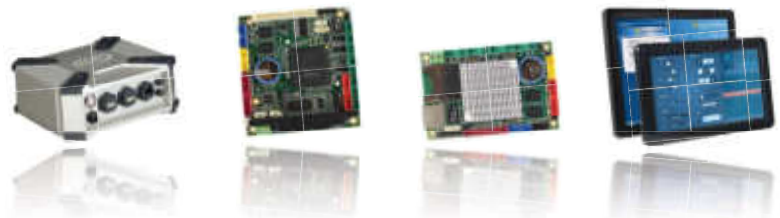


**ICOP**  
intelligent control on processor






**ICOP Technology**, established in 1997, is the world leading manufacturer of industrial embedded solutions. With its headquarter in Taipei, Taiwan ; subsidiaries in the US, China, Japan, Germany and Mexico and worldwide distributors. ICOP's presence in many locations shows our commitments to have strong local customer support in the long term.

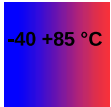
ICOP's rugged industrial hardware and flexible in-time service provide customers high quality, good reliability, low manufacturing costs and short lead time delivery user experience. Strong embedded technology know-how and good customer service allow ICOP's products widely adopted by many world-class leading industrial equipment manufacturers and public utility service providers.


Usage applications include industrial and home automation, publicity utility, transportation, traffic and fleet management, parking and ticketing systems, telecommunication systems, entrance and security control, environmental monitoring, medical devices, packaging systems, gaming systems, point of sale and vending systems, and many others.


**Products**


SBC	Module	PPC	Box PC
			
PC/104 3.5 inch 2.5 inch ISA/PCI Half-size ITX / Pico	SOM-304 SOM-200 ETX SMARC Qseven	4.3 inch 5.7 inch 9 inch 10.4 inch 15 inch	VESA Mount DIN RAIL WALL Mount

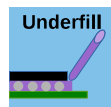
**Features**


- 

**Working Temperature**  
With strong know-how and experience in designing embedded boards, ICOP provides -40°C to +85°C CPU board choice for those industrial applications in harsh environment.
- 

**10+ Year life cycle**  
With good ERP knowledge and support from group member DMP Electronics, ICOP has ability and commits to provide long-life product supply at least 10 years from products' first day launch.
- 

**Fanless design**  
Fan operation and dust collection are usually the failure points for some critical applications. All ICOP's products including single board computers, touch panel computers and small enclosure systems are fanless design as standard.
- 

**Coating service**  
In-house conformal coating service provides additional protection for boards to against a variety of hazards such as moisture, dust, salt, chemicals, temperature changes, and mechanical abrasion.
- 

**Underfill service**  
In-house underfill service provides protection for boards to against dropping, scrolling, vibration and collision during the delivery and operation.
- 

**ODM service**  
By leveraging ICOP's design, manufacturing and production capability, 3 prototype samples can usually be provided within 8 weeks for customer's test after product's specifications and BOM (Bill of Materials) are confirmed by ICOP and the customer.

# Table of Contents

<b><i>Introduction and Features</i></b>	<b>1</b>
<b><i>Table of Contents</i></b>	<b>2</b>
<b><i>The Processors</i></b>	<b>3</b>
<b><i>SBC</i></b>	<b>4</b>
PC/104.....	4
3.5" SBC / Half-size SBC.....	5
Tiny SBC / ITX Board.....	6
EBM / DIP Module.....	7
Standard SOM.....	8
SOM304 / 200 Module.....	9
DIP-128 / 168 Module.....	10
<b><i>Panel PC</i></b>	<b>11</b>
Rugged PPC Series.....	11, 12
Compact PPC Series.....	13
HMI-043T Series / Open Frame Series.....	14
<b><i>BOX PC</i></b>	<b>15</b>
iBPC / EB-3362 Series.....	15
D-3362 / ICE 104 Series.....	16
EBOX-335xDX3 / 335xDX3-C2 Series.....	17
EBOX-336x Standard / Special Series.....	18
EBOX IMX8M / DIN PC-336x Series.....	19
EBOX Apollo Lake / Braswell Series.....	20
<b><i>Storage</i></b>	<b>21</b>
<b><i>OEM / ODM Service</i></b>	<b>22</b>



# The Processors



**Braswell** is the multicore system-on-a-chip based on Intel's latest microarchitecture and 14 nm process technology. It's built for designs that target entry-level 2-in-1 devices, laptops, desktops, and all-in-one PCs.

**Apollo Lake** is the multicore system-on-a-chip which empowers real-time computing in digital surveillance, new in-vehicle experiences, advancements in industrial and office automation, new solutions for retail and medical, and more. Utilizing Intel's industry-leading 14 nm process technology.

Code Name	Braswell	Braswell	Braswell	Apollo Lake	Apollo Lake	Apollo Lake
Processor Number	N3710	N3160	X5-E8000	N4200	J3455	N3350
Product Collection	Pentium	Celeron	Atom	Pentium	Celeron	Celeron
Clock Speed	1.6 GHz	1.6 GHz	1.04 GHz	1.10 GHz	1.5 GHz	1.10 GHz
Burst Speed	2.56 GHz	2.24 GHz	2.0 GHz	2.50 GHz	2.3 GHz	2.4 GHz
# of Cores	4	4	4	4	4	2
OS Support	Windows 10, Windows 10 IoT, Linux					
Passmark Score	1864	1666	1568	2035	2108	879



**i.MX8M Mini** is NXP's first embedded multicore application processor built using advanced 14LPC FinFET process technology, providing more speed and improved power efficiency. Backed by NXP's product longevity program, the I.MX8M Mini family can be used in any general purpose industrial and IoT application.

Code Name	NXP I.MX8M Mini			
Core	Cortex-A53 1.6 GHz		Cortex-A53 1.8 GHz	
# of Cores	4	2	4	2
GPU	GCNono Ultra for 3D , GC320 for 2D			
VPU	Decode 1080p60, H.264,H.264 / Encode 1080p60, H.264			
RAM, LPDDR4	1GB / 2GB			
eMMC	8 ~ 64 GB , SLC / MLC			
OS Support	Yocto Linux , Window 10 IoT Core			
Working Temperature	-40 to 85°C	-40 to 85°C	0 to 70°C	0 to 70°C



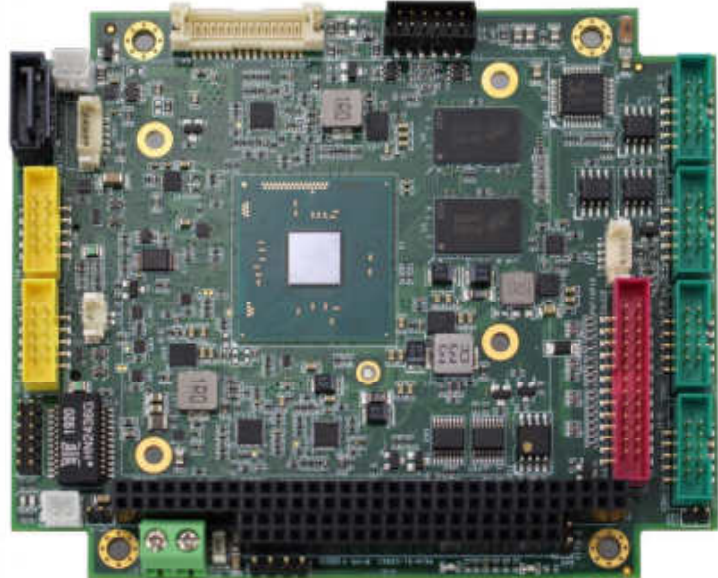
**Vortex86 SoC** series are 32-bit x86 architecture microprocessor which designed for embedded industrial applications. The CPU clock ranges from a single core 300MHz to dual core 1GHz. It has build-in ISA, PCI, PCIe, UART, IDE/SATA, I2C, SPI, CAN, GPIO, USB.....etc, most of the legacy I/O interface into one single BGA package with 10+ years long life cycle support.

Code Name	Vortex86				
Processor Name	DX3	DX2	DX	EX2	EX
Clock Speed	1.0 GHz	800 MHz	800 MHz	600 MHz	400 MHz
# of Cores	2	1	1	1 + 1	1
GPU	Yes	Yes	No	No	No
OS Support	Windows 7, CE7, Linux , VxWorks, QNX , RTOS-32				
Performance/DIMPS	3796	2744	1097	1632	740
Working Temperature	-40 to 85°C				

# PC/104



90 x 96mm



116 x 96mm

**CPU:** Intel Braswell Family / DMP Vortex86

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

16-bit full ISA support

Fanless

10 years life cycle

Part NO.	CPU	RAM	Storage	I/O
IBW-6954-A4	Pentium® N3710 Quad Core 1.6GHz	4GB Max.	SATA	4S/4U/GLAN/LPT/I²C/Audio/mPCIe/16GPIO/ HDMI/VGA/LVDS
IBW-6954-E4	Atom® x5-E8000 Quad Core 1.04GHz	4GB Max.	SATA	4S/4U/GLAN/LPT/I²C/Audio/mPCIe/16GPIO/ HDMI/VGA/LVDS
IBW-6954-B4	Celeron® N3160 Quad Core 1.6GHz	4GB Max.	SATA	4S/4U/GLAN/LPT/I²C/Audio/mPCIe/16GPIO/ HDMI/VGA/LVDS
VEX2-6454-2C4INE	Vortex86EX2 Processor 600MHz	1GB Max.	MicroSD /eMMC	2S/2U/LAN/LPT/Audio/mPCIe/ VGA/LCD/LVDS
VEX2-6454-4C4NE	Vortex86EX2 Processor 600MHz	1GB Max.	MicroSD /eMMC	4S/2U/LAN/LPT/Audio/mPCIe/16GPIO VGA/LCD/LVDS
VDX3-6754-2G	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	4S/2U/LAN/LPT/Audio/16GPIO/ VGA/LCD/LVDS
VDX3-6754-2C-2G	Vortex86DX3 Processor Dual Core 1GHz	2GB Max.	SATA	4S/2U/LAN/LPT/Audio/16GPIO/ VGA/LCD/LVDS
VDX3-6755-2G	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	3S(isolated)/2U/GLAN/LAN/CAN(optional)/ VGA/LVDS
VDX3-6755-2C-2G	Vortex86DX3 Processor Dual Core 1GHz	2GB Max.	SATA	3S(isolated)/2U/GLAN/LAN/CAN(optional)/ VGA/LVDS
NAD11-103-SD	Vortex86DX2 Processor 800MHz	256MB Max.	SD	4S/4U/LAN/I²C/ VGA/LCD/LVDS

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

## 3.5" SBC



102 x 146mm

**CPU:** Intel Braswell Family / Intel Apollo Lake Family / DMP Vortex86

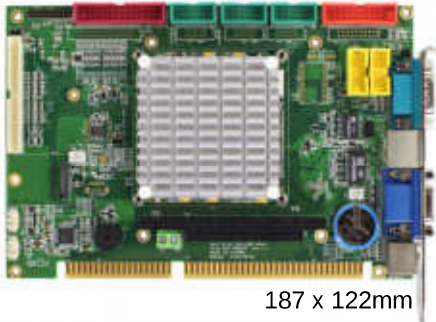
**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- 10 COM
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Storage	I/O
IBW-35-E4	Atom® x5-E8000 Quad Core 1.04GHz	4GB Max.	mSATA/ SATA	4S/6U/2GLAN/I <sup>2</sup> C/Audio/mPCIe/16GPIO/ HDMI/VGA/LVDS
APL-35-N3350	Celeron® N3350 Dual Core 1.10GHz	8GB Max.	M.2 SATA/ SATA	6S/6U/2GLAN/I <sup>2</sup> C/Audio/mPCIe/8GPIO/ 2DP/eDP
VEX2-6427-10C4VNE	Vortex86EX2 Processor 600MHz	1GB Max.	MicroSD/SD/ eMMC	10S/4U/LAN/2CAN/2I <sup>2</sup> C/Audio/mPCIe/ VGA/LCD/LVDS
VDX3-6726-2G	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	4S/4U/2GLAN/LAN/LPT/Audio/16GPIO/ VGA/LVDS
VEX-6225-43VE	Vortex86EX Processor 400MHz	512MB Max.	MicroSD/ SATA	2S/2U/LAN/CAN/I <sup>2</sup> C/mPCIe/8ADC/ VGA/LVDS

## Half-size SBC



187 x 122mm

**CPU:** DMP Vortex86

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- 16-bit full ISA support
- PCI support
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Storage	I/O
VDX3-6724-2G	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	4S/4U/GLAN/LAN/LPT/Audio/16GPIO/ VGA/LCD/LVDS
VDX3-6724-CF-2G	Vortex86DX3 Processor 1GHz	2GB Max.	CF/ SATA	4S/4U/GLAN/LAN/Audio/ VGA/LCD/LVDS
VDX3-PCI-7S5E	Vortex86DX3 Processor 1GHz	2GB Max.	IDE/CF/ SATA	2S/2U/GLAN/Audio/ VGA/LVDS
VDX3-PCI-7S4E	Vortex86DX3 Processor 1GHz	1GB Max.	IDE/CF/ SATA	2S/2U/GLAN/Audio/ VGA/LVDS
VDX-6324RD	Vortex86DX Processor 800MHz	512MB Max.	CF/ IDE	4S/4U/LAN/LPT/16GPIO/ VGA/LCD

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# Tiny SBC



100 x 66m

**CPU:** DMP Vortex86

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- Compact design
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Storage	I/O
VEX2-6415-4C4NE	Vortex86EX2 Processor 600MHz	1GB Max.	MicroSD/ eMMC	4S/2U/2LAN/LPT/Audio/2mPCIe/16GPIO
VEX2-6415-4C3NE	Vortex86EX2 Processor 600MHz	512MB Max.	MicroSD/ eMMC	4S/2U/2LAN/LPT/Audio/2mPCIe/16GPIO
VDX2-6518-1G-SD	Vortex86DX2 Processor 800MHz	1GB Max.	SD	4S/2U/LAN/LPT/8GPIO/ VGA/LVDS
VDX-6318RD	Vortex86DX Processor 800MHz	512MB Max.	IDE	4S/4U/LAN/Audio/32GPIO/ VGA/LCD
VDX-6314RD	Vortex86DX Processor 800MHz	512MB Max.	IDE	4S/2U/LAN/16GPIO/ VGA/LVDS

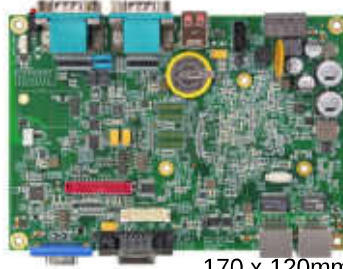
# ITX Board

**IBW-Mitx-E**



187 x 122mm

**VDX3-EITX**



170 x 120mm

**VDX3-PITX**



100 x 72mm

Part NO.	CPU	RAM	Storage	I/O
IBW-Mitx-E	Atom® x5-E8000 Quad Core 1.04GHz	8GB Max.	SD/mSATA/ SATA	6S/10U/2GLAN/LPT/Audio/8GPIO/mPCIe HDMI/VGA/LVDS
IBW-Mitx-B	Celeron® N3160 Quad Core 1.6GHz	8GB Max.	M.2 SATA/ SATA	2S/4U/GLAN/Audio/mPCIe/8GPIO/ HDMI/LVDS
APL-PITX-N3350	Celeron® N3350 Dual Core 1.10GHz	8GB Max.	M.2 SATA/ SATA	2S/4U/GLAN/Audio/mPCIe/8GPIO/ HDMI/LVDS
VDX3-PITX-7S5E1	Vortex86DX3 Processor 1GHz	2GB Max.	MicroSD/ SATA	4U/LAN/Audio/16GPIO/8ADC/ VGA
VDX3-EITX-7S5E1	Vortex86DX3 Processor 1GHz	2GB Max.	CF/ SATA	3S/6U/GLAN/LAN/CAN/Audio/ VGA/LVDS

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# EBM



101.6 x 111.5mm

**CPU:** Intel Braswell Family / Intel Apollo Lake Family

**Operating Temp:** 0 ~ +60°C Max.

**Features:**

- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Storage	I/O
APL-U-N3350	Celeron® N3350 Dual Core 1.10GHz	8GB Max.	M.2 SATA/ SATA	1S/5U/2GLAN/Audio/2mPCIe/8GPIO/ HDMI/VGA
APL-U-J3455	Celeron® J3455 Quad Core 1.10GHz	8GB Max.	M.2 SATA/ SATA	1S/5U/2GLAN/Audio/2mPCIe/8GPIO/ HDMI/VGA
IBW-U-E	Atom® x5-E8000 Quad Core 1.04GHz	8GB Max.	MicroSD/ SATA	2S/4U/2GLAN/Audio/M.2 2230 E-Key HDMI
IBW-U-B	Celeron® N3160 Quad Core 1.6GHz	8GB Max.	MicroSD/ SATA	2S/4U/2GLAN/Audio/M.2 2230 E-Key HDMI
IBW-U-A	Pentium® N3710 Quad Core 1.6GHz	8GB Max.	MicroSD/ SATA	2S/4U/2GLAN/Audio/M.2 2230 E-Key HDMI

## DIP Module



70 x 45mm

**CPU:** DMP Vortex86

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- 16-bit full ISA support
- PCI support
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Storage	I/O
VEX2-DIP-ISA	Vortex86EX2 Processor 600MHz	1GB Max.	MicroSD/ eMMC	5S/4U/LAN/32GPIO/ISA
VDX-DIP-ISARD	Vortex86DX Processor 800MHz	512MB Max.	IDE	5S/4U/LAN/32GPIO/ISA
VDX-DIP-PCIRD	Vortex86DX Processor 800MHz	512MB Max.	IDE	5S/4U/LAN/32GPIO/PCI
VDX-6319RD-FB-D	Vortex86DX Processor 800MHz	512MB Max.	512MB Flash/ IDE	2S/U/16GPIO/x-ISA
VDX-6300RD	Vortex86DX Processor 800MHz	512MB Max.	CF/ IDE	4S/3U/LAN/32GPIO/CF

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe



# Standard SOM

VDX3-ETX



95 x 144mm

VDX3-Q7



70 x 70mm

VDX3-SMARC



82 x 80mm

**CPU:** DMP Vortex86

**Operating Temp:** -40 ~ +85°C Max.

**Form factor:**

ETX  
QSeven  
SMARC

**Features:**

16-bit full ISA support  
PCI support  
Fanless  
10 years life cycle

## ETX®

Part NO.	CPU	RAM	Onboard Storage	I/O
VDX3-ETX-74IE	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	2S/4U/LAN/I <sup>2</sup> C/Audio/IDE/ VGA/LCD
VDX3-ETX-74LE	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	2S/4U/LAN/LPT/I <sup>2</sup> C/Audio/ VGA/LCD

 Q S E V E N

Part NO.	CPU	RAM	Onboard Storage	I/O
VDX3-Q7-75E	Vortex86DX3 Processor 1GHz	2GB Max.	N/A	1S/7U/GLAN/I <sup>2</sup> C/SPI/Audio/PCIe/16GPIO/SD/ eMMC/SATA VGA/LVDS
VDX3-Q7-53S	Vortex86DX3 Processor 800MHz	512MB Max.	N/A	1S/7U/GLAN/I <sup>2</sup> C/SPI/Audio/PCIe/16GPIO/SD/ eMMC/SATA VGA/LVDS

 SMARC

Part NO.	CPU	RAM	Onboard Storage	I/O
VDX3-SMARC-75E	Vortex86DX3 Processor 1GHz	2GB Max.	N/A	4S/2U/GLAN/I <sup>2</sup> C/SPI/Audio/PCIe/12GPIO/SD/ eMMC/SATA VGA/LVDS
VDX3-SMARC-53S	Vortex86DX3 Processor 800MHz	512MB Max.	N/A	4S/2U/GLAN/I <sup>2</sup> C/SPI/Audio/PCIe/12GPIO/SD/ eMMC/SATA VGA/LVDS

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# SOM304 Module



70 x 70mm

**CPU:** DMP Vortex86

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- 16-bit full ISA support
- PCI support
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Onboard Storage	I/O
SOM304D375EINE1-HS	Vortex86DX3 Processor 1GHz	2GB Max.	N/A	4U/LAN/2PCIe/SATA/ISA 11 Configurable I/O Ports VGA/LCD
SOM304RD52VINE1	Vortex86DX Processor 800MHz	256MB Max.	N/A	5S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/ISA VGA/LCD
SOM304RD52VICE1	Vortex86DX Processor 800MHz	256MB Max.	1GB NAND Flash	5S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/ISA VGA/LCD
SOM304RD53VINE1	Vortex86DX Processor 800MHz	512MB Max.	N/A	5S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/ISA VGA/LCD
SOM304RD52PINE1	Vortex86DX Processor 800MHz	256MB Max.	N/A	4S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/PCI/ISA

# SOM200 Module



52 x 52mm

**CPU:** DMP Vortex86EX

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- Maximum 10 configurable IO ports
- 16-bit ISA support
- PCI support
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Onboard Storage	I/O
SOM200EX43VGNE1	Vortex86EX Processor 400MHz	512MB Max.	N/A	2U/LAN/8ADC/SATA/ 10 Configurable I/O Ports VGA
SOM200EX43EGNE1	Vortex86EX Processor 400MHz	512MB Max.	N/A	2U/LAN/8ADC/PCIe/SATA/ 10 Configurable I/O Ports
SOM200RD52XINE1	Vortex86DX Processor 800MHz	256MB Max.	N/A	5S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/x-ISA
SOM200RD52XICE1	Vortex86DX Processor 800MHz	256MB Max.	1GB NAND Flash	5S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/x-ISA
SOM200RD52PCNE1	Vortex86DX Processor 800MHz	256MB Max.	N/A	5S/4U/LAN/LPT/I <sup>2</sup> C/32GPIO/IDE/PCI

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# DIP-128 Module



**CPU:** DMP Vortex86EX

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- Maximum 10 configurable IO ports
- 16-bit ISA support
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Onboard Storage	I/O
VEX-SOM	Vortex86EX Processor 400MHz	256MB Max.	N/A	2U/LAN/8ADC/PCIe/SATA/ 10 Configurable I/O Ports
VEX-SOM-512	Vortex86EX Processor 400MHz	512MB Max.	N/A	2U/LAN/8ADC/PCIe/SATA/ 10 Configurable I/O Ports

# DIP-168 Module



**CPU:** NXP i.MX8M Mini / DMP Vortex86EX2

**Operating Temp:** -40 ~ +85°C Max.

**Features:**

- Maximum 15 configurable IO ports
- 16-bit ISA support
- Fanless
- 10 years life cycle

Part NO.	CPU	RAM	Onboard Storage	I/O
N8MM-D168	NXP i.MX 8M Mini Quad Core 1.6GHz	2GB Max.	MicroSD	4S/2U/GLAN/MIPI-CSI/4PWM/3I <sup>2</sup> C/3SPI/3PS/ 20GPIO/PCIe/MIPI-DSI
VEX2-DIP-168-4ME1	Vortex86EX2 Processor 600MHz	1GB Max.	MicroSD	2U/LAN/8ADC/2PCIe/ 15 Configurable I/O Ports
VEX2-DIP-168-4EE1	Vortex86EX2 Processor 600MHz	1GB Max.	4GB eMMC	2U/LAN/8ADC/2PCIe/ 15 Configurable I/O Ports

VEX-IOT-DEV  
(Development kit for VEX-SOM)



VEX2-6427  
(Development board for VEX2-DIP-168)



S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# Rugged PPC Series

## Features:

- Support x86 platform of DMP Vortex86 Processors.
- Different size of LCD and Touch panel support for 9", 10.4" and 15".
- Wide power requirement, +12VDC ~ +24VDC.
- Flexible I/O expansion.
- IP65 Front Panel Protection.
- Metal and Fanless Design & VESA and Panel Mount Support.



Model Name	PPC-090T	PPC-104T	PPC-150T	PPC-150P
<b>Display Size</b>	9" WSVGA	10.4" SVGA	15" XGA	
<b>Max Resolution</b>	1024 x 600	800 x 600	1024 x 768	
<b>Luminance (cd/m<sup>2</sup>)</b>	300	500	250	
<b>Touchscreen</b>	Analog Resistive			Capacitive Touch Panel
<b>CPU</b>	Vortex86DX2-933MHz Vortex86DX3-1GHz			
<b>System Memory</b>	1GB / 2GB			
<b>I/O</b>	2S/3U/LAN/GLAN/Audio		2S/3U/LAN/GLAN/Audio	
<b>Storage</b>	CF Card / SATA SLIM / 2GB Nand Flash Onboard			
<b>Expansion I/O</b>	PoE / COM x5 / COM x3 + 16bit GPIO			
<b>Power Requirement</b>	+12VDC ~ +24VDC			
<b>Operating Temperature</b>	0°C ~ 50°C / -20°C ~ +60°C			
<b>Dimensions (W x H x D) mm</b>	242 x 156.5 x 44	273.4 x 219.8 x 49	354.9 x 280.4 x 55	354.9 x 280.9 x 54.9
<b>Certificate</b>	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)			



S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

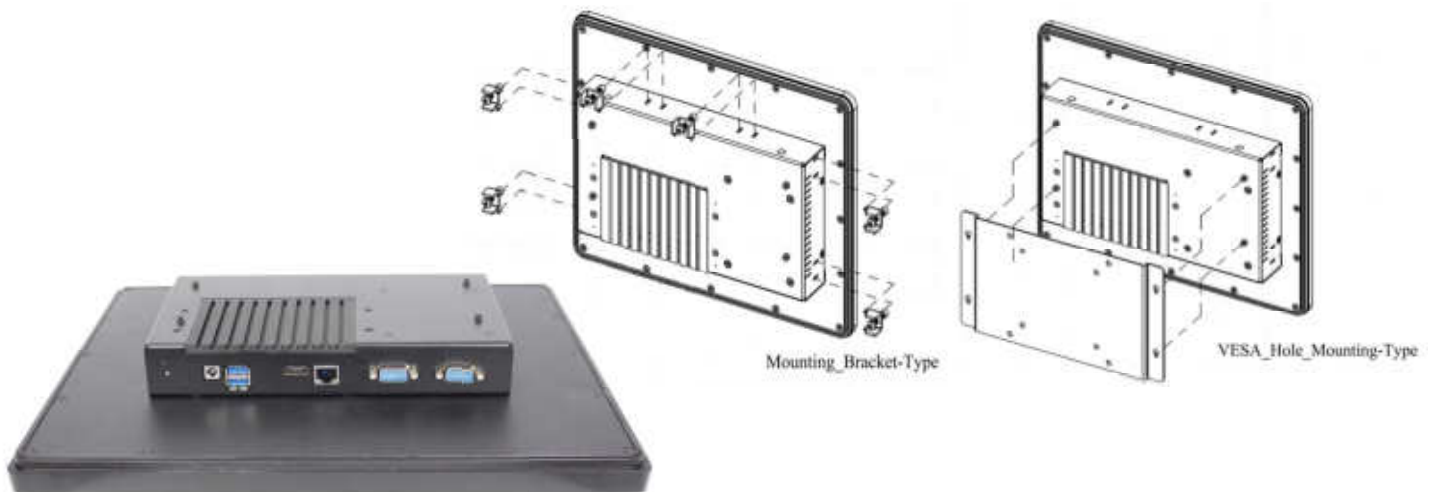
# Rugged PPC Series

## Features:

- Support x86 platform of Intel® Processor
- Different size of LCD and Touch panel support for 9", 10.4" and 15".
- IP65 Front Panel Protection.
- Metal and Fanless Design.
- VESA and Panel Mount Support.



Model Name	PPC-090T-APL	PPC-104T-APL	PPC-150T-APL	PPC-150P-APL
<b>Display Size</b>	9" WSVGA	10.4" SVGA	15" XGA	
<b>Max Resolution</b>	1024 x 600	800 x 600	1024 x 768	
<b>Luminance (cd/m<sup>2</sup>)</b>	300	500	250	
<b>Touchscreen</b>	Analog Resistive		Capacitive Touch Panel	
<b>CPU</b>	Intel® Pentium® N4200 (Quad) Intel® Celeron® N3350 (Dual)			
<b>System Memory</b>	4GB / 8GB			
<b>I/O</b>	2S/3U/LAN/GLAN/Audio			
<b>Storage</b>	M.2 2242 SATA M-Key / 2.5" SATA HDD/SSD			
<b>Expansion I/O</b>	mPCIe Slot x1 HDMI 1.4 (As Dual Display)			
<b>Power Requirement</b>	+12VDC			
<b>Operating Temperature</b>	0°C ~ 60°C			
<b>Dimensions (W x H x D) mm</b>	242 x 156.5 x 50.6	273.4 x 219.8 x 52.5	354.9 x 280.9 x 58	359.6 x 283.0 x 57.9
<b>Certificate</b>	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)			



S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

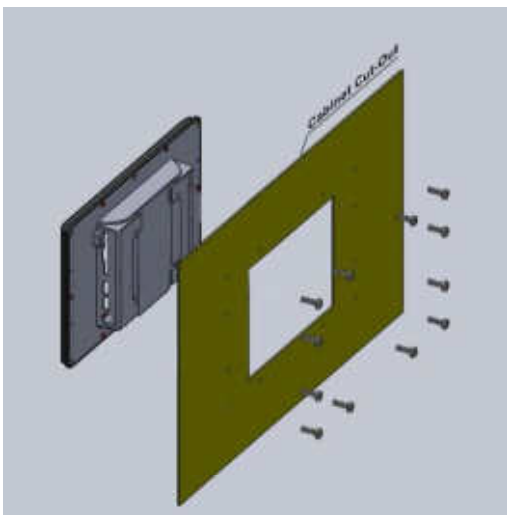
# Compact PPC Series

## Features:

- Support x86 platforms of Intel® and DMP Vortex86 Processors, and ARM platform of Realtek RTD1195 Cortex-A7 processor.
- Different size of LCD and Touch panel support for 5.7" and 9".
- IP65 Front Panel Protection for 9" Panel PC.
- Metal and Fanless Design.
- VESA and Panel Mount Support.



Model Name	PEX-057T PDX2-057T PDX3-057T	PEX-090T PDX2-090T PDX3-090T	PINT-090T-APL	PRTD-090T
Display Size	5.7" VGA	9" WSVGA	9" WSVGA	9" WSVGA
Max Resolution	640 x 480	1024 x 600	1024 x 600	1024 x 600
Luminance (cd/m <sup>2</sup> )	500	300	300	300
Touchscreen	Analog Resistive			
CPU	Vortex86EXm-400MHz Vortex86DX2-933MHz Vortex86DX3-1GHz		Intel® Pentium® N4200 (Quad) Intel® Celeron® N3350 (Dual)	RTD1195-1.2GHz Cortex-A7 (Dual)
System Memory	1GB / 2GB		4GB / 8GB	1GB / 2GB
I/O	1S/2U/LAN/Audio		2S/3U/LAN/GLAN/Audio	1S/2U/LAN/Audio
Storage	MiroSD Slot / CF Card / 2GB Nand Flash Onboard		M.2 2242 SATA M-Key	8GB eMMC Onboard
Expansion I/O	N/A		mPCIe Slot x1 HDMI 1.4 (As Dual Display)	N/A
Power Requirement	+5VDC / +8VDC ~ +35VDC		+12VDC	+5VDC / +8VDC ~ +35VDC
Operating Temperature	0°C ~ 50°C / -20°C ~ +60°C		0°C ~ +60°C	0°C ~ 60°C / -20°C ~ +70°C
Dimensions (W x H x D) mm	152 x 112 x 33	236.6 x 146 x 35	236.3 x 146 x 44.5	236.6 x 146 x 35
Certificate	CE, FCC, VCCI, Vibration	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)



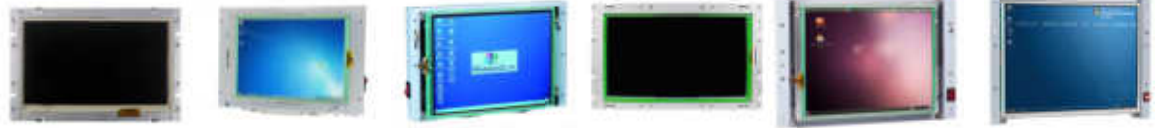
S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# HMI-043T Series



Model Name	HMI-043T	HMI-043T-OP
Display Size	4.3" WQVGA	4.3" WQVGA
Max Resolution	480 x 272	480 x 272
Luminance (cd/m <sup>2</sup> )	280	280
Touchscreen	Analog Resistive	Analog Resistive
CPU	Vortex86EXm-400MHz	Vortex86EX-400MHz
System Memory	128MB / 256MB	128MB / 256MB
I/O	1S/1U/CAN/LAN/Audio/8GPIO	3S/2U/LCD/LAN/CAN/Audio/8GPIO
Storage	SD Slot / 512MB or 8GB eMMC	512MB / 8GB eMMC
Expansion I/O	HF RFID	3 Configurable I/O Ports
Power Requirement	+7VDC ~ 24VDC	+5VDC
Operating Temperature	0°C ~ 50°C / -20°C ~ +60°C	-20°C ~ +60°C
Dimensions (W x H x D) mm	116.4 x 94.4 x 34.36	105.5 x 67.2 x 13.6
Certificate	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)	N/A

# Open Frame Series



Model Name	VOX-070-TS	VOX-065-TS	VOX-084-TS	VOX-090-TS	VOX-104-TS	VOX-150-TS
Display Size	7" WVGA	6.5" VGA	8.4" SVGA	9" WSVGA	10.4" SVGA	15" XGA
Max Resolution	800 x 480	640 x 480	800 x 600	1024 x 600	800 x 600	1024 x 768
Luminance (cd/m <sup>2</sup> )	400	800	250	300	300	350
Touchscreen	Analog Resistive					
CPU	Vortex86EX2 -600MHz	Vortex86DX2-933MHz Vortex86DX3-1GHz				
System Memory	1GB / 2GB	512MB / 1GB / 2GB				
I/O	5S/4U/LCD/LAN /CAN/Audio /8GPIO	4S/4U/VGA/LCD/LVDS /2GLAN/LAN/PWM/Audio /16GPIO				
Storage	4GB eMMC / SD Slot	SATA				
Expansion I/O	mPCIe x4	PC/104 Bus				
Power Requirement	+12VDC~+36VDC	+5VDC & +12VDC		+5VDC	+5VDC & +12VDC	
Dimensions (W x H x D) mm	186 x 121.1 x 28.7	190 x 145 x 41.9	230.4 x 150 x 29	245 x 152.2 x 38.5	303 x 204 x 45.5	368 x 278 x 45.5
Operating Temperature	0°C ~ 50°C / -20°C ~ +60°C / -30 ~ +80°C	0°C ~ 50°C / -20°C ~ +60°C				

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

## iBPC Series

**CPU:** DMP Vortex86DX3

**Features:**  
 Panel mounting available  
 Isolated GPIO  
 LVDS support  
 10 years life cycle



**Dimensions:** 152 x 104 x 52mm

**Operating Temp:** -20 ~ +70°C

Part NO.	CPU	RAM	Storage	I/O
iBPC-75GE	Vortex86DX3 Processor 1GHz	2GB Max.	MicsoSD/ SATA	3S/4U/2GLAN/LAN/Audio/8GPIO/ 8GPIO(isolated) VGA/LVDS
iBPC-75CE	Vortex86DX3 Processor 1GHz	2GB Max.	MicsoSD/ SATA	3S/4U/2GLAN/LAN/CAN/Audio/ 8GPIO(isolated)/ VGA/LVDS
iBPC-75FE	Vortex86DX3 Processor 1GHz	2GB Max.	MicsoSD/ SATA	3S/4U/2GLAN/LAN/CAN/Audio/8GPIO/ 8GPIO(isolated)/ VGA/LVDS

## EB-3362 Series

**CPU:** DMP Vortex86DX3

**Features:**  
 100 x100mm VESA Support  
 Compact design  
 Fanless design and DIN Rail rack  
 10 years life cycle



**Dimensions:** 115 x 115 x 35 mm

**Operating Temp:** -20 ~ +70°C



VESA Mount



Din-Rail

Part NO.	CPU	RAM	Storage	I/O
EB-3362-L2851C3P-I	Vortex86DX3 Processor 1GHz	2GB Max.	SD	4S/3U/GLAN/LAN/Audio/mPCIe/ VGA
EB-3362-C2G2SIM-I	Vortex86DX3 Processor 1GHz	2GB Max.	SD/ SATA	2S/3U/LAN/Audio/mPCIe/16GPIO/ VGA
EB-3362-L2C2851G1E-I	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	3S/3U/GLAN/LAN/Audio/8GPIO/ VGA



## D-3362 Series



**CPU:** DMP Vortex86DX3

**Features:**  
Fanless design  
DIN Rail rack  
10 years life cycle

**Dimensions:** 152 x 104 x 52mm

**Operating Temp:** -20 ~ +70°C



DIN Rail rack

Part NO.	CPU	RAM	Storage	I/O
D-3362-852C2-I	Vortex86DX3 Processor 1GHz	2GB Max.	SD(internal)/ SATA	4S/2U/GLAN/LAN/mPCIe/ VGA
D-3362-851C1G2-I	Vortex86DX3 Processor 1GHz	2GB Max.	SD(internal)/ SATA	2S/2U/GLAN/LAN/mPCIe/16GPIO/ VGA

## ICE-104 Series

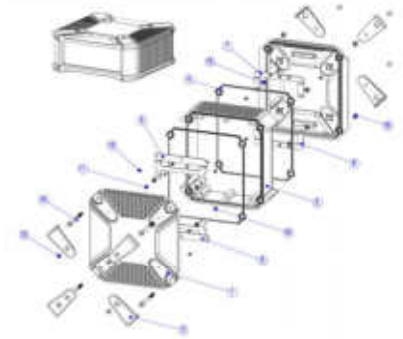


**CPU:** DMP Vortex86DX3

**Features:**  
Customizable I/O ports configuration services  
100x100mm VESA support  
IP67 dust&water proof rated  
Active-warming design enclosure  
Support PC/104 form factor

**Dimensions:** 181.6 x 184.7 x 56.6mm

**Operating Temp:** -100°C~+80°C Max.



Part NO.	CPU	RAM	Storage	I/O
ICE-6754-DC	Vortex86DX3 Processor 1GHz	2GB Max.	SATA	3S/2U/LAN/16GPIO VGA



S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

## EBOX-335xDX3 Series



**Features:**  
 GLAN support  
 Fanless design  
 PXE Diskless Boot  
 Auto Power On support  
 75 x 75mm VESA support

**Dimensions:** 95 x 95 x 20mm

**Operating Temp:** 0~+60°C / -20~+70°C



Part NO.	CPU	RAM	Storage	I/O
EBOX-335xDX3	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/LAN/Mic-in/Line-out/VGA
EBOX-335xDX3-GL	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/GLAN/Mic-in/Line-out/VGA
EBOX-335xDX3-W	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/LAN/Mic-in/Line-out/VGA
EBOX-335xDX3-GLW	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/GLAN/Mic-in/Line-out/VGA

## EBOX-335xDX3-C2 Series



**Features:**  
 GLAN support  
 Dual RS-232 support  
 Fanless design  
 PXE Diskless Boot  
 Auto Power On support  
 75 x 75mm VESA support

**Dimensions:** 95 x 95 x 35mm

**Operating Temp:** 0~+60°C / -20~+70°C



Part NO.	CPU	RAM	Storage	I/O
EBOX-335xDX3-RCA	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/ Micro SD	3U/LAN/Mic-in/Line-out/mPCIe/ HDMI/VGA/RCA jack
EBOX-335xDX3	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/LAN/Mic-in/Line-out/VGA
EBOX-335xDX3 1G LAN	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/GLAN/Mic-in/Line-out/VGA
EBOX-335xDX3 Wide Temp	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/LAN/Mic-in/Line-out/VGA
EBOX-335xDX3 1G LAN Wide Temp	Vortex86DX3 Processor 1GHz	1GB 2GB	SD	2S/3U/GLAN/Mic-in/Line-out/VGA

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

## EBOX-336x Standard Series



### Features:

Dual-core CPU All-in-One Module  
Multiple RS-232/485/422/GPIO/CANBus  
100 x 100mm VESA support  
Fanless design and DIN Rail rack  
Auto Power On/ PXE Diskless Boot

**Dimensions:** 115 x 115 x 35mm

**Operating Temp:** 0~+60°C / -20~+70°C



Part NO.	CPU	RAM	Storage	I/O
EB-336x HDMI	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/ Micro SD	4S/3U/GLAN/LAN/CAN/Mic-in/Line-out/ mPCIe/HDMI/VGA
EB-336x RS-232	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/3U/GLAN/LAN/CAN/Line-out/ mPCIe/8GPIO/VGA
EB-336x RS-485	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/3U/GLAN/LAN/CAN/Mic-in/Line-out/ mPCIe/8GPIO/VGA
EB-336x RS-422	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/3U/GLAN/LAN/CAN/Line-out/ mPCIe/8GPIO/VGA

## EBOX-336x Special Series



### Features:

Dual-core CPU All-in-One Module  
Multiple LAN & COM ports  
SATA, CF, SD card, mPCIe, 4G LTE  
Auto Power On/ PXE Diskless Boot  
100 x 100mm VESA support  
Fanless design and DIN Rail rack

**Dimensions:** 115 x 115 x 35mm

**Operating Temp:** 0~+60°C / -20~+70°C



Part NO.	CPU	RAM	Storage	I/O
EBOX-336x 4G LTE	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/3U/LAN/CAN/Line-out/mPCIe/8GPIO/VGA
EBOX-336x GPIO	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/3U/GLAN/LAN/CAN/Line-out/ mPCIe/8GPIO/VGA
EBOX-336x Multi LAN	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/4U/2GLAN/LAN/CAN/Mic-in/Line-out/mPCIe/ 8GPIO/VGA
EBOX-336x Special IO	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA CF/SD	3S/3U/GLAN/LAN/LPT/Line-out/VGA

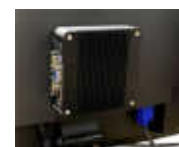
## EBOX IMX8M Series



**Features:**  
 2GB LPDDR4, 16GB eMMC onboard  
 Fanless, 100 x 100mm VESA support  
 GLAN, RS-232/ 485, M.2 2230 E Key support  
 Auto Power On support

**Dimensions:** 115 x 115 x 35mm

**Operating Temp:** 0~+60°C



Part NO.	CPU	RAM	Storage	I/O
EB-MX8MM-L1C2	NXP i.MX8M Mini Quad Core 1.6GHz	2GB	eMMC/SD	2S/3U/GLAN/Line-out/M.2/HDMI
EB-MX8MM-L1C4	NXP i.MX8M Mini Quad Core 1.6GHz	2GB	eMMC/SD	4S/3U/GLAN/Line-out/M.2/HDMI
EB-MX8MM-L2C2	NXP i.MX8M Mini Quad Core 1.6GHz	2GB	eMMC/SD	2S/3U/2GLAN/Line-out/M.2/HDMI
EB-MX8MM-L2C4	NXP i.MX8M Mini Quad Core 1.6GHz	2GB	eMMC/SD	4S/3U/2GLAN/Line-out/M.2/HDMI

## DIN PC-336x



**Features:**  
 PXE Diskless Boot  
 Fanless, DIN Rail support  
 GLAN, RS-232, GPIO support  
 Auto Power On support

**Dimensions:** 152 x 104 x 52mm

**Operating Temp:** 0~+60°C



Part NO.	CPU	RAM	Storage	I/O
D-336x-C2	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	2S/2U/GLAN/LAN/VGA
D-336x-C4	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/2U/GLAN/LAN/VGA
D-336x-852C2	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/2U/GLAN/LAN/VGA
D-336x-852G2	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/2U/GLAN/LAN/8GPIO/VGA
D-336x-C2G2A	Vortex86DX3 Processor 1GHz	1GB 2GB	SATA/SD	4S/2U/GLAN/LAN/Mic-in/Line-out/8GPIO/VGA

S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

## EBOX Apollo Lake Series



**Features:**  
 Multi-Display outputs  
 Multi-COM functions  
 Dual GLAN, Fanless  
 100 x 100mm VESA support  
 Full size and Half size mPCIe

**Dimensions:** 115 x 115 x 48.5mm

**Operating Temp:** 0~60°C (with Airflow)/ -10°C Bootable



Part NO.	CPU	RAM	Storage	I/O
EBOX-ALN3350	Celeron® N3350 Dual Core 1.10GHz	4GB 8GB	mSATA/ SATA	1S/4U/2GLAN/Audio/mPCIe/2HDMI/VGA
EBOX-ALJ3455	Celeron® J3455 Quad Core 1.10GHz	4GB 8GB	mSATA/ SATA	1S/4U/2GLAN/Audio/mPCIe/2HDMI/VGA

## EBOX Braswell Series



**Features:**  
 AMI UEFI BIOS (Legacy mode switchable)  
 M.2 2230 E Key support  
 Dual GLAN, RS-232  
 100 x 100mm VESA support

**Dimensions:** 115 x 115 x 35mm

**Operating Temp:** 0~+60°C

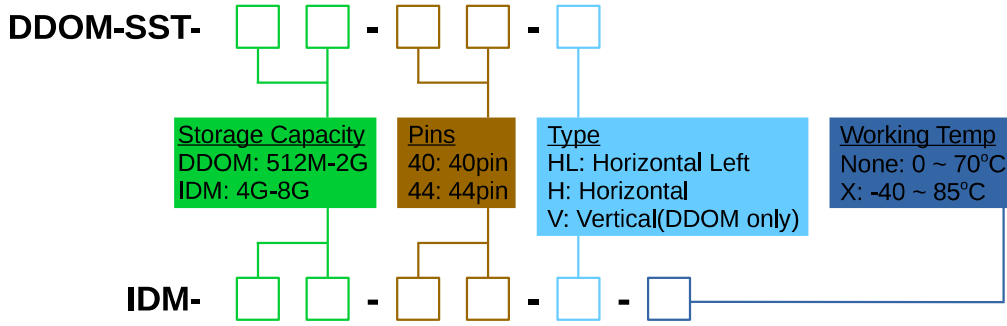


Part NO.	CPU	RAM	Storage	I/O
EB-58E4-L1C2F	Atom® x5-E8000 Quad Core 1.04GHz	4GB	SATA/ Micro SD	2S/4U/GLAN/Mic-in/Line-out/M.2/HDMI
EB-58E4-L2C2F	Atom® x5-E8000 Quad Core 1.04GHz	4GB	SATA/ Micro SD	2S/4U/2GLAN/Mic-in/Line-out/M.2/HDMI
EB-58E8-L1C2F	Atom® x5-E8000 Quad Core 1.04GHz	8GB	SATA/ Micro SD	2S/4U/GLAN/Mic-in/Line-out/M.2/HDMI
EB-58E8-L2C2F	Atom® x5-E8000 Quad Core 1.04GHz	8GB	SATA/ Micro SD	2S/4U/2GLAN/Mic-in/Line-out/M.2/HDMI
EB-58N4-L1C2F	Celeron® N3160 Quad Core 1.6GHz	4GB	SATA/ Micro SD	2S/4U/GLAN/Mic-in/Line-out/M.2/HDMI
EB-58N4-L2C2F	Celeron® N3160 Quad Core 1.6GHz	4GB	SATA/ Micro SD	2S/4U/2GLAN/Mic-in/Line-out/M.2/HDMI
EB-58N8-L1C2F	Celeron® N3160 Quad Core 1.6GHz	8GB	SATA/ Micro SD	2S/4U/GLAN/Mic-in/Line-out/M.2/HDMI
EB-58N8-L2C2F	Celeron® N3160 Quad Core 1.6GHz	8GB	SATA/ Micro SD	2S/4U/2GLAN/Mic-in/Line-out/M.2/HDMI

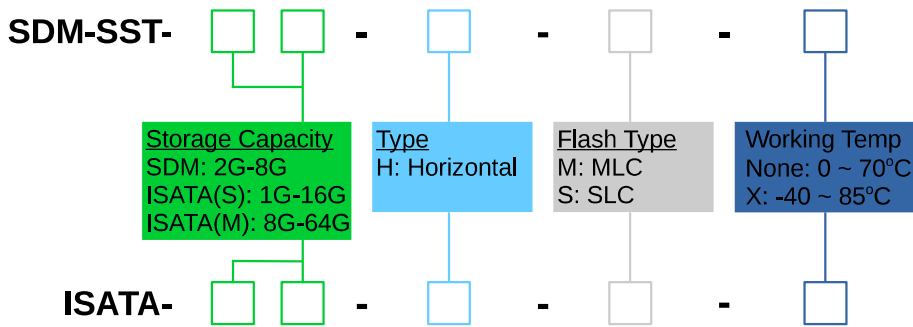
S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

# Storage

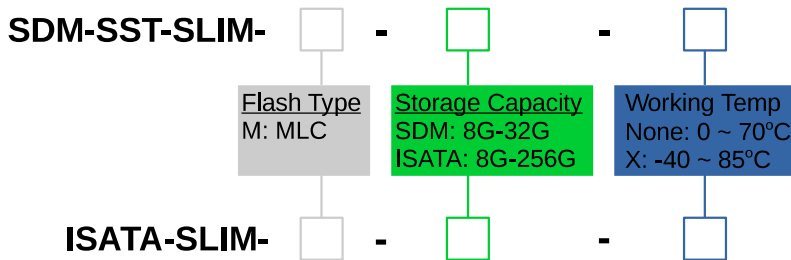
## IDE DOM Series



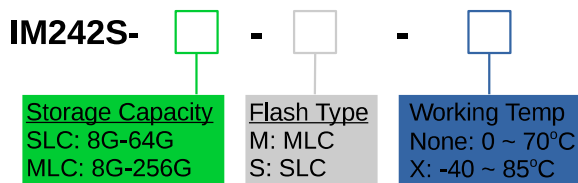
## SATA DOM Series



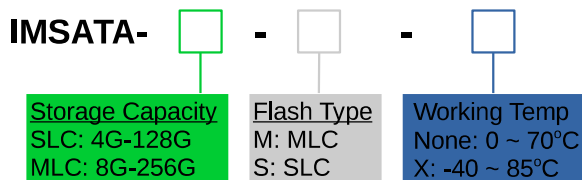
## SATA SLIM Series



## M.2 SATA Series



## mSATA SATA Series



# ODM/OEM Service

Based on our experience, 3 prototype samples can usually be provided within 8 weeks for the customer's test after the product's specifications and BOM (Bill of Materials) are confirmed by ICOP and the customer.

OEM/ODM project service agreement with project details will be defined and signed by both parties in order to launch the OEM/ODM service.

## ICOP's ODM Project Examples

### Vehicle Application



### Factory Automation



### Conference Application

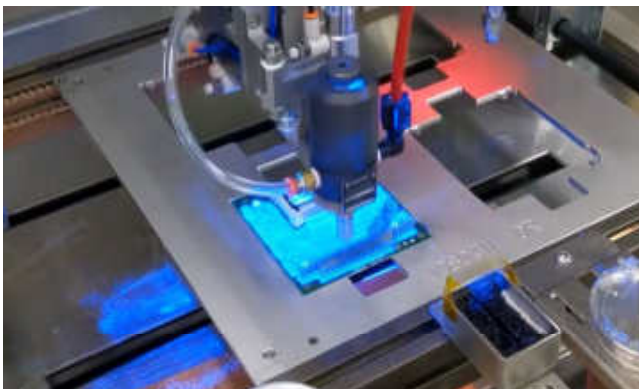


## Further Protection Service

### Conformal Coating

The coating machine : Nordson SL-940

The coating material : HumiSeal 1B73 (acrylic type)



### Underfill

The underfill machine: ASCENTEX ASG-Mini

The underfill material: Zymet X2823-B



