Celeron N2930	12"	Industrial Panel PC	Stainless steel enclosure	APC-MX812FL/GFL/PFL	76
Intel Celeron N2930	15"	Industrial Panel PC	Stainless steel enclosure	APC-MX815FL/GFL/PFL	76

# AR-PA807~808(P)FL-N2930

## Features

- 7"/8"/10.1"/12.1"/15" Industrial Compact Size Panel PC
- Flat front panel touch screen
- Fanless design
- Intel Bay Trail N2930(1.83GHz) CPU for option
- Onboard 4GB DDR3L-1600MHz / 4GB(option)
- 9~36VDC wide-ranging power input
- IP65 compliant front panel
- Optional projected capacitive touchscreen support 7H anti-scratch surface



## Specification

Model Name	AR-PA807(P)FL-N2930	AR-PA808(P)FL-N2930
<b>System</b>		
CPU	Onboard Intel Bay Trail N2930(1.83GHz) Processor for option	
System Chipset	Intel Bay Trail SoC	
System Memory	Onboard 4GB DDR3L-1600MHz / 4GB(option)	
<b>Display</b>		
Display Type	7"	8"
Max. Resolution	800 x 480	800 x 600
Max. Color	262 K	262 K
Luminance (cd/m <sup>2</sup> )	350	350
Contrast Ratio	400 : 1	500 : 1
View angle(H°/V°)	H:140° / V:110°	H:140° / V:125°
Backlight Lifetime	40,000(hrs)	40,000(hrs)
<b>Touch screen - Resistive Touch Window Type</b>		
Type	Resistive Touch Windows	
Interface	USB	
Light Transmission	Resistive Touch Windows: 80%	
<b>Touch screen - Projected Capacitive Type</b>		
Type	Projected Capacitive Touch(For P Model)	
Interface	USB	
Light Transmission	Projected Capacitive Touch: 90%	
<b>I/O Port</b>		
USB	1 x USB 2.0 type A + 1 x USB 3.0 type A	
Serial/Parallel	1 x RS-232 DB-9(COM2) + 1 x DB-9 RS-232/422/485 (Default RS-232)(COM1)	
Audio/HDMI	1 x Audio Line Out / 1 x HDMI Port (reserved, no printing)	
LAN	2 x GbE LAN RJ-45	
Power	1 x 3-pin Terminal Block DC Power input + 1 x 2-pin connector for power on/off button	
<b>Storage</b>		
HDD	1 x SATA MO-297 SSD bay (Easy Accessible)	
Movable device	1 x SD card slot, up to 32GB	
<b>Expansion</b>		
On board expansion bus	1 x Internal mini PCIe slot (full size)	
<b>Power Requirement</b>		
Power Input	9~36V DC	
Power Consumption	Max:14.1W / 13.7W(P)	Max:10.8W / 13.9W(P)
<b>Software</b>		
OS Support	Windows Embedded Compact 7, Windows Embedded Standard 7, Windows Embedded 8 Standard, Windows Embedded 8.1 Industry Windows 10 IoT Enterprise 2015 LTS13	



### Mechanical

Color	RAL 9007		
Construction	Aluminum Die-casting Front Bezel and Chassis		
Mounting	Panel Mounting, VESA 75 x 75		
Dimension (mm)	202 x 149 x 40		231 x 176 x 50
Net Weight (KG)	1.2 Kg		1.9 Kg

### Environmental

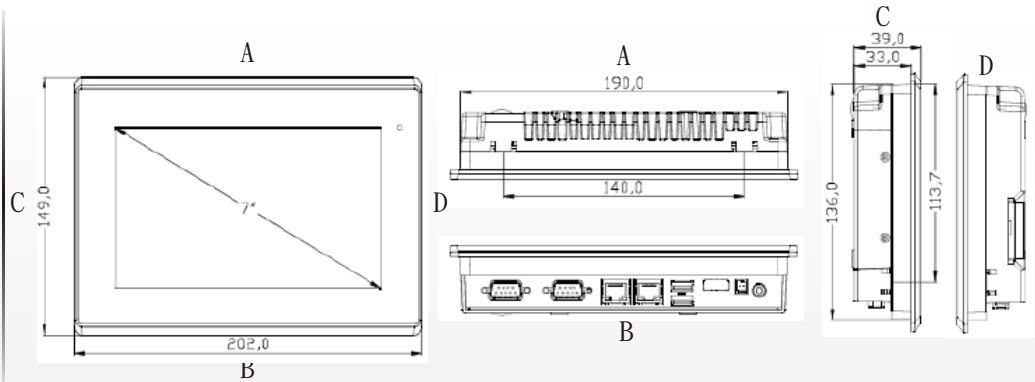
Operating temperature(°C)	0~50°C
Storage temperature(°C)	-20~60°C
Storage humidity	10 to 90% @ 40°C, non- condensing
Certification	CE, FCC CLASS A, CB, UL

### Ordering Information

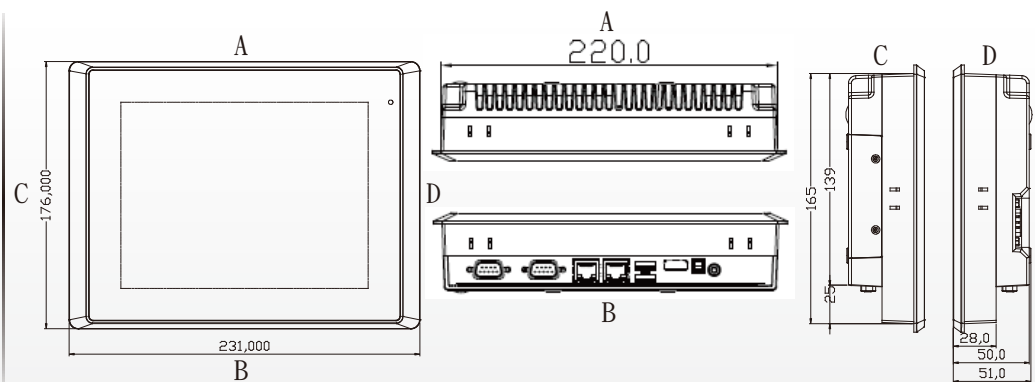
AR-PA807(P)FL	7" WVGA Fanless HMI barebone with Intel N2930 CPU, 4GB DDR3L RAM, Resistive touch screen, 9~36V DC input with adapter / Projected Capacitive touch screen, Aluminum chassis
AR-PA808(P)FL	8" SVGA Fanless HMI barebone with Intel N2930 CPU, 4GB DDR3L RAM, Resistive touch screen, 9~36V DC input with adapter / Projected Capacitive touch screen, Aluminum chassis

## Dimension

### AR-PA807(P)FL



### AR-PA808(P)FL



# AR-PA810~812(P)FL-N2930

## Features

- 7"/8"/10.1"/12.1"/15" Industrial Compact Size Panel PC
- Flat front panel touch screen
- Fanless design
- Intel Bay Trail N2930(1.83GHz) CPU for option
- Onboard 4GB DDR3L-1600MHz / 4GB(option)
- 9~36VDC wide-ranging power input
- IP65 compliant front panel
- Optional projected capacitive touchscreen support 7H anti-scratch surface



## Specification

Model Name	AR-PA810(P)FL-N2930	AR-PA812(P)FL-N2930
<b>System</b>		
CPU	Onboard Intel Bay Trail N2930(1.83GHz) Processor for option	
System Chipset	Intel Bay Trail SoC	
System Memory	Onboard 4GB DDR3L-1600MHz / 4GB(option)	
<b>Display</b>		
Display Type	10.1"	12.1"
Max. Resolution	1280 x 800	800 x 600
Max. Color	262 K	262 K
Luminance (cd/m <sup>2</sup> )	350	450
Contrast Ratio	800 : 1	800 : 1
View angle(H°/V°)	H:160° / V:160°	H:160° / V:140°
Backlight Lifetime	40,000 (hrs)	50,000 (hrs)
<b>Touch screen - Resistive Touch Window Type</b>		
TS Control IC	Resistive Touch Windows	
Interface	USB	
Light Transmission	Resistive Touch Windows: 80%	
<b>Touch screen - Projected Capacitive Type</b>		
TS Control IC	Projected Capacitive Touch(For P Model)	
Interface	USB	
Light Transmission	Projected Capacitive Touch: 90%	
<b>I/O Port</b>		
USB	1 x USB 2.0 type A + 1 x USB 3.0 type A	
Serial/Parallel	1 x RS-232 DB-9(COM2) + 1 x DB-9 RS-232/422/485 (Default RS-232)(COM1)	
Audio/HDMI	1 x Audio Line Out / 1 x HDMI Port (reserved, no printing)	
LAN	2 x GbE LAN RJ-45	
Power	1 x 3-pin Terminal Block DC Power input + 1 x 2-pin connector for power on/off button (Only for AR-PA810(P)FL, AR-PA812(P)FL, and AR-PA815(P)FL)	
Option	2 x RS-232 DB-9 + 1 x mini PCIe slot via TB-528C2ME1 / 2 x CAN bus via TB-528CAN2 / 2 x USB 2.0 type A Via TB-528U2 2 x USB 2.0 type A + 1 x mini PCIe slot + 1 x RS-232 DB-9 via TB-528C1U2P1 for AR-PA812(P)FL 2 x USB 2.0 type A + 1 x mini PCIe slot + 1 x RS-232 DB-9 via TB-528C1U2 for AR-PA810(P)FL	
<b>Storage</b>		
HDD	1 x 2.5" SATA HDD bay for SATA HDD (Easy Accessible)	
Movable device	1 x SD card slot, up to 32GB	
<b>Software</b>		
OS Support	Windows Embedded Compact 7, Windows Embedded Standard 7, Windows Embedded 8 Standard, Windows Embedded 8.1 Industry Windows 10 IoT Enterprise 2015 LTS13	

## Expansion

On board expansion bus 1 x Internal mini PCIe slot full size

## Power Requirement

Power Input 9~36V DC

Power Consumption Max:11.2W / 14W(P) Max:14.6W / 15.2W(P)

## Mechanical

Color RAL 9007

Construction Aluminum Die-casting Front Bezel and Chassis

Mounting Panel Mounting, VESA 100 x 100

Dimension (mm) 285 x 189 x 48.9 319 x 245 x 51.7

Net weight (Kg) 1.9 Kg 2.5 Kg

## Environmental

Operating temperature(°C) 0~50°C

Storage temperature(°C) -20~60°C

Storage humidity 10 to 90% @ 40°C, non- condensing

Certification CE, FCC CLASS A, CB, UL

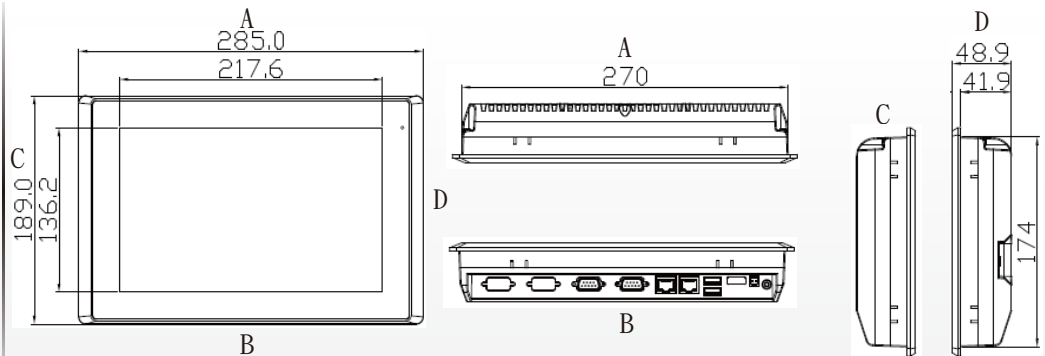
## Ordering Information

AR-PA810(P)FL 10.1" WVGA Fanless HMI barebone with Intel N2930 CPU, 4GB DDR3L RAM, Resistive touch screen / Projected Capacitive touch screen, 9~36V DC input with adapter Aluminum chassis

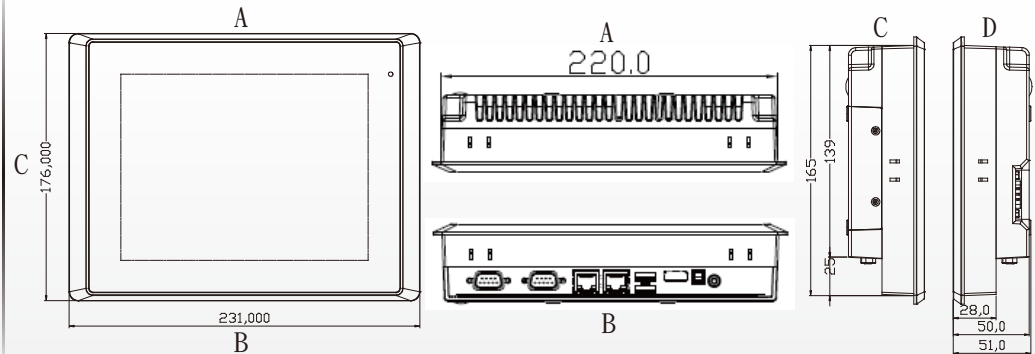
AR-PA812(P)FL 12.1" SVGA Fanless HMI barebone with Intel N2930 CPU, 4GB DDR3L RAM, Resistive touch screen / Projected Capacitive touch screen, 9~36V DC input with adapter Aluminum chassis

## Dimension

### AR-PA810(P)FL



### AR-PA812(P)FL



# AR-PA815~817(P)FL-N2930

## Features

- 15"/17"/21" Industrial Compact Size Panel PC
- Flat front panel touch screen
- Fanless design
- Intel Bay Trail N2930(1.83GHz) CPU for option
- Onboard 4GB DDR3L-1600MHz / 4GB(option)
- 9~36VDC wide-ranging power input
- IP65 compliant front panel
- Optional projected capacitive touchscreen support 7H anti-scratch surface



## Specification

Model Name	AR-PA815(P)FL-N2930	AR-PA817(P)FL-N2930
<b>System</b>		
CPU	Onboard Intel Bay Trail N2930(1.83GHz) Processor for option	
System Chipset	Intel Bay Trail SoC	
System Memory	Onboard 4GB DDR3L-1600MHz / 4GB(option)	
<b>Display</b>		
Display Type	15" color TFT LCD	17"
Max. Resolution	1024 x 768	1280 x 1024
Max. Color	262 K	16.2 M
Luminance (cd/m <sup>2</sup> )	350	350
Contrast Ratio	800 : 1	1000 : 1
View angle(H°/V°)	H:160° / V:145°	H:160° / V:170°
Backlight Lifetime	50,000 hrs	30,000 hrs
<b>Touch screen</b>		
Type	Resistive Touch Windows / Projected Capacitive Touch(For P Model)	
Interface	USB	
Light Transmission	Resistive Touch Windows: 80% / Projected Capacitive Touch: 90%	
<b>I/O Port</b>		
USB	1 x USB 2.0 type A + 1 x USB 3.0 type A	
Serial/Parallel	1 x RS-232 DB-9(COM2) + 1 x DB-9 RS-232/422/485 (Default RS-232)(COM1)	
Audio/HDMI	1 x Audio Line Out / 1 x HDMI Port (Reserved, no printing)	
LAN	2 x GbE LAN RJ-45	
Power	1 x 3-pin DC Power input terminal + 1 x 2-pin connector for power on/off button	
Option	(Only for AR-PA815(P)FL, AR-PA817(P)FL) 2 x RS-232 DB-9 + 1 x mini PCIe slot via TB-528C2ME1 2 x CAN bus via TB-528CAN2 2 x USB 2.0 type A Via TB-528U2 2 x USB 2.0 type A + 1 x mini PCIe slot + 1 x RS-232 DB-9 via TB-528C1U2P1 for AR-PA815(P)FL 2 x USB 2.0 type A + 1 x mini PCIe slot + 1 x RS-232 DB-9 via TB-528C1U2P1	
<b>Storage</b>		
HDD	1 x 2.5" SATA HDD bay for SATA HDD (Easy Accessible)	
Movable device	1 x SD card slot, up to 32GB	
<b>Software</b>		
OS Support	Windows Embedded Compact 7, Windows Embedded Standard 7, Windows Embedded 8 Standard, Windows Embedded 8.1 Industry Windows 10 IoT Enterprise 2015 LTS13	

## Expansion

On board expansion bus 1 x Internal mini PCIe slot (full size)

## Power Requirement

Power Input 9~36V DC

Power Consumption Max:17.8W Max:20.3W / 18.1W(P)

## Mechanical

Chassis Color RAL 9007

Front Bezel Metal Aluminum / Panel Mounting

Rear Panel Metal Aluminum / VESA Mount 100 x 100

IP Rating IP65 Compliant Front Panel

Dimension (mm) 410 x 310 x 54.7 412 x 277.5 x 60.4

Net Weight (KG) 4.4 Kg 4.8 Kg

## Environmental

Operating temperature(°C) 0~50°C

Storage temperature(°C) -20~60°C

Storage humidity 10 to 90% @ 40°C, non- condensing

Certification CE, FCC CLASS A, CB, UL

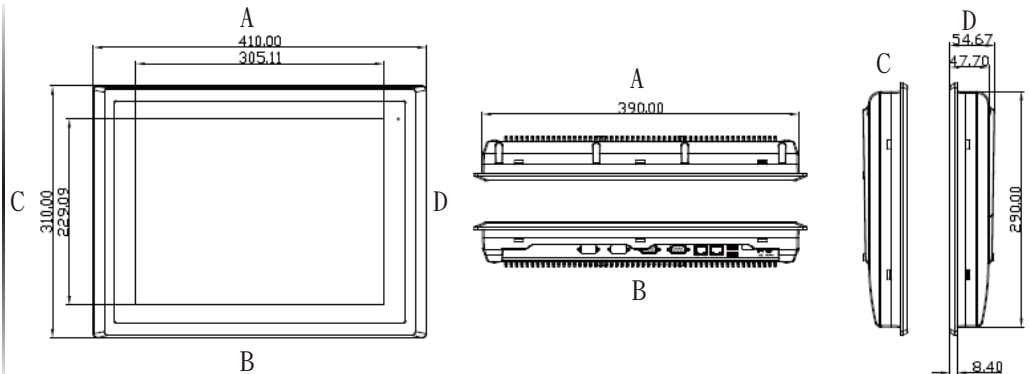
## Ordering Information

AR-PA815(P)FL 15.6" WXGA Fanless HMI barebone with Intel N2930 CPU, 4GB DDR3L RAM, Resistive touch screen / Projected Capacitive touch screen, 9~36V DC input with adapter Aluminum chassis

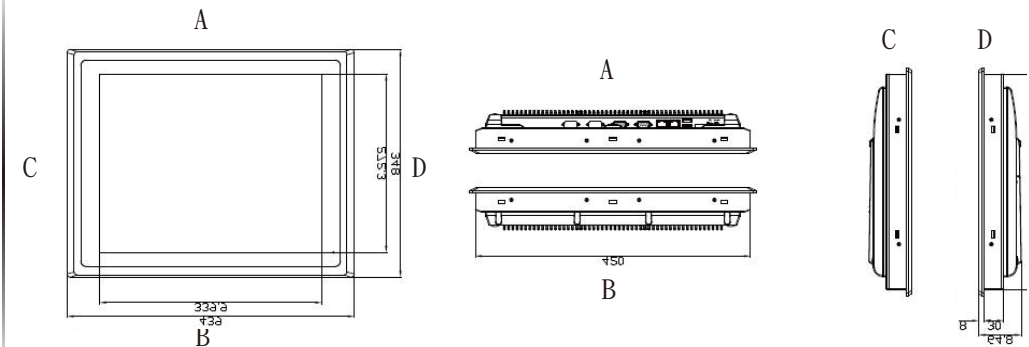
AR-PA817(P)FL 17" SXGA Fanless HMI barebone with Intel N2930 CPU, 4GB DDR3L RAM, Resistive touch screen / Projected Capacitive touch screen, 9~36V DC input with adapter Aluminum chassis

## Dimension

### AR-PA815(P)FL



### AR-PA817(P)FL



# APC-MX6XXFL/GFL/PFL

## Features

- 10.1"/12.1"/15" TFT-LCD Touch.monitor (GFL w/o touch).
- Freescale I.MX6 DualLite 1.0GHz Onboard Processor.
- True Flat Front Bezel and Grade 304 Stainless Steel Enclosure (Grade 316 for Option).
- IP66/IP69K Rated with M12 Connectors.
- Touch on/off Button on the Side Edge for Hygienic Cleanin.



## Specification

Model Name	APC-MX610FL / GFL / PFL	APC-MX612FL / GFL / PFL	APC-MX615FL / GFL / PFL
<b>System</b>			
CPU	Freescale I.MX6 DualLite ARM Cortex A9 processor 1.0GHz		
System Memory	Onboard 1GB DDR3 DRAM		
<b>Display</b>			
Display Type	10.1" TFT-LCD	12.1" TFT-LCD	15." TFT-LCD
Max. Resolution	1280 x 800	800 x 600 / 1024x768(optional)	1024 x 768
Max. Color	16.7 M	262K, 16.2M	16.7 M
Luminance (cd/m <sup>2</sup> )	350	450, 500	420
Contrast Ratio	800:1	800:1, 700:1	800:1
View angle(H°/V°)	H:170° / V:170°	H:160° / V:150°, H:160° / V:140°	H:160° / V:160°
Backlight Lifetime	15,000(hrs)	50,000 / 30,000(hrs)	50,000(hrs)
<b>Touch screen</b>			
Type	FL: R touch / GFL: NA /PFL: P touch		
Interface	USB		
Light Transmission(%)	80%		
<b>Storage</b>			
HDD	Onboard 4GB eMMC NAND Flash		
<b>I/O Port</b>			
USB	1 x M12 8-pin for USB 2.0 with waterproof cap		
Serial/Parallel	1 x M12 8pin for COM 1, RS-232/422/485, Default RS-232, with waterproof cap		
LAN	1 x M12 8pin for LAN with waterproof cap		
Power	1 x Touch on/off button on the side		
<b>Expansion</b>			
On board expansion bus	1 x Mini PCIe slot for WIFI/BT (optional)		
<b>Power Requirement</b>			
Power Input	9~36V DC		
Power Consumption	Max:13.6W	Max:13.6W	Max: 11.8W
<b>Software</b>			
OS Support	Linux 3.2, Android 4.2.2		
<b>Mechanical</b>			
Construction	Stainless steel enclosure		
IP Rating	IP66 / IP69K		
Mounting	VESA 75 x 75, Yoke mount	VESA 75 x 75, Yoke mount	VESA 75 x 75, Yoke mount
Dimension (mm)	300 x 220 x 53	335 x 265 x 53	399 x 324 x 53
Net weight(Kgs)	3.8 kg	4.6 kg	7.1 kg



### Environmental

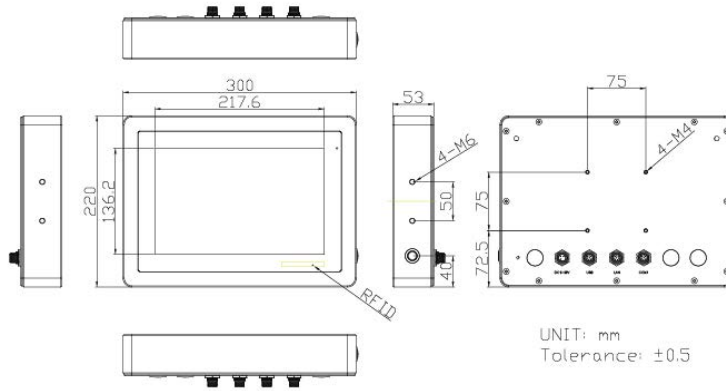
Operating temperature(°C)	-20~60°C
Storage temperature(°C)	-30~70°C
Storage humidity	10 to 90% @ 40°C, non- condensing
Certification	CE, FCC Class A,

### Ordering Information

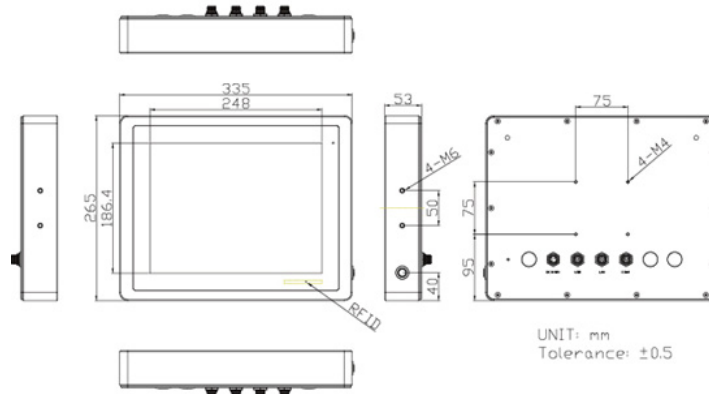
APC-MX610FL	10.1" WXGA IP66/IP69K stainless steel panel pc, Freescale i.MX6 Dual Lite ARM Cortex A9,1GB DDR3 RAM,4GB eMMC, (FL:5 wire resistive touch , PFL= projected capacitive touch , GFL: w/o touch) 9~36V DC power input with Adapter.
APC-MX612FL	12.1" SVGA IP66/IP69K stainless steel panel pc, Freescale i.MX6 Dual Lite ARM Cortex A9,1GB DDR3 RAM,4GB eMMC, (FL:5 wire resistive touch , PFL= projected capacitive touch , GFL: w/o touch), 9~36V DC power input with Adapter.
APC-MX615FL	15" XGA IP66/IP69K stainless steel panel pc, Freescale i.MX6 Dual Lite ARM Cortex A9,1GB DDR3 RAM,4GB eMMC, (FL:5 wire resistive touch , PFL= projected capacitive touch , GFL: w/o touch), 9~36V DC power input with Adapter.

## Dimension

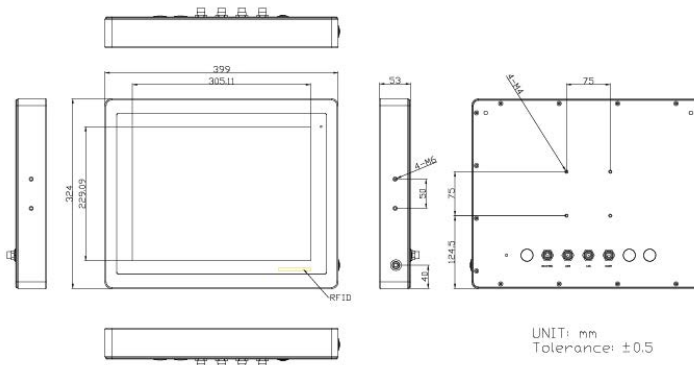
### APC-MX610FL/GFL/PFL



### APC-MX612FL/GFL/PFL



### APC-MX615FL/GFL/PFL



# APC-MN8XXFL/GFL/PFL

## Features

- 10.1"/12.1"/15" TFT-LCD Touch monitor(GFL w/o touch).
- Intel Celeron N2930 1.83GHz Onboard Processor.
- True Flat Front Bezel and Grade 304 Stainless Steel Enclosure (Grade 316 for Option).
- IP66/IP69K Rated with M12 Connectors.
- Touch on/off Button on the Side Edge for Hygienic Cleaning.



## Specification

Model Name	APC-MN810FL / GFL / PFL	APC-MN812FL / GFL / PFL	APC-MN815FL / GFL / PFL
<b>System</b>			
CPU	Onboard Intel Celeron N2930(1.83GHz) Processor		
System Memory	Onboard 4GB DDR 3L 1600 MHz/8GB (optional)		
<b>Display</b>			
Display Type	10.1" TFT-LCD	12.1" TFT-LCD	15." TFT-LCD
Max. Resolution	1280 x 800	800 x 600 / 1024x768(optional)	1024 x 768
Max. Color	16.7 M	262K, 16.2M	16.7 M
Luminance (cd/m <sup>2</sup> )	350	450, 500	420
Contrast Ratio	800:1	800:1, 700:1	800:1
View angle(H°/V°)	H:170° / V:170°	H:160° / V:150°, H:160° / V:140°	H:160° / V:160°
Backlight Lifetime	15,000(hrs)	50,000 / 30,000(hrs)	50,000(hrs)
<b>Touch screen</b>			
Type	FL:R Touch / PFL :P Touch		
Interface	USB		
Light Transmission(%)	80%		
<b>Storage</b>			
HDD	1 x 2.5" HDD/SSD		
<b>I/O Port</b>			
USB	1 x M12 8-pin for USB 2.0 with waterproof cap		
Serial/Parallel	1 x M12 8pin for COM 1, RS-232/422/485, Default RS-232, with waterproof cap		
LAN	1 x M12 8pin for LAN with waterproof cap		
Power	1 x Touch on/off button on the side		
<b>Expansion</b>			
On board expansion bus	1 x Mini PCIe slot for WIFI/BT (optional)		
<b>Power Requirement</b>			
Power Input	9~36V DC		
Power Consumption	TBD	Max:18.9W	TBD
<b>Software</b>			
OS Support	Windows 7 Embedded Enterprise, Windows Embedded Standard 7, Windows Embedded 8.1 Pro, Windows Embedded 8.1 Industry Pro, Windows 10 IoT 2016		
<b>Mechanical</b>			
Construction	Stainless steel enclosure		
IP Rating	IP66 / IP69K		
Mounting	VESA 75 x 75, Yoke mount	VESA 75 x 75, Yoke mount	VESA 75 x 75, Yoke mount
Dimension (mm)	300 x 220 x 53	335 x 265 x 53	399 x 324 x 53
Net weight(Kgs)	4 kg	5 kg	7 kg

## Environmental

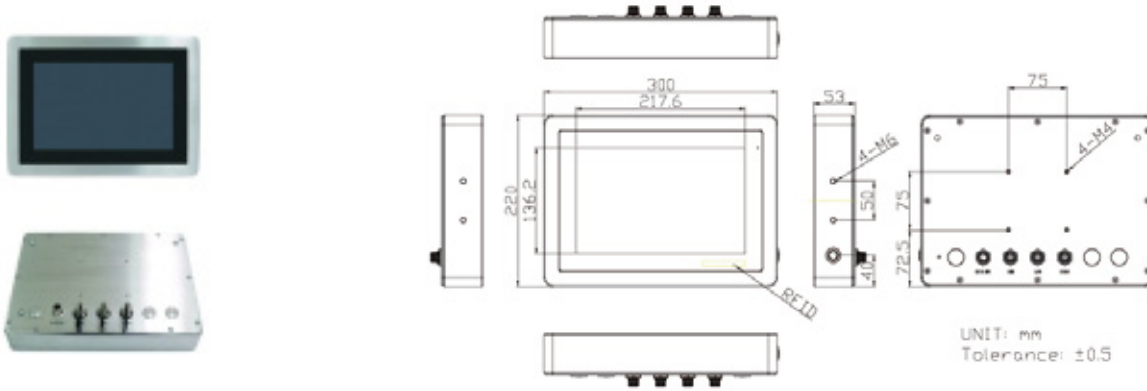
Operating temperature(°C)	-20~60°C
Storage temperature(°C)	-30~70°C
Storage humidity	10 to 90% @ 40°C, non- condensing
Certification	CE, FCC Class A,

## Ordering Information

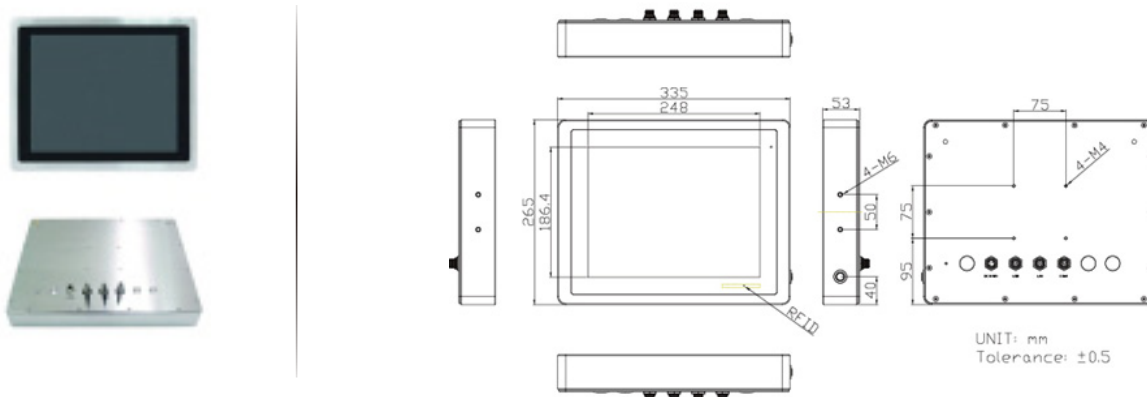
APC-MN810FL	10.1" WXGA IP66/IP69K stainless steel panel pc, Celeron N2930(1.83.GHz ) CPU, 4GB DDR3L RAM, 32G MLC SSD, (FL:5 wire resistive touch , PFL= projected capacitive touch, GFL: w/o touch), 9~36V DC power input with Adapter. Accessory : 1 x M12 USB Cable
APC-MN812FL	12.1" SVGA IP66/IP69K stainless steel panel pc, Celeron N2930(1.83.GHz ) CPU, 4GB DDR3L RAM, 32G MLC SSD, (FL:5 wire resistive touch , PFL= projected capacitive touch, GFL: w/o touch), 9~36V DC power input with Adapter. Accessory : 1 x M12 USB Cable
APC-MN815FL	15" XGA IP66/IP69K stainless steel panel pc, Celeron N2930(1.83.GHz ) CPU, 4GB DDR3L RAM, 32G MLC SSD, (FL:5 wire resistive touch , PFL= projected capacitive touch, GFL: w/o touch), 9~36V DC power input with Adapter. Accessory : 1 x M12 USB Cable

## Dimension

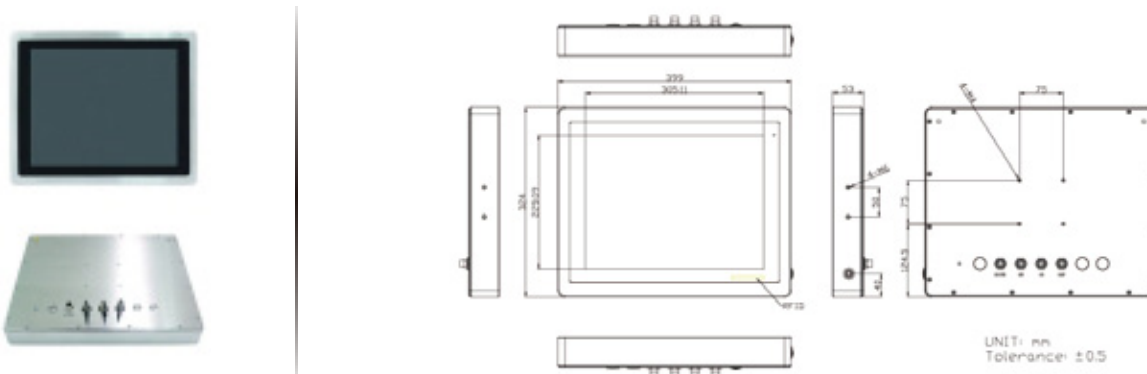
### APC-MN810FL/GFL/PFL



### APC-MN812FL/GFL/PFL



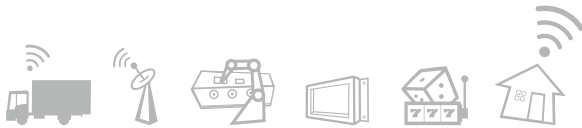
### APC-MN815FL/GFL/PFL





To Make Your  
Embedded  
Idea a Reality

**aCROSSER**  
Acrosser Technology Co., Ltd.



#### **Acrosser Headquarters**

241新北市三重區光復路一段61巷26號10樓  
10F., No.26, Ln. 61, Sec. 1, Guangfu Rd.,  
Sanzhong Dist., New Taipei City 241, Taiwan (R.O.C.)  
TEL: +886-2-29999000  
FAX: +886-2-29992887

#### **Acrosser Taichung Office**

414台中市烏日區僑仁街8號10樓之1  
10F.-1, No.8, Qiaoren St., Wuri Dist.,  
Taichung City 414, Taiwan, (R.O.C.)  
TEL: +886-4-23370715  
FAX: +886-4-23373422

#### **Acrosser USA Inc.**

13945 Central Ave.  
Chino, CA 91710  
USA  
Toll Free: +1-866-401-9463  
TEL: +1-714-903-1760  
FAX: +1-714-903-5629

#### **Acrosser China Subsidiary**

深圳市欣扬通电子有限公司  
深圳市福田区车公庙泰然九路21号皇冠科技园3栋2楼 (邮编518040)  
2F., 3rd Building, Crown Science Park, No. 21,  
Tai-Ran 9th Rd., Che Gong Miao, Futian Dist., Shenzhen, China (Postal:518040)  
TEL: +86-755-83542210  
FAX: +86-755-83700087

#### **Acrosser Nanjing Office**

欣扬通电子有限公司 南京办事处  
江苏省南京市江宁区天元东路228号504室(莱茵铂郡) (邮编211112)  
Room 504, No. 228, Rhine County Building, Tian Yuan East Rd.,  
Jiang Ning Dist., Nanjing City, Jiangsu, China (Postal:211112)  
TEL: +86-025-86137002  
FAX: +86-025-86137003

#### **Acrosser Beijing Office**

欣扬通电子有限公司 北京办事处  
北京市昌平区沙河镇沙阳路巩华新村 8号楼 2单元 1403室  
Room 1403, Unit 2, Building 8, Gonghua Village, Shahe Town,  
Changping District, Beijing, China  
Mobile: +86-13311317329