

Product Guide

TO emBEDded OR NOT TO emBEDded



Industrial Embedded Solutions



SBC



Panel PC



Box PC



Storage



Quick-EtherCAT

About ICOP

ICOP Technology, established in 1997, is the world's leading manufacturer of industrial embedded solutions. Headquartered in Taipei, Taiwan and subsidiaries around the globe as well as worldwide distributors demonstrates ICOP's global commitment for long term and local support.

ICOP constantly strives to provide highest quality and reliability, extensive technical support, short lead times to reduced manufacturing costs and reasonable prices to meet its customers' expectations.

Strong know-how in the embedded field and extensive customer support helps ICOP to be recognized and selected by numerous well-known manufacturers and service providers from the industrial, medical, transportation, traffic management, agricultural field etc. just to mention a few.



Table of Contents

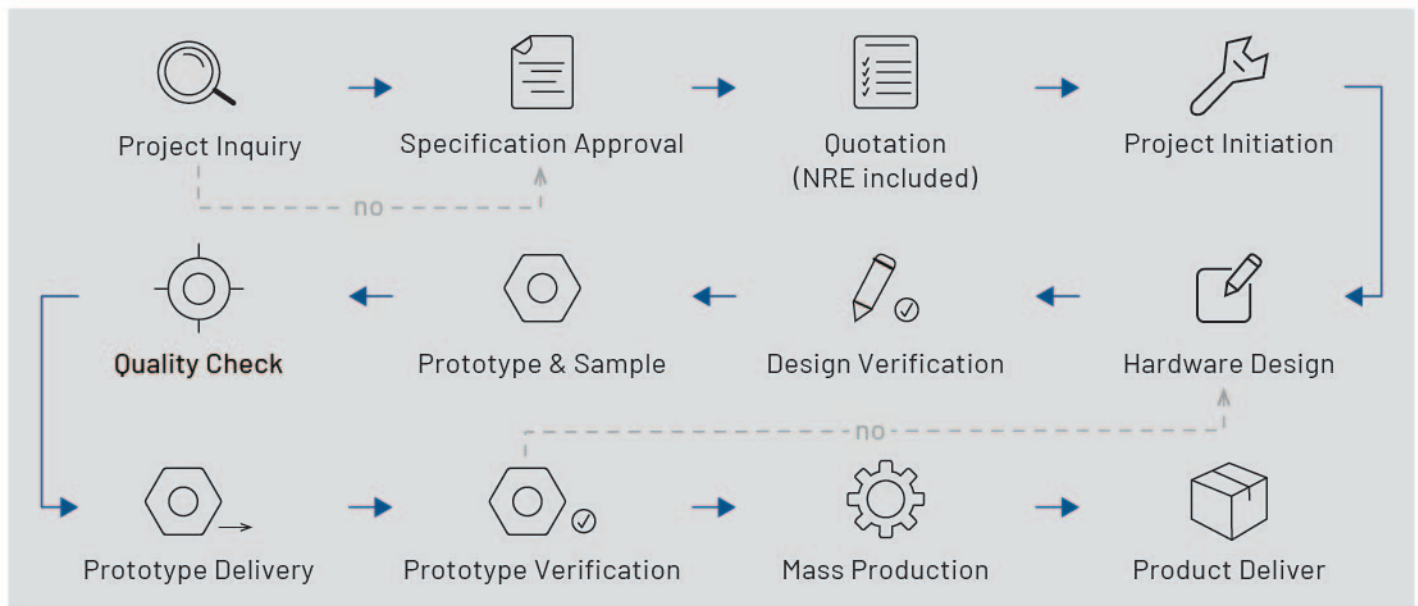
● About ICOP	1
● Table of Contents	2
● ICOP Capability	3-4
● The Processors	5-6
● NX8MM Series	7-8
● Product Category	9
● Features	10
● SBC	
PC/104	11
3.5" SBC / Half-size SBC	12
Tiny SBC / ITX Board	13
ETX Module / EBM	14
SOM304 Module / SOM200 Module	15
DIP-128 Module / DIP-168 Module	16
● Panel PC	
Rugged PPC Series	17-18
Compact PPC Series	19
HMI-043T Series / Open Frame Series	20
● Box PC	
iBPC Series / EBOX-3362 Series	21
D-3362 Series / ICE-104 Series	22
EBOX-335xDX3 Series / EBOX-335xDX3-C2 Series	23
EBOX-336x Standard Series / EBOX-336x Special Series	24
EBOX-IMX8MM Series / DIN PC-336x Series	25
EBOX Apollo Lake Series / EBOX Braswell Series	26
● QEC-EtherCAT Solutions	27-30
● Flash Disk	31
● Peripheral	32
● Memo	33-34

ICOP Capability

ODM / OEM Service

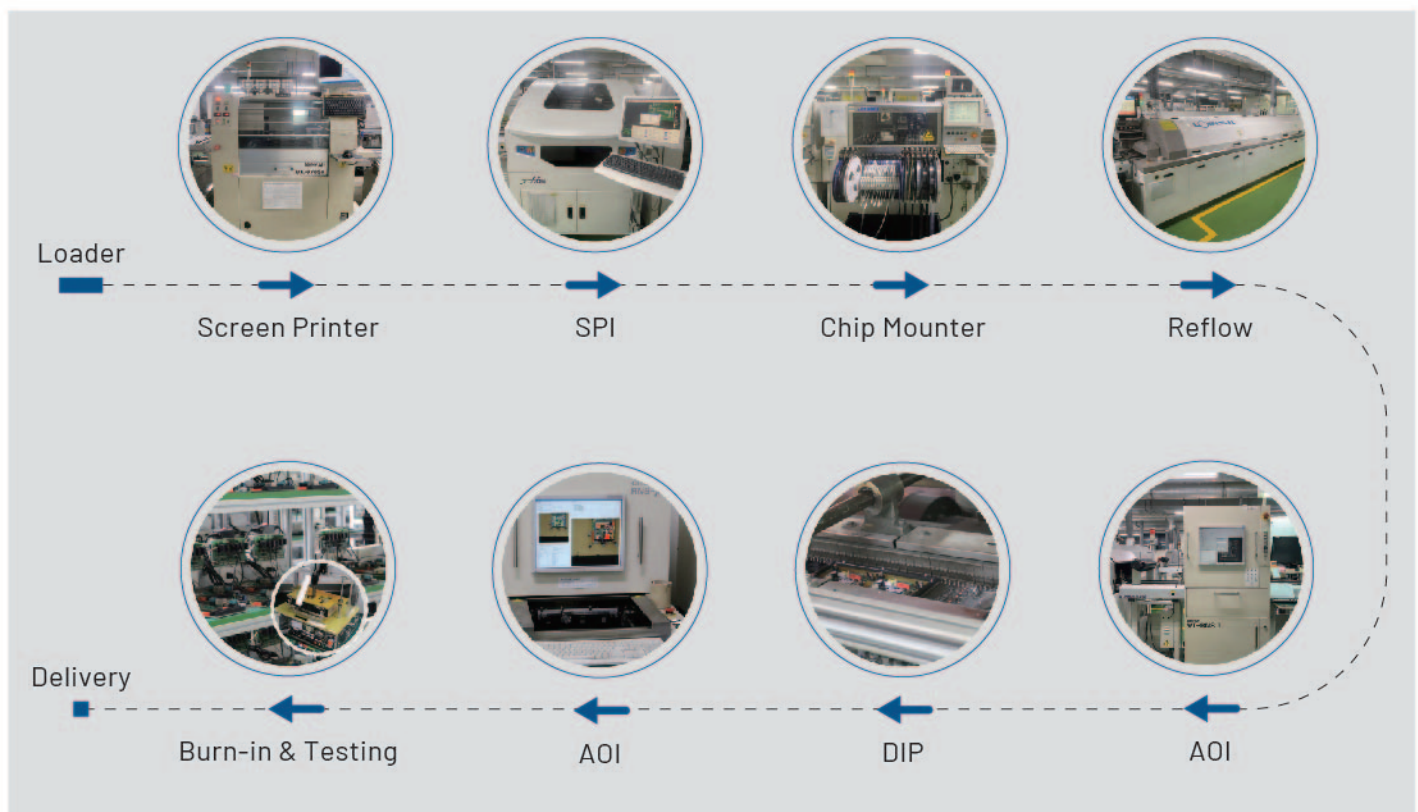
Over 20 years of experience, ICOP has established a standardized ODM/OEM flow and provides over 100 types of customized products to our customers, and it occupies 50% of ICOP's sales.

- Project Time : 12 weeks from PO to prototype.



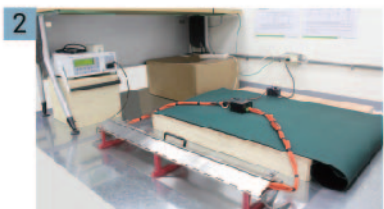
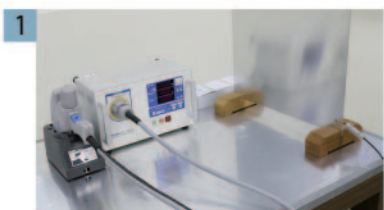
Manufacture

- Production Line : 4 lines.



Reliability Lab

In ICOP's Reliability Lab, we provide testing facilities below to test the reliability of all of our products.



- 1 ESD Generator**
IEC61000-4-2 EMC Test
- 2 EFT Generator**
Testing Capability: 1.5 kV
- 3 Electrical Safety Compliance Analyzer**
ACW, DCW, IR, GB tests ACW/DCW/IR/GB/high voltage endurance tests
- 4 Programmable Temp. & Humidity Chamber**
Temp.: -40 ~ +85°C
Humidity: 10% ~ 98% RH
- 5 EMI Compliance Testing**
Test Grade : Class A/B
Compliance with CE/FCC/VCCI Standard

Mechanics & 3D Printed Sample Service



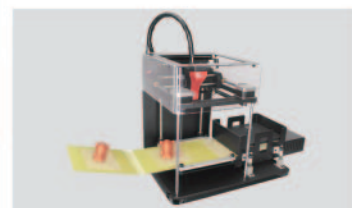
2.5D Optical Projector



Wire Cut EDM



CNC Milling Machine



3D Printed Sample Service



Coordinate Measuring Machine



Die Sink EDM



Laser Engraving Machine

Conformal Coating & Underfill



Conformal Coating

- The coating machine : Nordson SL-940
- The coating material : HumiSeal 1 B73 (acrylic type)



Underfill

- The underfill machine : ASCENTEX ASG-Mini
- The underfill material : Zymet X2823-B



- Video -

The Processors



Elkhart Lake is Intel's first IoT-optimized platform with best-in-class CPU/GPU performance to support IoT application requirements. It has a low TDP between 4.5 to 12 Watt TDP and up to 4 cores with Gen 11LP graphics and video encoding/decoding. For industrial and embedded applications, it has In-Band ECC, 3 x 2.5GbE TSN MACs, x12 configurable HSIO lanes and supports -40 to +85°C ambient temperatures.

Code Name	Elkhart Lake / Embedded			
Processor Number	x6211E	x6413E	x6425E	J6412
Product Collection	Atom	Atom	Atom	Celeron
Clock Speed	1.3GHz	1.5GHz	2.0GHz	2.0GHz
Burst Speed	3.0GHz	3.0GHz	3.0GHz	2.6GHz
# of Cores	2	4	4	4
OS Support	Windows 10/11, Windows 10/11 IoT, Linux			
TDP	6W	9W	12W	10W
Passmark Score	1695	4070	4884	4710



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 14nm 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	1.6GHz	1.6GHz	1.04GHz	1.10GHz	1.5GHz	1.10GHz
Burst Speed	2.56GHz	2.24GHz	2.0GHz	2.50GHz	2.3GHz	2.4GHz
# of Cores	4	4	4	4	4	2
OS Support	Windows 10, Windows 10 IoT, Linux					
Passmark Score	1864	1666	1568	2035	2108	879

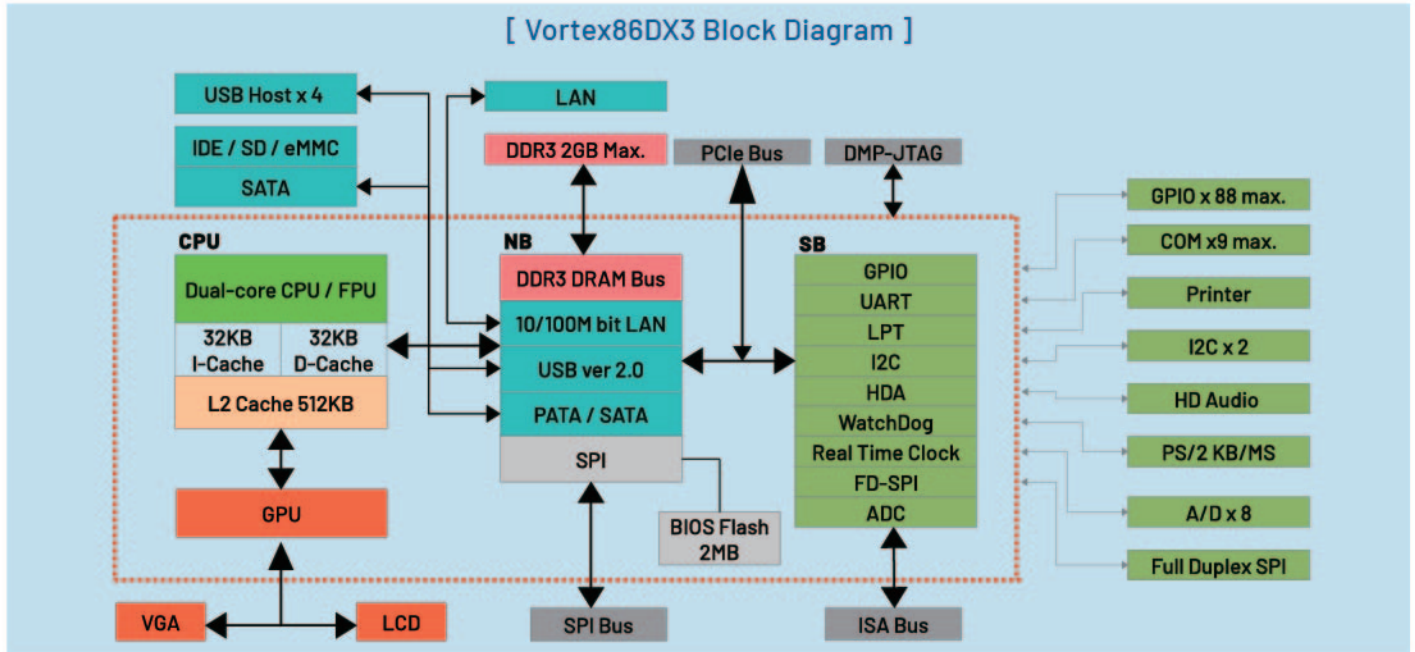


i.MX8M Mini is NXP's first embedded multicore application processor built using advanced 14LPC FinFET process technology, providing more speed and improved power efficiency. Backed by NXP's product longevity program, the I.MX8M Mini family can be used in any general purpose industrial and IoT application.

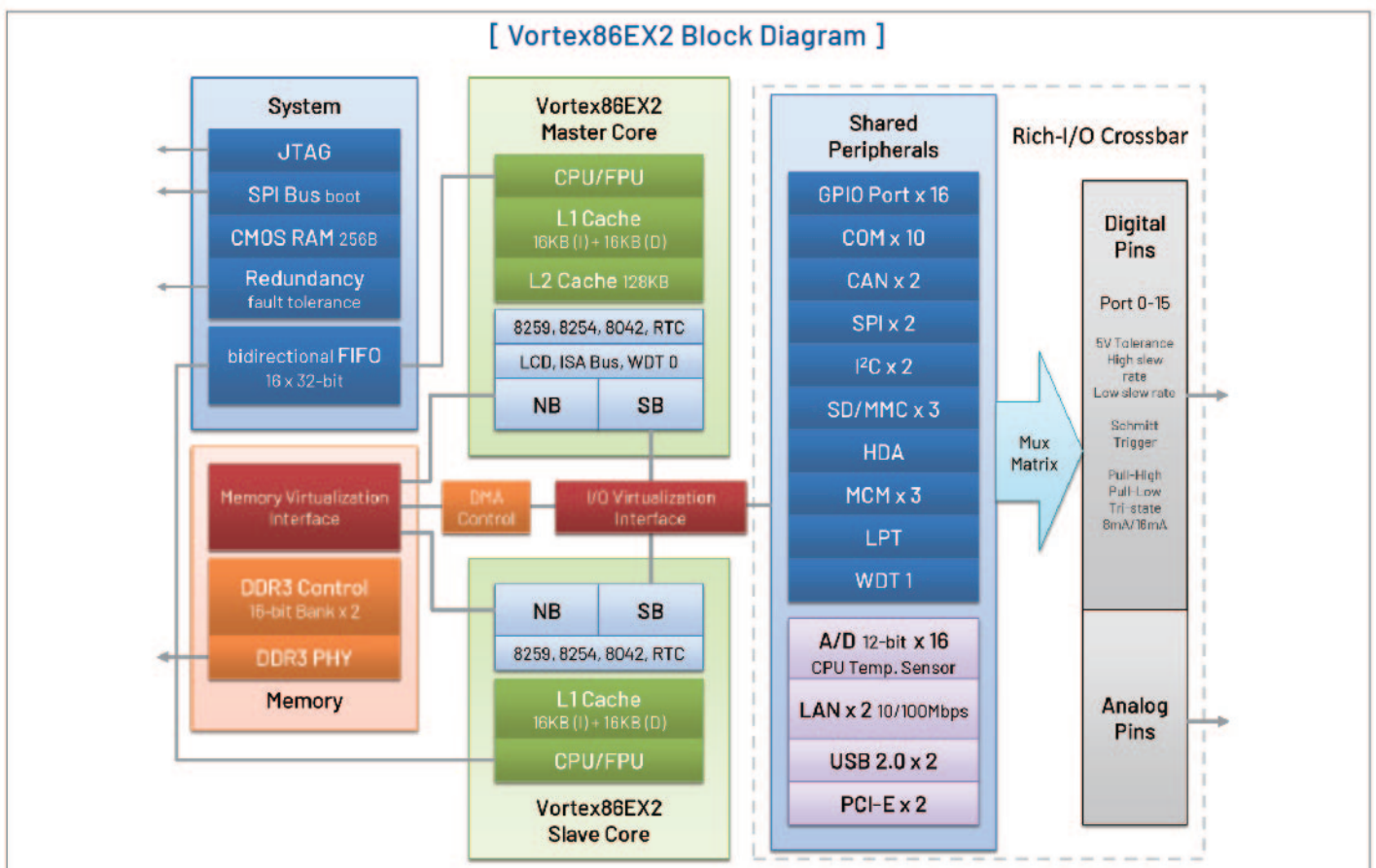
Code Name	NXP I.MX8M Mini			
Core	Cortex-A53 1.6GHz			
# of Cores	4	2	4	2
GPU	GCNono Ultra for 3D, GC320 for 2D			
VPU	Decode 1080p60, H.264, H.264 / Encode 1080p60, H.264			
RAM, LPDDR4	1GB / 2GB / 4GB			
eMMC	8 ~ 64GB, SLC . MLC			
OS Support	Yocto Linux, Android			
Working Temp.	-40 to 85°C	-40 to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



Vortex86 DX series includes the DX, DX2 and DX3. This family was originally designed for legacy x86 based applications that need traditional buses such as ISA, PCI, etc.; in the newest DX3 line, the system now utilizes an optional dual-core and also enriches the I/O interface, GPU, SATA and PCIe for legacy applications to take advantage of new technologies. The -40 to 85 °C wide temperature and 15+ year life cycle guarantee had consistently supported a variety of industrial applications for decades.



Vortex86 EX series includes the EX, EX2, and the upcoming EX3 in 2023. This tiny and low power consumption line of processors is equipped with a crossbar switch that allows for plenty of I/O for IoT, automation, and industrial applications. And for real-time applications, the current EX2 two-core CPU uses a Primary and Secondary core that can run different OS concurrently, making a system that can process in real-time while utilizing a dedicated CPU core.

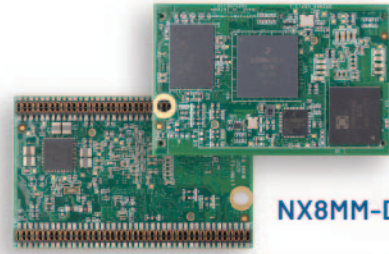


NX8MM Series

NX8MM series is ICOP's new series based on i.MX8M MINI ARM based solutions.

We provides the products such as:

1. System on Module - NX8MM-D168
2. 3.5" Development board - NX8MM-35
3. BOX PC - EBOX-IMX8MM
4. 9" Panel PC - PN8M-090T

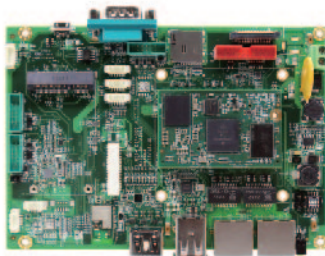


NX8MM-D168

NX8MM-35

3.5" full function development board

Page 12



PN8M-090T

9" IP65 front panel waterproof/dustproof PPC

Page 19



EBOX-IMX8MMINI

115 x 115mm VESA compatible compact PC

Page 25



What We Supports?



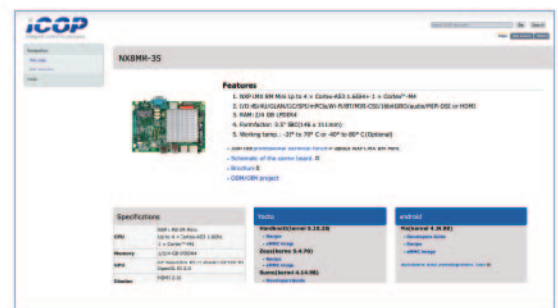
Software Support

android 

yocto
PROJECT



ICOP Wiki



(<https://wiki.icop.com.tw>)

ICOP's wiki site and one-stop service offer comprehensive support including detailed recipes, demo images, and patches for Yocto Linux, Android, and other platforms.



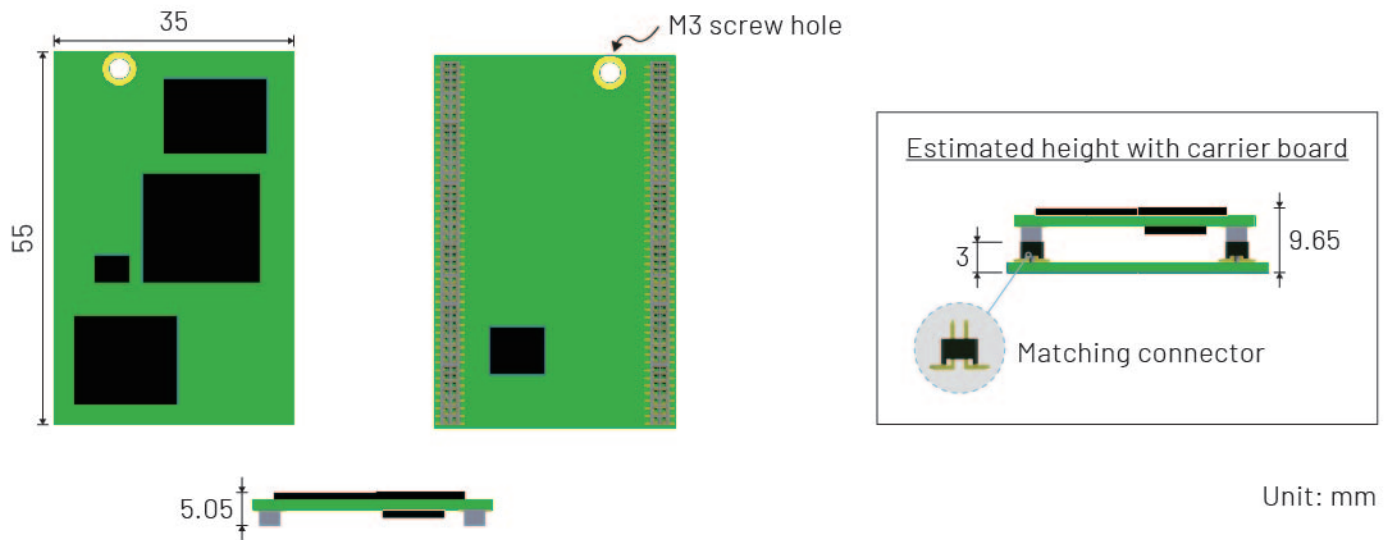
One-station Engineering Service



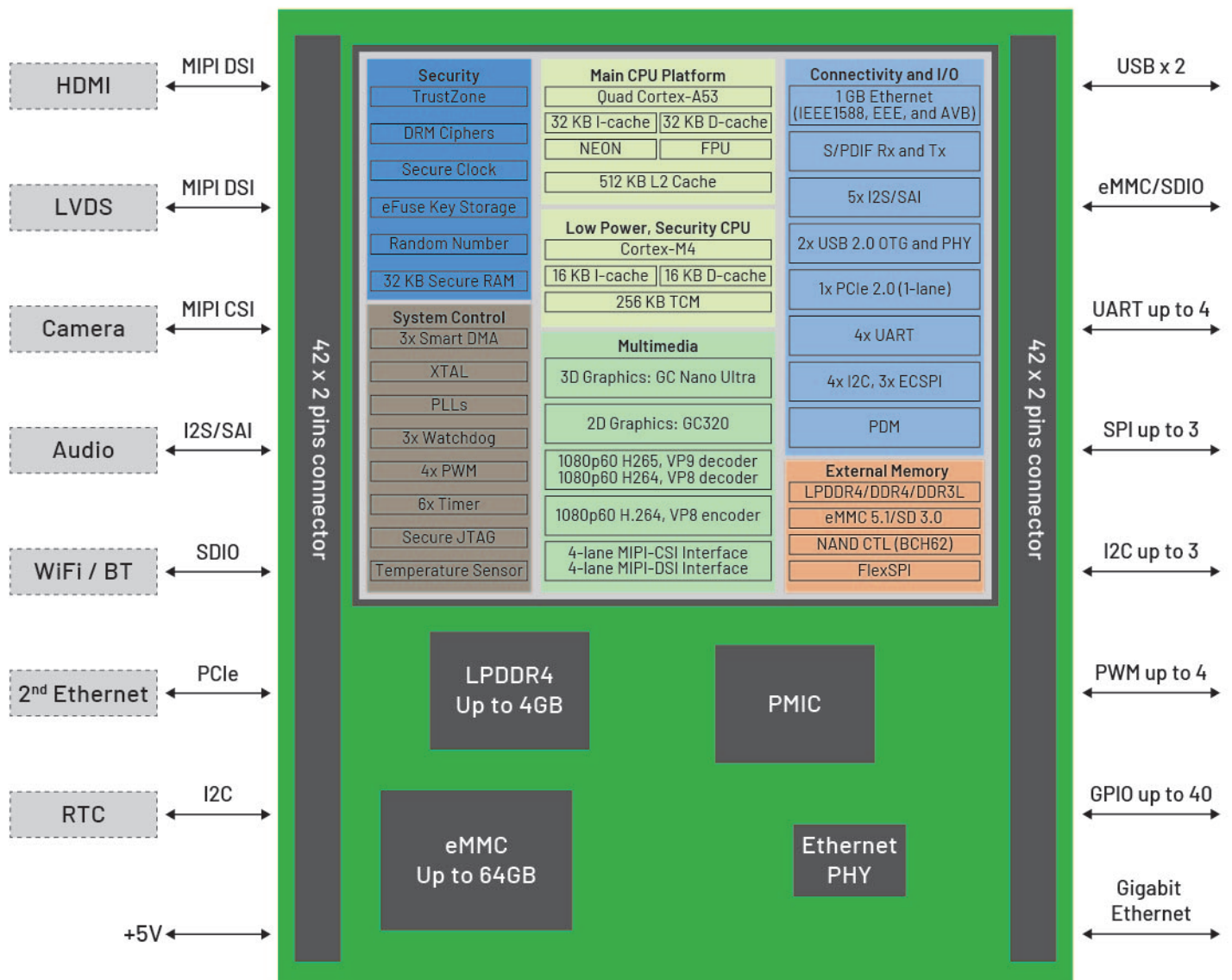
Solutions

ARM

Dimension



Block Diagram



Product Category



Embedded SBC

Based on the DM&P family SoC core Technology, ICOP can provide several series of Industrial SBCs and SOMs for different industrial applications and customer needs.

SoM-ICOP Proprietary | SoM-Standard | PC/104 SBC | 3.5" SBC | Tiny SBC | Half-size SBC | ITX Board



Industrial Panel PC

Support for touch panel sizes including 4.3", 5.7", 6.5", 7", 8.4", 9", 10.4", and 15", the ICOP Industrial PPC series offers flexible I/O expansion and a ruggedized design.

Panel PC Series | HMI Series | OpenFrame | LCD



Box PC

To satisfy the demands for different environments and applications, ICOP offers 3 series of Box PCs: ICE-104, iBPC and Mini PC.

Mini PC | ICE-104 | Embedded Barebone



QEC

The QEC device series, including the EtherCAT Master Device & Slave Controller, conform to standard EtherCAT protocol while promoting Arduino Style Programming and/or Block Coding.

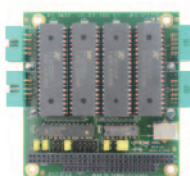
QEC-M | QEC-R | QEC-P



Flash Disk

ICOP's storage products offer a wider variety of interfaces for industrial embedded flash including SLC, MLC, and iSLC types. Storage sizes range from 512MB to 256GB.

IDE DOM | SATA DOM | SATA-Slim | mSATA | M.2 | Mini PCIe | CF cards



Peripheral

ICOP's line of peripherals are external additions to our products that allow for easy development by our customers and include items such as the DC-to-DC power module, PC/104 48-bit/24-bit digital I/O card, PC/104 RS232 x4 port card, etc.

Peripheral



Features



Working Temperature

With strong know-how and experience in designing embedded boards and modules, ICOP provides -40°C to $+85^{\circ}\text{C}$ CPU board option for industrial applications stationed in harsh environments.



Fanless Design

Fan malfunction and dust collection are failure points for critical applications. All ICOP products such as single board computer, touch panel computers, and small enclosure systems have a fanless standard by design.



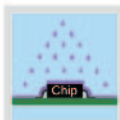
IP65 Waterproof

ICOP Touch Panel PC front panels are IP65 rated which meets demand for most applications and allows for specific outdoor and humid environments.



Shock & Vibration

All ICOP products feature excellent robustness; and with an ICOP solution, your applications can be deployed in harsh environments without worry. Shock & Vibration certifications are available for systems and panels online.



Coating Service

In-house conformal coating services are an option that provides additional protection for boards against a variety of hazards such as moisture, dust, salt, chemicals, temperature changes, and mechanical abrasions.



15+ Year Life Cycle

With extensive ERP knowledge and support by group member DMP Electronics, ICOP can maintain and commits to providing long-life products by supplying the product for 15 years from launch.



Variety of OS Support

The demand for legacy OS always exist for its high stability. ICOP is currently the only vendor with the ability to offer support for legacy DOS, Windows CE, and Windows 7/10. Mainstream Linux distributions and Real Time Operating Systems are also supported.



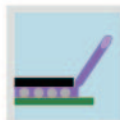
Budget

By taking advantage of the Vortex86 System-on-Chip which builds in most of the required I/O functions without using extra I/O ICs, ICOP is able to provide low BOM item products to avoid shortages and providing products at budgetary price points.



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.



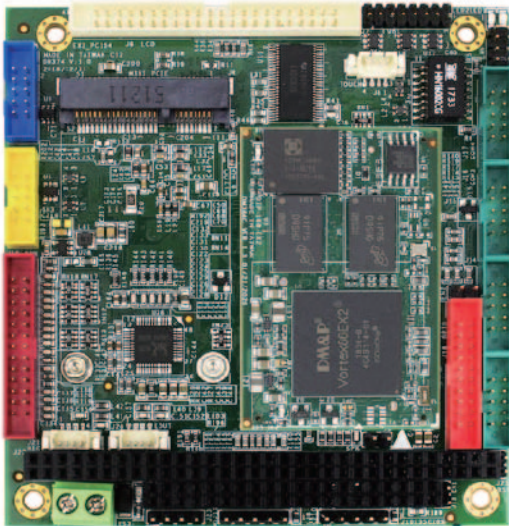
Underfill Service

In-house underfill service options provide protection for boards against dropping, scrolling, vibration, and collision during delivery and operation.

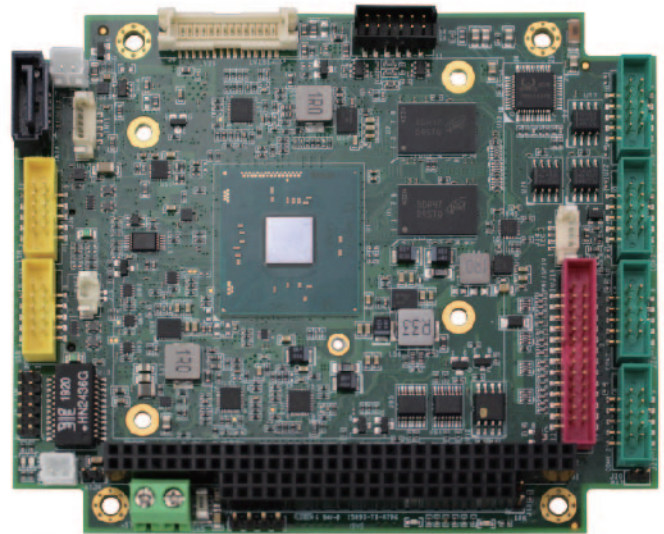


PC/104

- **CPU** : Intel Braswell Family / DMP Vortex86
- **Operating Temp.** : -40 ~ +85°C Max.
- **Features** : 16-bit full ISA support
 - Fanless
 - 10 years life cycle



■ **Size** : 90 x 96mm



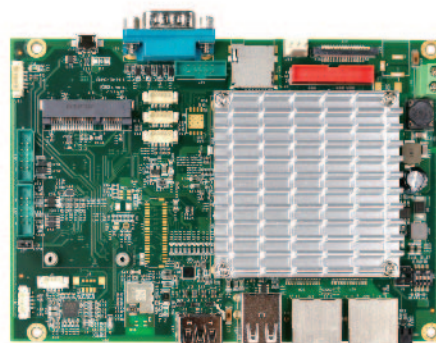
■ **Size** : 116 x 96mm

Part No.	CPU	RAM	Storage	I/O
IBW-6954	Pentium® N3710 Atom® x5-E8000 Celeron® N3160	4GB	SATA	4S/4U/GLAN/LPT/I ² C/Audio/ mPCIe/16GPIO/HDMI/VGA/LVDS
VEX2-6454-2C4INE	Vortex86EX2-600MHz	1GB	Micro SD/eMMC	2S/2U/LAN/LPT/Audio/mPCIe/ VGA/LCD/LVDS
VEX2-6454-4C4NE	Vortex86EX2-600MHz	1GB	Micro SD/eMMC	4S/2U/LAN/LPT/Audio/mPCIe/ 16GPIO/VGA/LCD/LVDS
VDX3-6754-V2-2G	Vortex86DX3-1GHz	2GB	SATA	4S/2U/LAN/LPT/Audio/16GPIO/ VGA/LCD/LVDS
VDX3-6754-V2-2C-2G	Vortex86DX3-Dual Core -1GHz	2GB	SATA	4S/2U/LAN/LPT/Audio/16GPIO/ VGA/LCD/LVDS
VDX3-6754S-V2	Vortex86DX3-600MHz	256MB	SATA	4S/2U/LAN/LPT/16GPIO/ VGA/LCD/LVDS
VDX3-6755-2G	Vortex86DX3-1GHz	2GB	SATA	3S (isolated)/2U/GLAN/LAN/ CAN(Optional)/VGA/LVDS
VDX3-6755-2C-2G	Vortex86DX3-Dual Core -1GHz	2GB	SATA	3S (isolated)/2U/GLAN/LAN/ CAN(Optional)/VGA/LVDS
NAD11-103-SD	Vortex86DX2-800MHz	256MB	SD	4S/4U/LAN/I ² C/VGA/LCD/LVDS

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

3.5" SBC

- **CPU** : Intel Braswell Family / Intel Apollo Lake Family / DMP Vortex86
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 102 x 146mm
- **Features** : 10 COM
Fanless
10 years life cycle

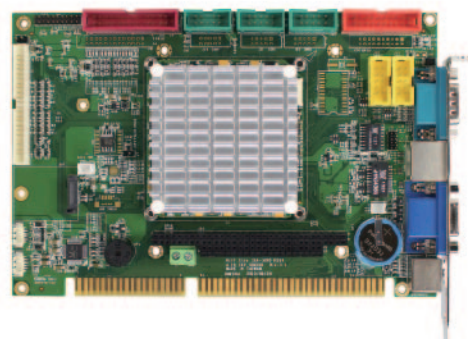


Part No.	CPU	RAM	Storage	I/O
NX8MM-35	NXP I.MX8M MINI Quad Core 1.6GHz	2GB/4GB Max.	eMMC/SD	3S/3U/HDMI(MIPI-DSI)/MIPI-CSI/ Audio/mPCIe/GLAN/WIFI/BT
IBW-35	Pentium® N3710 Atom® x5-E8000 Celeron® N3160	4GB	mSATA/SATA	4S/6U/2GLAN/I²C/Audio/mPCIe/ 16GPIO/HDMI/VGA/LVDS
APL-35	Celeron® N3350 Pentium® N4200 Celeron® J3455	8GB Max.	M.2 SATA/SATA	6S/6U/2GLAN/I²C/Audio/mPCIe/ 8GPIO/2DP/eDP
VEX2-6427-10C4VNE	Vortex86EX2-600MHz	1GB	Micro SD/SD/ eMMC	10S/4U/LAN/2CAN/2I²C/Audio/ mPCIe/VGA/LCD/LVDS
VDX3-6726-V2-2G	Vortex86DX3-1GHz	2GB	SATA	4S/4U/2GLAN/LAN/LPT/ Audio/16GPIO/VGA/LVDS
VEX-6225-43VE	Vortex86EX-400MHz	512MB	Micro SD/SATA	2S/2U/LAN/CAN/I²C/ mPCIe/8ADC/VGA/LCD

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

Half-size SBC

- **CPU** : DMP Vortex86
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 187 x 122mm
- **Features** : 16-bit full ISA support
PCI support
Fanless
10 years life cycle

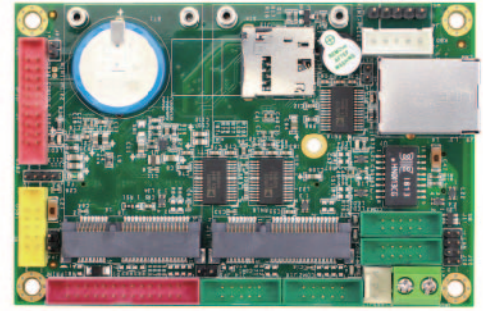


Part No.	CPU	RAM	Storage	I/O
VDX3-6724-V2-2G	Vortex86DX3-1GHz	2GB	SATA	4S/4U/GLAN/LAN/LPT/Audio/ 16GPIO/VGA/LCD/LVDS
VDX3-6724-V2-CF-2G	Vortex86DX3-1GHz	2GB	CF/SATA	4S/4U/GLAN/LAN/Audio/ VGA/LCD/LVDS
VDX3-PCI-7S5E	Vortex86DX3-1GHz	2GB	IDE/CF/SATA	2S/2U/GLAN/Audio/ VGA/LVDS
VDX3-PCI-7S4E	Vortex86DX3-1GHz	1GB	IDE/CF/SATA	2S/2U/GLAN/Audio/ VGA/LVDS
VDX-6324RD	Vortex86DX-800MHz	512MB Max.	Micro SD/SATA	4S/4U/LAN/LPT/16GPIO/ VGA/LCD

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

Tiny SBC

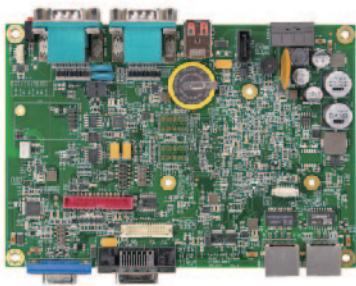
- **CPU** : DMP Vortex86
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 100 x 66mm
- **Features** : Compact design
Fanless
10 years life cycle



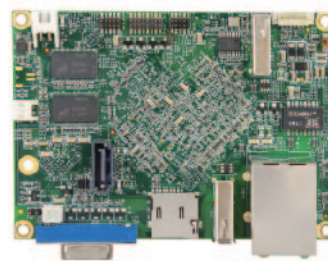
Part No.	CPU	RAM	Storage	I/O
VEX2-6415-4C4NE	Vortex86EX2-600MHz	1GB	Micro SD/eMMC	4S/2U/2LAN/LPT/Audio/ 2mPCIe/16GPIO
VEX2-6415-4C3NE	Vortex86EX2-600MHz	512MB	Micro SD/eMMC	4S/2U/2LAN/LPT/Audio/ 2mPCIe/16GPIO
VDX2-6518-1G-SD	Vortex86DX2-800MHz	1GB	SD	4S/2U/LAN/LPT/8GPIO/ VGA/LVDS
VDX-6318RD	Vortex86DX-800MHz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

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

ITX Board



VDX3-EITX
■ Size : 170 x 120mm



VDX3-PITX
■ Size : 100 x 72mm

Part No.	CPU	RAM	Storage	I/O
APL-PITX	Celeron® N3350 Pentium® N4200	8GB Max.	M.2 SATA/SATA	2S/4U/GLAN/Audio/mPCIe/ 8GPIO/HDMI/LVDS
VDX3-PITX-7S5E1	Vortex86DX3-1GHz	2GB	Micro SD/SATA	4U/LAN/Audio/16GPIO/ 8ADC/VGA
VDX3-EITX-7S5E1	Vortex86DX3-1GHz	2GB	CF/SATA	3S/6U/GLAN/LAN/CAN/Audio/ VGA/LVDS

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

ETX Module | ETX®

- CPU : DMP Vortex86
- Operating Temp. : -40 ~ +85°C Max.
- Size : 95 x 144mm
- Features : 16-bit full ISA support
PCI support
Fanless
10 years life cycle



Part No.	CPU	RAM	Onboard Storage	I/O
VDX3-ETX-74IE-V2	Vortex86DX3-1GHz	1GB	SATA	2S/4U/LAN/I ² C/Audio/IDE/VGA/LCD
VDX3-ETX-74LE-V2	Vortex86DX3-1GHz	1GB	SATA	2S/4U/LAN/LPT/I ² C/Audio/VGA/LCD
VDX3-ETX-75IE-V2	Vortex86DX3-1GHz	2GB	SATA	2S/4U/LAN/I ² C/Audio/IDE/VGA/LCD
VDX3-ETX-75LE-V2	Vortex86DX3-1GHz	2GB	SATA	2S/4U/LAN/LPT/I ² C/Audio/VGA/LCD

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

EBM

- CPU : Intel Braswell Family / Intel Apollo Lake Family
- Operating Temp. : 0 ~ +60°C Max.
- Size : 101.6 x 111.5mm
- Features : Fanless
10 years life cycle

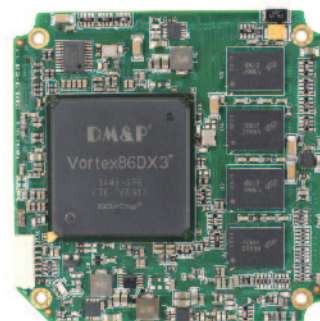


Part No.	CPU	RAM	Storage	I/O
APL-U	Celeron® N3350 Celeron® J3455	8GB Max.	M.2 SATA/SATA	1S/5U/2GLAN/Audio/2mPCIe/ 8GPIO/HDMI/VGA
IBW-U	Pentium® N3710 Atom® x5-E8000 Celeron® N3160	8GB Max.	Micro SD/SATA	2S/4U/2GLAN/Audio/ M.2 2230 E-key/HDMI

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

SOM304 Module

- **CPU** : DMP Vortex86
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 70 x 70mm
- **Features** : 16-bit full ISA support
PCIe support
Fanless
10 years life cycle

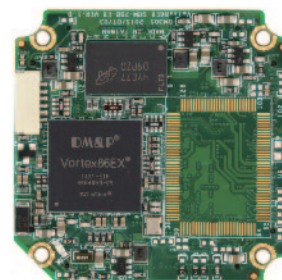


Part No.	CPU	RAM	Onboard Storage	I/O
SOM304D375EINE1-HS	Vortex86DX3-1GHz	2GB	N/A	4U/LAN/2PCIe/SATA/ISA/VGA/ 11 Configurable I/O Ports/LCD

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

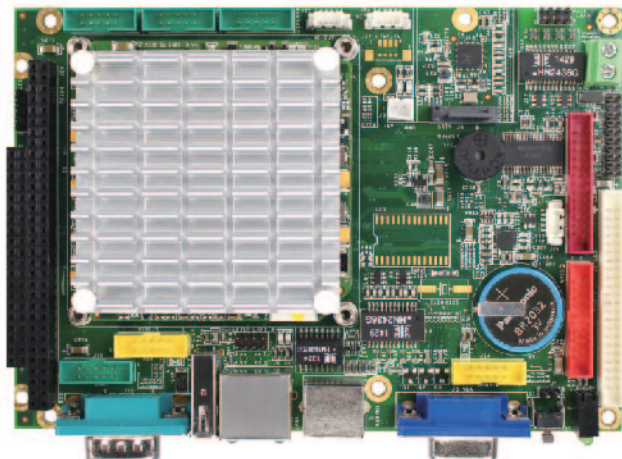
SOM200 Module

- **CPU** : DMP Vortex86EX
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 52 x 52mm
- **Features** : Maximum 10 configurable I/O ports
16-bit x-ISA support
PCIe support
Fanless
10 years life cycle



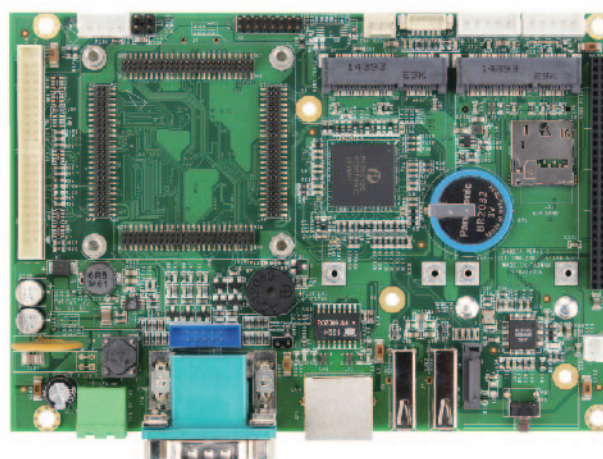
Part No.	CPU	RAM	Onboard Storage	I/O
SOM200EX43VGNE1	Vortex86EX-400MHz	512MB	N/A	2S/LAN/8ADC/SATA/ 10 Configurable I/O Ports/VGA
SOM200EX43EGNE1	Vortex86EX-400MHz	512MB	N/A	2U/LAN/8ADC/PCIe/SATA/ 10 Configurable I/O Ports

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



VDX3-6726

- Development board for [SOM304D3](#)



VEX-6225

- Development board for [SOM200EX](#)

DIP-128 Module

- **CPU** : DMP Vortex86EX
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 45 x 28mm
- **Features** : Maximum 10 configurable I/O ports
16-bit x-ISA support
PCIe support
Fanless
10 years life cycle

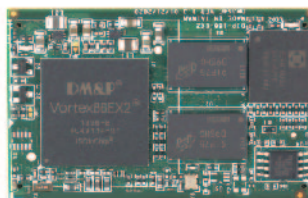


Part No.	CPU	RAM	Onboard Storage	I/O
VEX-SOM	Vortex86EX-400MHz	128MB	N/A	2U/LAN/8ADC/PCIe/SATA/ 10 Configurable I/O Ports
VEX-SOM-512	Vortex86EX-400MHz	512MB	N/A	2U/LAN/8ADC/PCIe/SATA/ 10 Configurable I/O Ports

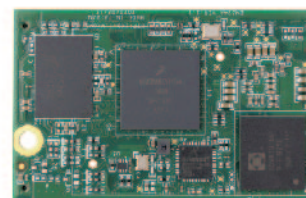
■ S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCIe=miniPCIe

DIP-168 Module

- **CPU** : NXP i.MX8M Mini / DMP Vortex86EX2
- **Operating Temp.** : -40 ~ +85°C Max.
- **Size** : 55 x 35mm
- **Features** : Maximum 15 configurable I/O ports
16-bit full ISA support
PCIe support
Fanless
10 years life cycle



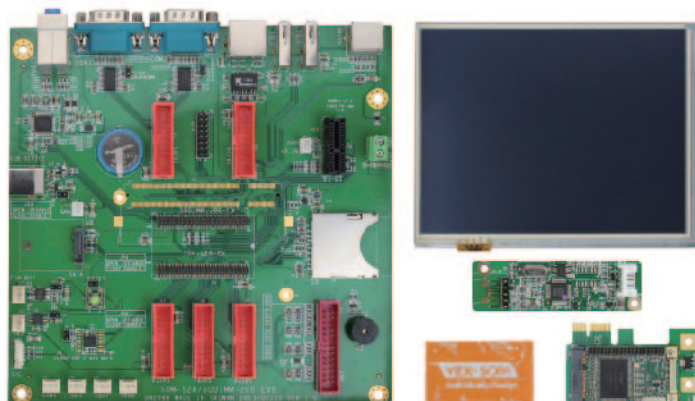
VEX2-DIP-168



N8MM-D168

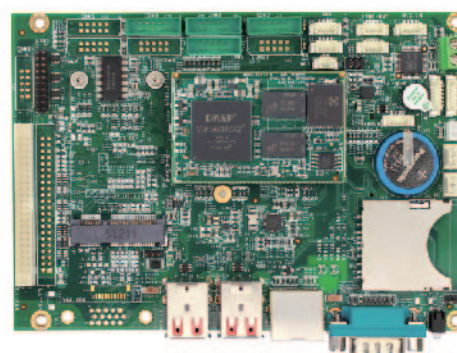
Part No.	CPU	RAM	Onboard Storage	I/O
NX8MM-D168	NXP i.MX 8M Mini Quad Core 1.6GHz	2GB Max.	Micro SD	4S/2U/GLAN/MIPI-CSI/4PWM/3I ² C /3SPI/3I ² S/20GPIO/PCIe/MIPI-DSI
VEX2-DIP-168-4ME1	Vortex86EX2-600MHz	1GB	Micro SD	2U/LAN/8ADC/2PCIe/ 15 Configurable I/O Ports
VEX2-DIP-168-4EE1	Vortex86EX2-600MHz	1GB	4GB eMMC	2U/LAN/8ADC/2PCIe/ 15 Configurable I/O Ports

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



VEX-IOT-DEV

- Development kit for VEX-SOM



VEX2-6427

- Development board for VEX2-DIP-168

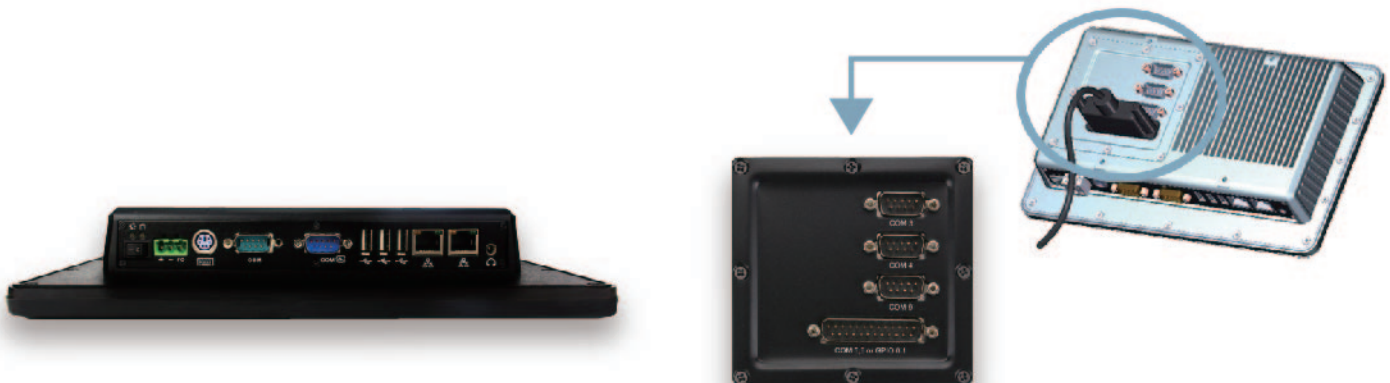
Rugged PPC Series

- 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
Display Size	9" WSVGA	10.4" SVGA		15" XGA
Max. Resolution	1024 x 600	800 x 600		1024 x 768
Luminance (cd/m ²)	300	500		350
Touch Screen	Analog Resistive/ Capacitive Touch Panel	Analog Resistive		Capacitive Touch Panel
CPU	Vortex86DX2-933MHz Vortex86DX3-1GHz (Dual core)			
System Memory	1GB/2GB			
I/O	2S/3U/LAN/GLAN/Audio			
Storage	CF Card/STAT SLIM/2GB Nand Flash Onboard			
Expansion I/O	PoE/COM x5/COM x3 + 16bit GPIO			
Power Requirement	+12VDC ~ 24VDC			
Operating Temp.	0 ~ 50°C / -20 ~ +60°C			
Dimension (WxHxD mm)	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
Certificate	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)			

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



■ Expansion I/O Ports
with Custom Design

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-EHL	PPC-104T-EHL	PPC-150T-EHL	PPC-150P-EHL
Display Size	9" WSVGA	10.4" SVGA		15" XGA
Max. Resolution	1024 x 600	800 x 600		1024 x 768
Luminance (cd/m ²)	300	500		350
Touch Screen	Analog Resistive/ Capacitive Touch Panel	Analog Resistive		Capacitive Touch Panel
CPU	Intel® Elkhart Lake J6412 Processor (Quad Core 2.0GHz)			
System Memory	8GB / 16GB / 32GB			
I/O	2S/USB3.1 x3/USB2.0 x3/2.5GbE x2 /HDMI x2/Audio			
Storage	M.2 M-key (2242/2280) PCIe Gen.3 x2/SATA Interface Support NVME			
Expansion I/O	M.2 B-key (3024) USB3.1/USB2.0 Interface & M.2 E-key (2230) USB2.0/PCIe Gen.3 x1 Interface			
Power Requirement	+12VDC ~ 24VDC			
Operating Temp.	0 ~ +50°C			
Dimension (WxHxD mm)	242.02 x 156.52 x 50.55	273.44 x 219.84 x 56.05	354.84 x 280.84 x 61.55	359.63 x 282.98 x 61.54
Sample & Certificate	CE, UKCA, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)(Avaliable on Q3, 2023)			

Model Name	PPC-090T-APL	PPC-104T-APL	PPC-150T-APL	PPC-150P-APL
Display Size	9" WSVGA	10.4" SVGA		15" XGA
Max. Resolution	1024 x 600	800 x 600		1024 x 768
Luminance (cd/m ²)	300	500		350
Touch Screen	Analog Resistive / Capacitive Touch Panel	Analog Resistive		Capacitive Touch Panel
CPU	Intel® Pentium® N4200 (Quad) Intel® Celeron® N3350 (Dual)			
System Memory	4GB/8GB			
I/O	2S/3U/LAN/GLAN/Audio			
Storage	M.2 2242 SATA M-key/2.5" SATA HDD / SSD			
Expansion I/O	mPCIe Slot x1 /HDMI 1.4 (as DUAL Display)			
Power Requirement	+12VDC			
Operating Temp.	0 ~ +60°C			
Dimension (WxHxD mm)	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 x 57.9
Certificate	CE, FCC, VCCI, Shock, Vibration, IP65 (Front Panel)			

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

Compact PPC Series

Support x86 platform of Intel® and DMP Vortex86 processors, and ARM platform of NXP iM8M Mini Cortex-A53 & Realtek RTD 1195 Cortex-A7 processors. 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	PEX-090T	PINT-090T-APL	PBSW-090T	PN8M-090T	PRTD-090T
	PDX2-057T	PDX2-090T				
	PDX3-057T	PDX3-090T				
Display Size	5.7" VGA		9" WSVGA			
Max. Resolution	640 x 480		1024 x 600			
Luminance (cd/m ²)	500		300			
Touch Screen	Analog Resistive		Analog Resistive/Capacitive Touch Panel			Analog Resistive
CPU	Vortex86EXm-400MHz Vortex86DX2-933MHz Vortex86DX3-1GHz		Pentium® N4200 Celeron® N3350	Atom® x5-E8000 Pentium® N3710 Celeron® N3160	NXP i.MX8M Mini 1.6GHz Cortex-A53 (Quad)	Realtek RTD1195-1.2GHz Cortex-A7
System Memory	1GB/2GB		4GB/8GB	4GB	1GB/2GB/4GB	1GB/2GB
I/O	1S/2U/LAN/Audio		2S/3U/LAN/ GLAN/Audio	1S/2U/GLAN/Audio		1S/2U/LAN/ Audio
Storage	Miro SD Slot / CF Card/ 2GB Nand Flash Onboard		M.2 2242 SATA M-key		16GB eMMC, Micro SD Slot	8GB eMMC Onboard
Expansion I/O	N/A		mPCIe Slot x 1 HDMI 1.4 x 1	mPCIe Slot x 1		N/A
Power Requirement	+5VDC / +8 ~ +35VDC		+12VDC	+12 ~ +36VDC	+5VDC / +12 ~ +36VDC	+5VDC / +8 ~ +35VDC
Operating Temp.	0 ~ +50°C / -20 ~ +60°C		0 ~ +60°C	0 ~ +50°C / -20 ~ +60°C	0 ~ +60°C / -20 ~ +70°C	
Dimension (WxHxD 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, VCCI, FCC, Vibration		CE, VCCI, FCC, 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 ²)	280	280
Touch Screen	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 RFIC	3 Configurable I/O Ports
Power Requirement	+7VDC ~ 24VDC	+5VDC
Operating Temp.	0 ~ +50°C / -20 ~ +60°C	-20 ~ +60°C
Dimension (WxHxD 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

■ S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCle=miniPCle

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 / WSVGA	6.5" VGA	8.4" SVGA	9" WSVGA	10.4" SVGA	15" XGA
Max. Resolution	800 x 480 / 1024 x 600	640 x 480	800 x 600	1024 x 600	800 x 600	1024 x 768
Luminance (cd/m ²)	400/500	800	250	300	300	350
Touch Screen	Analog Resistive					
CPU	Vortex86EX2 -600MHz / NXP i.MX8M Mini	Vortex86DX2-933MHz / Vortex86DX3-1GHz / Intel® Braswell x5-E8000 / N7310 / N3160 / 9" Support NXP i.MX8M Mini				
System Memory	1GB/2GB	1GB/2GB/4GB				
Storage	eMMC onboard / SD Slot	SATA / mSATA / eMMC onboard for NXP i.MX8M Mini only				
Expansion I/O	MiniPCle Slot					
Power Requirement	+12 ~ +36VDC	+5VDC & +12VDC / +12VDC / +12V~36VDC				
Operating Temp.	0 ~ +50°C / -20 ~ +60°C					

■ S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCle=miniPCle

iBPC Series

- **CPU** : DMP Vortex86DX3
- **Operating Temp.** : -20 ~ +70°C
- **Dimensions** : 151.7 x 103 x 53.3mm
- **Features** : Panel mounting available
Isolated GPIO
LVDS support
10 years life cycle



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

■ S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCle=miniPCle

EBOX-3362 Series

- **CPU** : DMP Vortex86DX3
- **Operating Temp.** : -20 ~ +70°C
- **Dimensions** : 115 x 115 x 35mm
- **Features** : 100 x 100mm VESA support
Compact design
Fanless design and DIN Rail rack
10 years life cycle



■ VESA Mount

■ Din-Rail rack

Part No.	CPU	RAM	Storage	I/O
EB-3362-L2851C3P-I	Vortex86DX3-1GHz	2GB Max.	SATA / SD	4S / 3U / GLAN / LAN / Line-out / mPCle / VGA
EB-3362-C2G2SIM-I	Vortex86DX3-1GHz	2GB Max.	SATA / SD	2S / 3U / LAN / Line-out / 16GPIO / mPCle / VGA
EB-3362-L2C2851G1E-I	Vortex86DX3-1GHz	2GB Max.	SATA	3S / 3U / GLAN / LAN / Mic-in / Line-out / 8GPIO / VGA

■ S=RS232/422/485; U=USB; GLAN=GigaLan; LPT=Printer; mPCle=miniPCle

D-3362 Series

- **CPU** : DMP Vortex86DX3
- **Operating Temp.** : -20 ~ +70°C
- **Dimensions** : 151.7 x 103 x 53.3mm
- **Features** : Fanless design
DIN Rail rack
10 years life cycle



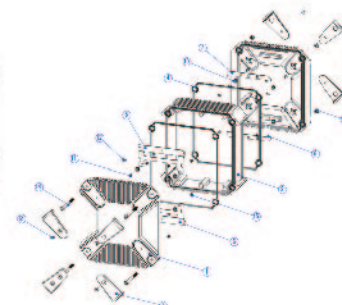
■ DIN Rail rack

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

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

ICE-104 Series

- **CPU** : DMP Vortex86DX3
- **Operating Temp.** : -100 ~ +80°C Max.
- **Dimensions** : 181.6 x 184.7 x 56.6mm
- **Features** : 100 x 100mm VESA support
IP67 dust&water design enclosure
Support PC/104 form factor
Customizable I/O ports configuration services

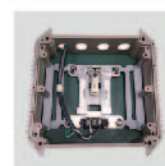
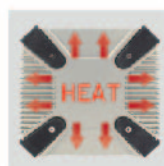


Part No.	CPU	RAM	Storage	I/O
ICE-6754-DC	Vortex86DX3-1GHz	2GB Max.	SATA	3S / 2U / 16GPIO / VGA

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

ICE-104 _ Passive Cooling Design / Active Warming System Design

- Heat flows through enclosure
- Active warming design form factor
- Works below freezing



ICE-104 _ Customizable Service & Function

- Company Logo engraving services
- Customizable I/O panels services
- Stackable Chassis system form



EBOX-335xDX3 Series

- **Operating Temp. :** 0 ~ +60°C / -20 ~ +70°C
- **Dimensions :** 95 x 95 x 20mm / 95 x 95 x 35mm
- **Features :** GLAN support
Fanless design
PXE Diskless Boot
Auto Power On support
75 x 75mm VESA support



Part No.	CPU	RAM	Storage	I/O
EBOX-335xDX3	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / LAN / Mic-in / Line-out / VGA
EBOX-335xDX3-GL	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / GLAN / Mic-in / Line-out / VGA
EBOX-335xDX3-W	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / LAN / Mic-in / Line-out / VGA
EBOX-335xDX3-GLW	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / GLAN / Mic-in / Line-out / VGA
EBOX-335xDX3-RCA	Vortex86DX3-1GHz	1GB 2GB	SATA / Mirco SD	3U / LAN / Mic-in / Line-out / VGA / mPCIe / HDMI / RCA jack

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

EBOX-335xDX3-C2 Series

- **Operating Temp. :** 0 ~ +60°C / -20 ~ +70°C
- **Dimensions :** 95 x 95 x 35mm
- **Features :** GLAN support
Dual RS-232 support
Fanless design
PXE Diskless Boot
Auto Power On support
75 x 75mm VESA support

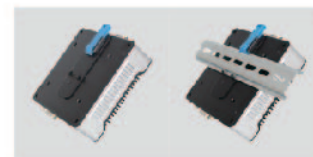


Part No.	CPU	RAM	Storage	I/O
EBOX-335xDX3	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / LAN / Mic-in / Line-out / VGA
EBOX-335xDX3 1G LAN	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / GLAN / Mic-in / Line-out / VGA
EBOX-335xDX3 Wide Temp.	Vortex86DX3-1GHz	1GB 2GB	SD	2S / 3U / LAN / Mic-in / Line-out / VGA
EBOX-335xDX3 1G LAN Wide Temp.	Vortex86DX3-1GHz	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

- **Operating Temp. :** 0 ~ +60°C / -20 ~ +70°C
- **Dimensions :** 115 x 115 x 35mm
- **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



Part No.	CPU	RAM	Storage	I/O
EB-336x HDMI	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 3U / GLAN / LAN / CAN / Mic-in / Line-out / mPCIe / HDMI
EB-336x RS-232	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 3U / GLAN / LAN / CAN / Line-out / mPCIe / 16GPIO / VGA
EB-336x RS-485	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 3U / GLAN / LAN / CAN / Mic-in / Line-out / mPCIe / 16GPIO / VGA
EB-336x RS-422	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 3U / GLAN / LAN / CAN / Line-out / mPCIe / 16GPIO / VGA

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

EBOX-336x Special Series

- **Operating Temp. :** 0 ~ +60°C / -20 ~ +70°C
- **Dimensions :** 115 x 115 x 35mm
- **Features :** Dual-core CPU All-in-One Module
Multiple LANs & 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

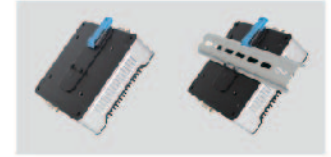


Part No.	CPU	RAM	Storage	I/O
EBOX-336x 4G LTE	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 3U / LAN / CAN / Line-out / mPCIe / 16GPIO / VGA
EBOX-336x GPIO	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 3U / GLAN / LAN / CAN / Line-out / mPCIe / 16GPIO / VGA
EBOX-336x Multi LAN	Vortex86DX3-1GHz	1GB 2GB	SATA / SD	4S / 4U / 2GLAN / LAN / CAN / Mic-in / Line-out / mPCIe / 16GPIO / VGA
EBOX-336x Special IO	Vortex86DX3-1GHz	1GB 2GB	SATA / CF / SD	3S / 3U / GLAN / LAN / LPT / Line-out / VGA

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

EBOX-IMX8MM Series

- **Operating Temp. :** 0 ~ +60°C / -40 ~ +80°C
- **Dimensions :** 115 x 115 x 35mm
- **Features :** 2GB / 4GB LPDDR4, 16GB eMMC onboard
Fanless design / DIN Rail rack
100 x 100mm VESA support
GLAN, RS-232 / 485
Auto Power On support

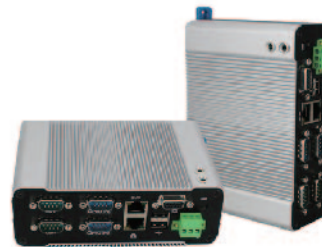


Part No.	CPU	RAM	Storage	I/O
EBOX-IMX8MM w/RS-232	NXP i.MX8M Mini Quad Core 1.6GHz	2GB 4GB	eMMC / Micro SD	2S / 3U / GLAN / Line-out / mPCIe / HDMI
EBOX-IMX8MM w/RS-485	NXP i.MX8M Mini Quad Core 1.6GHz	2GB 4GB	eMMC / Micro SD	2S / 3U / GLAN / Line-out / mPCIe / HDMI
EBOX-IMX8MM w/WiFi & BT	NXP i.MX8M Mini Quad Core 1.6GHz	2GB 4GB	eMMC / Micro SD	2S / 3U / GLAN / Line-out / mPCIe / HDMI
EBOX-IMX8MM w/RS-232, Dual LAN	NXP i.MX8M Mini Quad Core 1.6GHz	2GB 4GB	eMMC / Micro SD	2S / 3U / 2GLAN / Line-out / mPCIe / HDMI
EBOX-IMX8MM w/RS-485, Dual LAN	NXP i.MX8M Mini Quad Core 1.6GHz	2GB 4GB	eMMC / Micro SD	2S / 3U / 2GLAN / Line-out / mPCIe / HDMI
EBOX-IMX8MM w/WiFi & BT, Dual LAN	NXP i.MX8M Mini Quad Core 1.6GHz	2GB 4GB	eMMC / Micro SD	2S / 3U / 2GLAN / Line-out / mPCIe / HDMI

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

DIN PC-336x Series

- **Operating Temp. :** 0 ~ +60°C / -20 ~ +70°C
- **Dimensions :** 151.7 x 103 x 53.3mm
- **Features :** Dual-core CPU All-in-One Module
Fanless, DIN Rail support
GLAN, RS-232 / 485 / 422 / GPIO
PXE Diskless Boot
Auto Power On support



Part No.	CPU	RAM	Storage	I/O
D-336x-C2	Vortex86DX3-1GHz	1GB 2GB	SATA / SD (Internal)	2S / 2U / GLAN / LAN / VGA
D-336x-C4	Vortex86DX3-1GHz	1GB 2GB	SATA / SD (Internal)	4S / 2U / GLAN / LAN / VGA
D-336x-852C2	Vortex86DX3-1GHz	1GB 2GB	SATA / SD (Internal)	4S / 2U / GLAN / LAN / VGA
D-336x-852G2	Vortex86DX3-1GHz	1GB 2GB	SATA / SD (Internal)	2S / 2U / GLAN / LAN / 16GPIO / VGA
D-336x-C2G2A	Vortex86DX3-1GHz	1GB 2GB	SATA / SD (Internal)	2S / 2U / GLAN / LAN / Mic-in / Line-out / 16GPIO / VGA

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

EBOX Apollo Lake Series

- **Operating Temp. :** 0 ~ +60°C / -20 ~ +60°C
- **Dimensions :** 115 x 115 x 48.5mm
- **Features :** Multi-Display outputs
Multi-COM functions
Dual GLAN, Fanless
100 x 100mm VESA support
Full size and Half size mPCIe



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

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

EBOX Braswell Series

- **Operating Temp. :** 0 ~ +60°C
- **Dimensions :** 115 x 115 x 35mm
- **Features :** AMI UEFI BIOS (Legacy mode switchable)
M.2 2230 E Key support
GLAN, RS-232 / 485
100 x 100mm VESA support
Auto Power On support



Part No.	CPU	RAM	Storage	I/O
EB-58E w/RS-232	Atom® x5-E8000 Quad Core 1.04GHz	4GB 8GB	SATA / Micro SD	2S / 4U / GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58E w/RS-485	Atom® x5-E8000 Quad Core 1.04GHz	4GB 8GB	SATA / Micro SD	2S / 4U / GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58E w/RS-232, Dual LAN	Atom® x5-E8000 Quad Core 1.04GHz	4GB 8GB	SATA / Micro SD	2S / 4U / 2GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58E w/RS-485, Dual LAN	Atom® x5-E8000 Quad Core 1.04GHz	4GB 8GB	SATA / Micro SD	2S / 4U / 2GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58N w/RS-232	Celeron® N3160 Quad Core 1.6GHz	4GB 8GB	SATA / Micro SD	2S / 4U / GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58N w/RS-485	Celeron® N3160 Quad Core 1.6GHz	4GB 8GB	SATA / Micro SD	2S / 4U / GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58N w/RS-232, Dual LAN	Celeron® N3160 Quad Core 1.6GHz	4GB 8GB	SATA / Micro SD	2S / 4U / 2GLAN / Mic-in / Line-out / M.2 / HDMI
EB-58N w/RS-485, Dual LAN	Celeron® N3160 Quad Core 1.6GHz	4GB 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

QEC-EtherCAT Solutions

ICOP Technology provides a complete solution for EtherCAT – the QEC Series, which includes EtherCAT master motion controllers and EtherCAT slave modules (I/O, RS232/485, MPG, converters, motion control/drivers). With highly integrated hardware and software features, the QEC series supports a wide range of industrial automation applications and provides fast, simple, and often used/readily available functions while shortening development cycles. It can also build Database through MySQL library, which helps create smart IIoT technology.

Easily Develop EtherCAT

QEC supports the Arduino development environment, allowing project development processes to be accelerated with rich built-in examples and libraries and making system configuration streamlined through virtual programming tools and database libraries. This results in an easy, accelerated EtherCAT solution.



EtherCAT I/O



EtherCAT

EtherCAT

Stepper Motor Controller



HMI Editor



86EVA EtherCAT Configurator

Arduino Development Environment



ArduBlock Tools



SQL Database

EtherCAT Slave Device



Extender



MPG+RS232/485+LCM+Keypad



Servo Motor/Driver



QEC-M-01



Touch Panel Series
QEC-M-043T

4.3" LCD



Touch Panel Series
QEC-M-070T

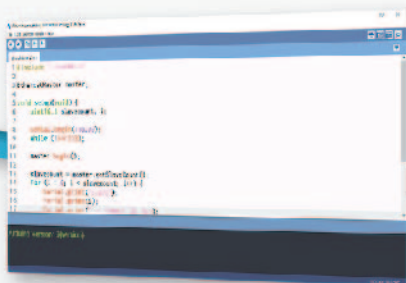
7" LCD



Touch Panel Series
QEC-M-090T

9" LCD

EtherCAT Master Device



86Duino IDE



Touch Panel Series
QEC-M-150T

15" LCD



Real-time & Reliability

- Synchronous motion control of up to 32 axes
- Minimum Communication Cycle 125us
- Motion Control Environment



Compatibility

- Support for Third-Party EtherCAT Slaves
- Offer ESI file



Easy Operation

- Arduino Development Environment
- HMI Resources & Tools
- Various Libraries & Examples



Service

- Professional Support Team
- HMI Customization Service
- ArduBlock Tool Collaboration Service

QEC-M, EtherCAT Master

The QEC-M series is an EtherCAT master control system based on the Vortex86EX2 processor, that provides two independent cores to meet the requirement of hardware and software real-time and reliable synchronous control.

The development environment uses industrial-Arduino software, 86Duino IDE, supporting a dedicated EtherCAT library and 3 graphical tools, which allows users to reduce development time and engineer threshold by using 86Duino IDE's rich built-in functions, examples, and libraries.

QEC-M-01

EtherCAT Master

Features

- Built-in integrated API dev
- Small-size, DIN-Rail, Simple Wiring
- User-friendly, Easy Install, Time Saving



QEC-M-043T

4.3-inch LCD

Features

- Support LVGL GUI graphics library
- HMI EtherCAT Master Solution
- Interactive User Interface



QEC-M-070T/090T

7-inch / 9-inch LCD

Open frame

EtherCAT Master

Features

- Full Arduino Pinout and Library
- Open Frame, Easy to embedded
- Powerful & Versatile EtherCAT Master



QEC-M-150T

15-inch LCD

Open frame

EtherCAT Master

Features

- 15" TFT 1024x768 Resistive Touch LCD
- Larger screen with Higher Resolution
- Can Adopt UI design from other QEC-M



QEC-R, EtherCAT Slave Modules

QEC-R00D0FD

16-ch Digital Output



Features

- Load Voltage Range: 24~56V DC
- Load Current: 1A
- Min. 1500 Vrms Optical Isolation
- Frequency Range up to 8KHz
- MOS-FET Relay

QEC-R00DF0S

16-ch Digital Input



Features

- Input Voltage Range: 24~56V DC
- Reverse Polarity Protection
- Min. 2000 Vrms Optical Isolation
- Frequency Range up to 8KHz
- Wire-break detection

QEC-R00HUAS

Human Interface Device



Features

- Support two standard RS232/485 (Easy change by Switch)
- Support MPG Hand-wheel
- Support Keypad + LCM
- LED indicators for status

QS00-RKI0GEDB

I2C/SPI Analog Input



Features

- Support SPI/I2C Interface
- 8-slot Customization Analog Input
- Vp/Vs Dual Isolated Power Input
- Multi-Color Terminal Blocks
- LED indicators for Analog status

QEC-R00MP3S

Stepper Motor Controller



Features

- 3 stepper motors, 2-phase bipolar
- Drive current up to 4.5A
- Encoder interfaces, differential
- 16 micro-steps per full step
- Automatic current reduction

QEC-R00UN01

LCD Touch Screen



Features

- Suitable Arduino Pin Assignment
- Support 2.5" and 3.5" TFT LCD
- Support Full Software API library
- Vp/Vs Dual Isolated Power Input
- LED indicators for I/O status

QEC-R00JT1S

Extender Junction



Features

- Handles efficient network traffic
- Distance up to 100 m
- Support daisy chain and star connection
- Vp/Vs Dual Isolated Power Input

QEC-R00JT3S

Fiber Optics Junction



Features

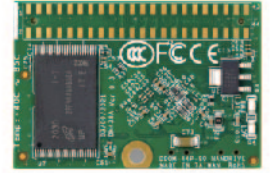
- Support Fiber Optic Connector
- Handles efficient network traffic
- Distance up to 20km
- Support daisy chain and star connection

Flash Disk

IDE DOM Series

DDOM-

Storage Capacity	Pins	Type	Working Temp.
DDOM-SST : 1G, 2G IDM : 512M-8G	44 : 44pin	HL : Horizontal Left H : Horizontal V : Vertical(Max 4GB)	None : 0 ~ 70°C X : -40 ~ 85°C

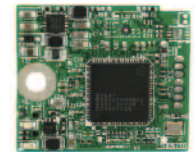


IDM-

SATA DOM Series

ISATA-

Storage Capacity	Type	Flash Type	Working Temp.
ISATA(S) : 1G-16G ISATA(M) : 8G-128G	H : Horizontal	S : SLC M : MLC	None : 0 ~ 70°C X : -40 ~ 85°C



SATA SLIM Series

ISATA-SLIM-

Flash Type	Storage Capacity	Working Temp.
M : MLC	8G-256G	None : 0 ~ 70°C X : -40 ~ 85°C



M.2 Series (SATA 2242 M key)

IM242S-

Storage Capacity	Flash Type	Working Temp.
SLC : 8G-64G MLC : 8G-256G	S : SLC M : MLC	None : 0 ~ 70°C X : -40 ~ 85°C



mSATA Series

IMSATA-

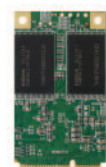
Storage Capacity	Flash Type	Working Temp.
SLC : 4G-128G MLC : 8G-256G	S : SLC M : MLC	None : 0 ~ 70°C X : -40 ~ 85°C



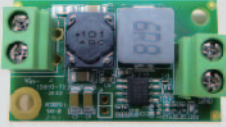
Mini PCIe DOM

IMPeDOM-

Storage Capacity	Flash Type
8G-128G	M : MLC IS : iSLC

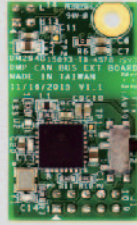


Peripheral



DCM

DC to DC power module



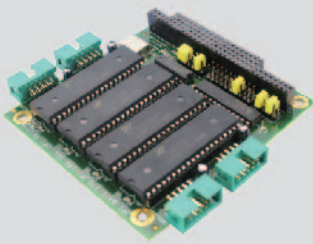
SERIALCAN

UART to CAN module



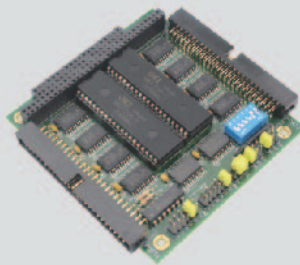
ICOP-0072

PC/104 DC to DC + 24-bit digital I/O card



ICOP-1800

PC/104 RS232 x 4 port card



ICOP-0101

PC/104 48-bit digital I/O card



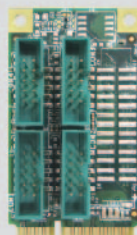
ICOP-0102

PC/104 24-bit digital I/O card



MINIPCIE-9160

Mini-PCle VGA card



MINIPCIE-4S

Mini-PCle to four RS232 card



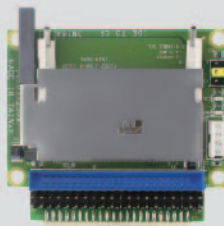
SD-1917

IDE (44pin) to Micro SD Controller



CF-1916

IDE (44pin) to Compact Flash Type I/II



CF-1915

IDE (44pin) to Compact Flash Type I/II



ICOP-0076

LAN Adapter Kit

Memo

Memo

ICOP Technology Inc.

No.15, Wugong 5th Rd, Xinzhuang Dist.,
New Taipei City 248020, Taiwan
新北市新莊區五工五路15號
URL : www.icop.com.tw
Email : info@icop.com.tw
Tel : +886-2-8990-1933
Fax : +886-2-8990-2045

ICOP Technology Inc. (USA)

177 South Brent Circle, City of Industry, CA 91789, U.S.A
URL : www.icoptech.com
Email : info@icoptech.com
Tel : +1-909-595-2333
Fax : +1-909-595-2331

ICOP Technology S. de R.L. de C.V. (Mexico)

Rio Lerma No.196 Int.301 Cuauhtémoc, C.P. 06500 CDMX
URL : www.icoptech.com
Email : info@icoptech.com
Teléfono: (55) 5207-2660
Móvil: 556818-1999
Ventas y Soporte Técnico:556319-7787

ICOP I.T.G. (Japan)

〒101-0021東京都千代田区外神田 6-16-9-8F
URL : www.icop.co.jp
Email : info@icop.co.jp
Tel : (03) 3831-6666
Fax : (03) 5846-6600

ICOP Technology GmbH (Germany)

Beethovenplatz 1-3, 60325 Frankfurt am Main, Germany
URL : www.icoptech.eu
Email : info@icoptech.eu
Tel : +49 (0) 69-2475-687-0
Fax : +49 (0) 69-2475-687-77

ICOP Technology Inc. (BeiJing)

北京市丰台区科技园区海鹰路6号院23号楼
URL : www.icop.com.cn
Email : sales@icop.com.cn
Tel : +86-10-6389-8777
Fax : +86-10-6526-8777

ICOP Technology Inc. (ShangHai)

上海市漕河泾高科技园区古美路1515号19栋902室
URL : www.icop.com.cn
Email : sales@icop.com.cn
Tel : +86-21-5445-1777
Fax : +86-21-5445-1767

ICOP Technology Inc. (ShenZhen)

深圳市龙华新区龙华街道和平路46号
金凤凰豪苑C栋303-306
URL : www.icop.com.cn
Email : sales@icop.com.cn
Tel : +86-755-2650-0777
Fax : +86-755-2650-5111

ICOP Technology Inc. (Xi'An)

西安市高新区(雁塔区)科技路48号创业广场A0502
URL : www.icop.com.cn
Email : sales@icop.com.cn
Tel : +86-29-8799-7777
Fax : +86-29-8799-7666



ICOP Technology Inc.

All trademarks appearing in this manuscript are registered trademark of their respective owners.

All specifications are subject to change without notice.

Copyright 2023 ICOP Technology Inc. All Right Reserved.

230524v1



ICOP Online Shop