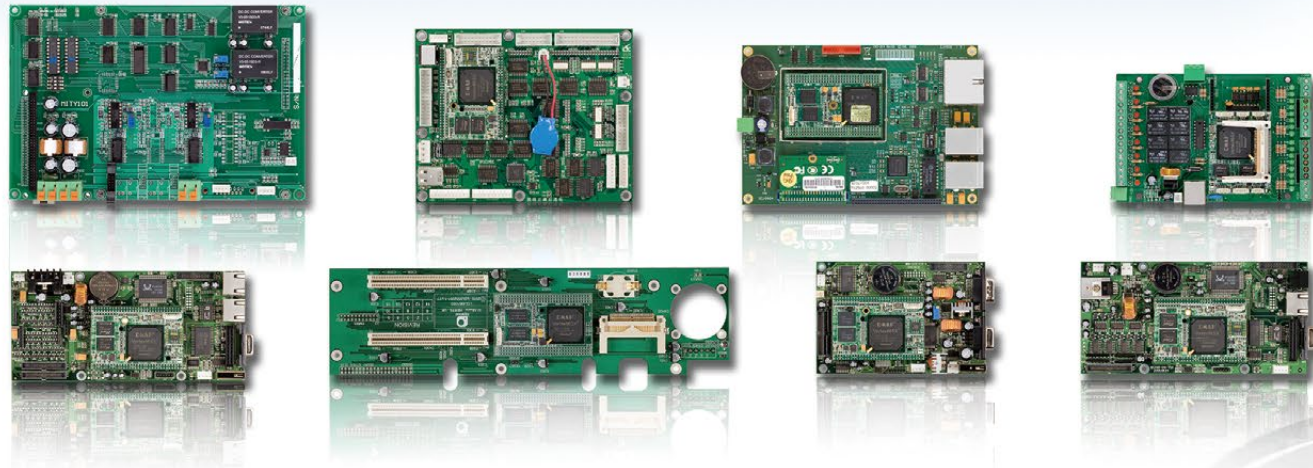


Beyond Limitation Of Embedded PC Design



Embed Your Needs With Your Own Design



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Individually Design

It's Easy, Efficient and Reliable

ICOP
intelligent control on processor



Vortex86MX+

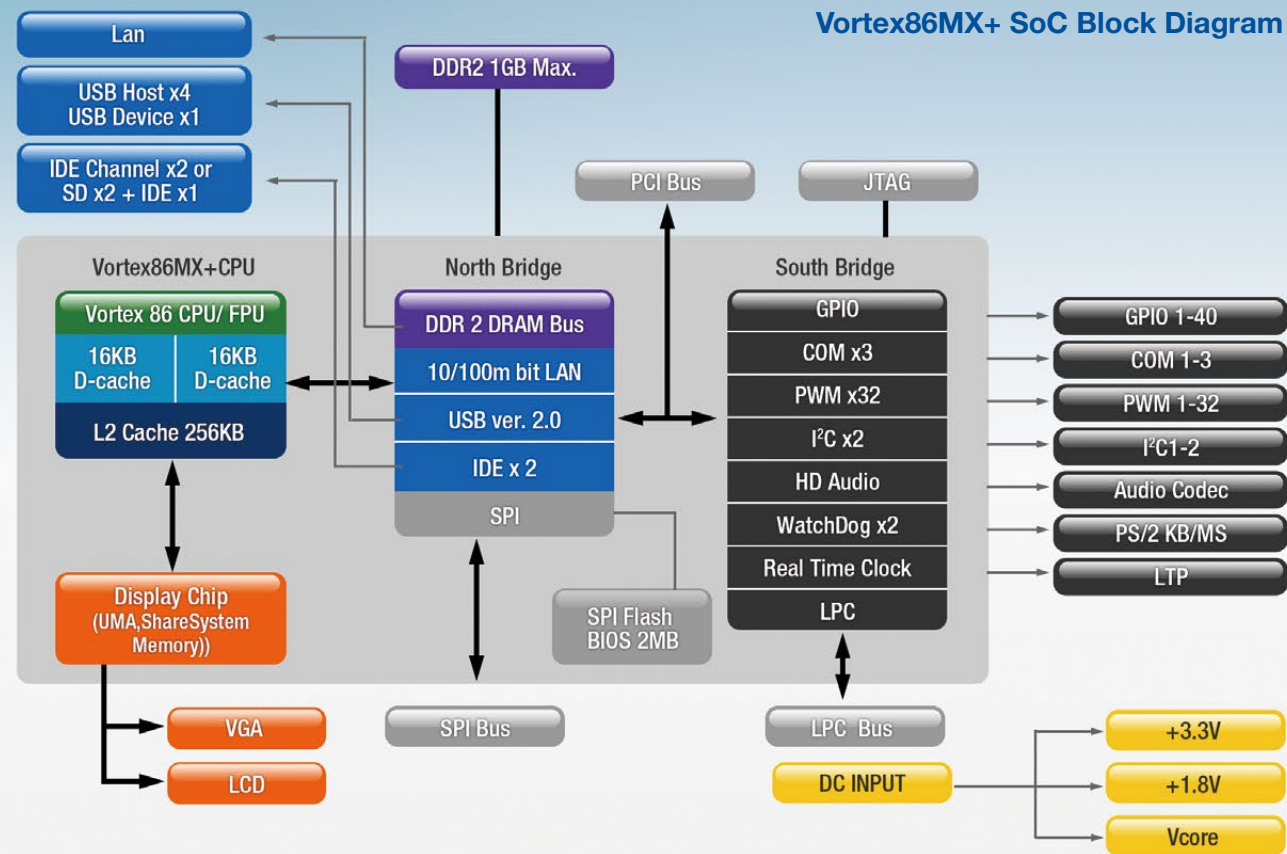
8000MHz

1G DDRIII



Vortex86MX+ integrates 32KB write through 4-way L1 cache, 256KB write through/write back 4-way L2 cache, PCI rev. 2.1 32-bit bus interface at 33 MHz, DDR2, ROM controller, IPC (Internal Peripheral Controllers with DMA and interrupt timer/counter included), Fast Ethernet, FIFO UART, USB2.0 Host and IDE controller within a single 720-pin BGA package to form a system-on-a-chip (SoC). It provides an ideal solution for the embedded system and communications products (such as thin client, NAT router, home gateway, access point and tablet PC).

Vortex86MX+ SoC Block Diagram



Vortex86DX2

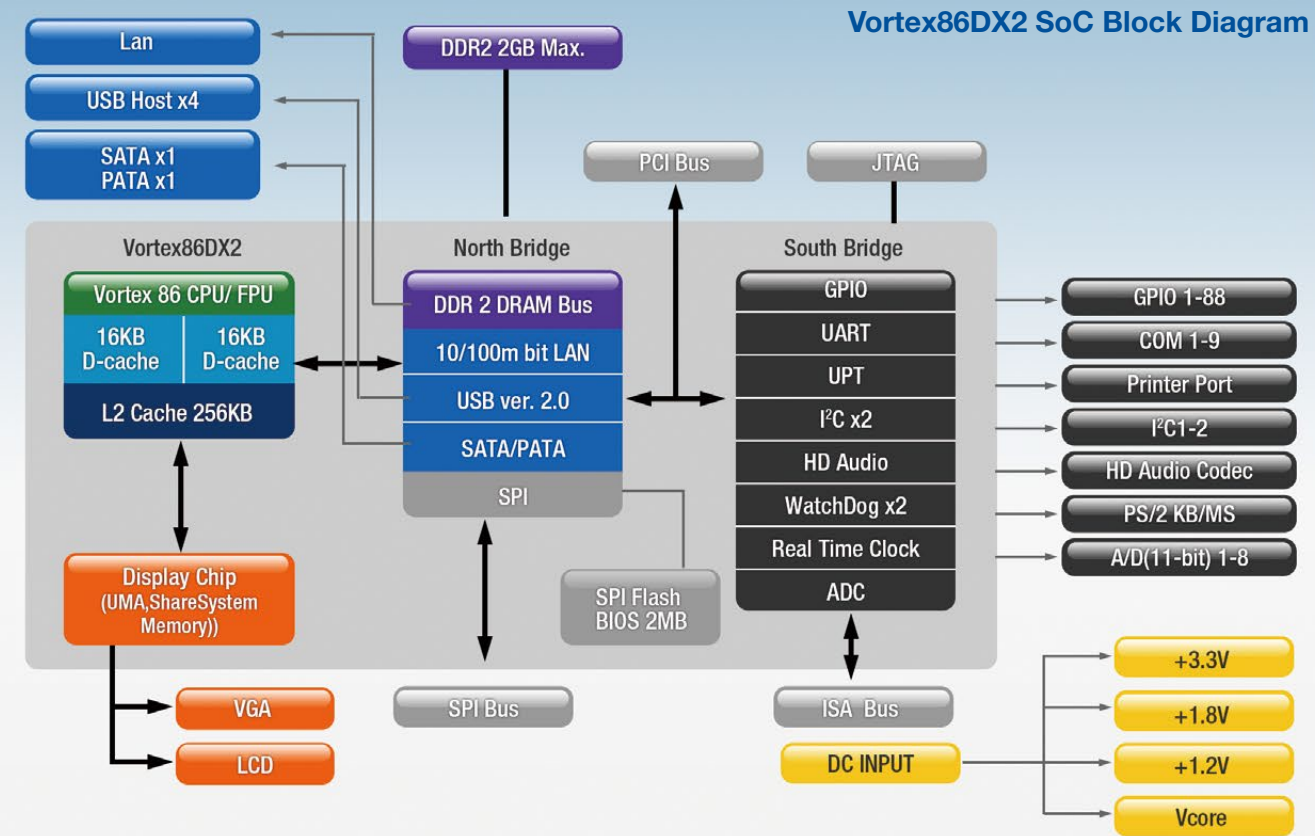
8000MHz

1G DDRIII



Other than the features Vortex86MX+ offers, there are many new features about this new family for example; Vortex86DX2 comes with ISA BUS, SATA DOM, PCI-E and 32 bit RAM bus and the best of all, Vortex86DX2 series is asking lower price than Vortex86DX series requires. Additionally, it performs as twice powerful as Vortex86DX, providing an ideal solution for the embedded system and communications products (such as thin client, NAT router, Motion control, home gateway, access point and tablet PC) to bring about desired performance.

Vortex86DX2 SoC Block Diagram



Current Product Line

DX2 Series

Current Product Line

MX+ Series



PC/104 CPU Module

VMXP-6453 Vortex86MX+ PC/104 CPU Module 512MB/3S/4USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/Printer/CF/LPC



3.5" CPU Cards

VMXP-6426 Vortex86MX+ PC/104 CPU Module 512MB/3S/4USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/Printer/CF/LPC

VMXP-6427 Vortex86MX+ 3.5" CPU Module 512MB/7S/3USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/Printer/CF/i



2.5" Tiny Module

VDX2-6518-1G-E Vortex86DX2 Tiny CPU Module 1G/4S/2USB/VGA/LCD/LVDS/LAN/eMMC/PWM

VDX2-6518-1G-S Vortex86DX2 Tiny CPU Module 1G/4S/2USB/VGA/LCD/LVDS/LAN/SD card slot/PWM



PC/104 CPU Module

VDX2-6554-512M Vortex86DX2 Tiny CPU Module 1G/4S/2USB/VGA/LCD/LVDS/LAN/eMMC/PWM

VDX2-6554-512M-T Vortex86DX2 PC/104 CPU Module 512MB/4S/2USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/PWMx16/T/S

VDX2-6554-1G Vortex86DX2 PC/104 CPU Module 1G/4S/2USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/PWMx16

VDX2-6554-1G-T Vortex86DX2 PC/104 CPU Module 1G/4S/2USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/PWMx16/T/S

NAD11-102 Vortex86DX2 (500MHz) PC/104 CPU Module 128MB/2S/2USB/VGA/LCD/LVDS/LAN/CF

NAD11-103 Vortex86DX2 (500MHz) PC/104 CPU Module 256MB/4S/4U/VGA/LCD/LVDS/LAN/TS/CH375



Half-Size CPU Cards

VDX2-6524-1G Vortex86DX2 Half-Size CPU Module 512M/4S/4USB/VGA/LCD/LVDS/2LAN/AUDIO/PWMx16

VDX2-6524-1G Vortex86DX2 Half-Size CPU Module 512M/4S/4USB/VGA/LCD/LVDS/2LAN/AUDIO/PWMx16



3.5" CPU Cards

VDX2-6526-512 Vortex86DX2 3.5" CPU Module 512M/4S/5USB/VGA/LCD/LVDS/3LAN/AUDIO/GPIO/PWMx16

VDX2-6526-1G Vortex86DX2 3.5" CPU Module 1G/4S/5USB/VGA/LCD/LVDS/3LAN/AUDIO/GPIO/PWMx16

Vortex86EX-disARMed

4000MHz

128MB DDRIII



VEX is the newest member of ICOP family with compact size and ultra low power consumption. It packs 16KB write through 4-way L1 cache, 128KB write through/write back 4-way L2 cache, 2.5Ghz PCI-E Bus, DDR3, ROM controller, xISA, I2C, SPI, IPC (Internal Peripheral Controllers with DMA and interrupt timer/counter included), Fast Ethernet, FIFO UART, USB2.0 Host, CAN, and SD/SATA controllers.

From the specification, one might think it runs at merely 400MHz; however, due to its pairing with DDRIII RAM gives it the equivalent calculating power to DX series. In addition, the distinguishing characteristics of Vortex86EX series such as lower price and extremely lower power consumption manifest it a great solution for relatively simple application such as data collection.

Vortex86EX ODM Service

Consulting

- Deliberate possible and desired lay out
- Designing

Prototype

- Hardware & Software verification
- Troubleshooting

Validation

- Pre-mass production check
- Final software & BIOS modification

Due to the unique features that EX series has, 88 reversible pins in according with customer's need, ICOP now offers the best ever opportunity for our customer to design their own system.

From the specification, one might think it runs at merely 400MHz; however, due to its pairing with DDRIII RAM gives it the equivalent calculating power to DX series. In addition, the distinguishing characteristics of Vortex86EX series such as lower price and extremely lower power consumption manifest it a great solution for relatively simple application such as data collection.

Based on the experience of designing x86 CPU, ICOP owns the valuable know-how that other SBC suppliers don't and further to apply this advantage in the early ODM stage such as CPU kernel modification with any essential software support.

ICOP understands how valuable the developing period is and how much it costs. Thus, ICOP is committed to offer our customer the prototype sample in 5 weeks since the confirmation day and another 4 weeks for mass production.

The current product line of EX series contains two boards: VEX-6252 & VEX 6254



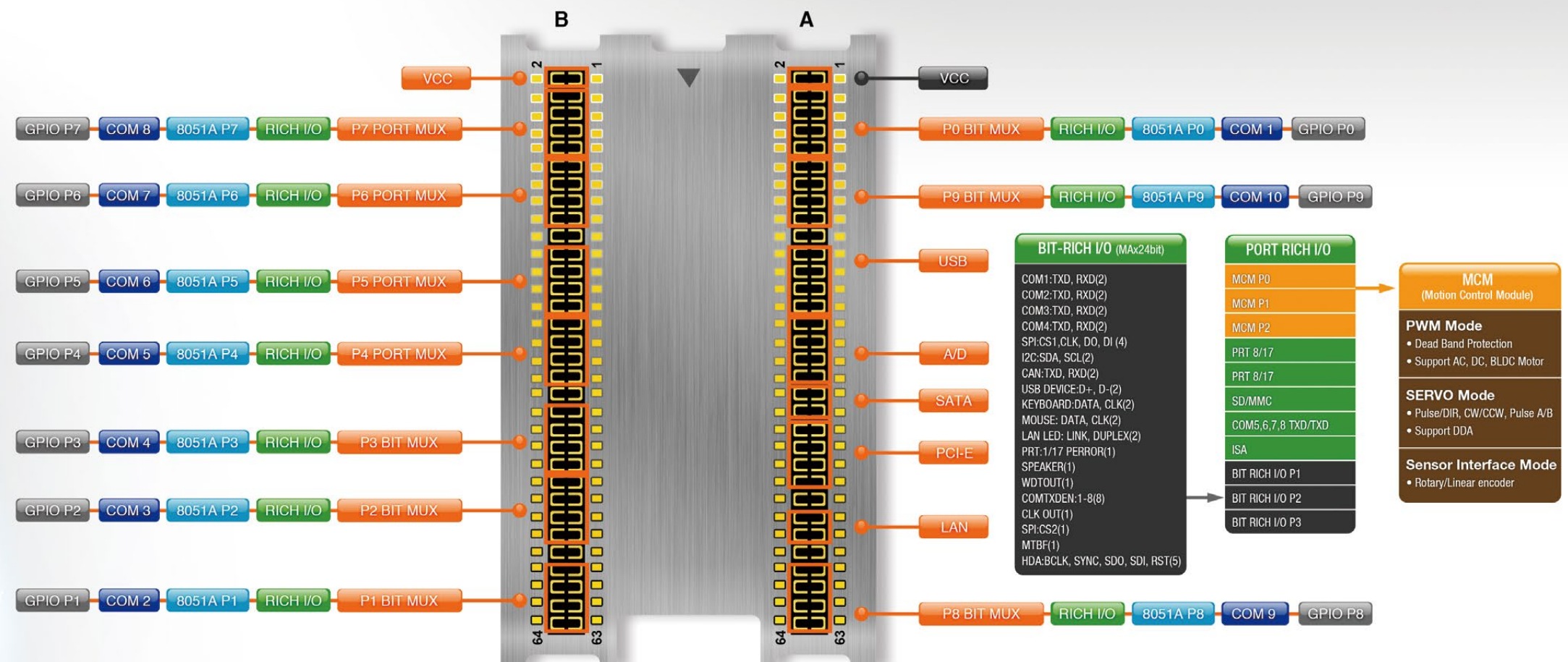
VEX-6254



VEX-6252

VEX-6253

SoC	DM&P SoC CPU Vortex86EX- 400MHz	DM&P SoC CPU Vortex86EX- 400MHz	DM&P SoC CPU Vortex86EX- 400MHz
Cache	L1:16K I-Cache, D-Cache, L2 Cache 128KB	L1:16K I-Cache, D-Cache, L2 Cache 128KB	L1:16K I-Cache, D-Cache, L2 Cache 128KB
System Memory	128MB DDR3 Onboard	128MB DDR3 Onboard	128MB DDR3 Onboard
Flash Disk Support	Onboard 4MB SPI Flash Disk Onboard eMMC 512MB (Optional) SD card slot (Optional) SATA 7pin connector	Onboard eMMC 512MB (Optional) SD card slot (Optional) SATA 7pin connector	Onboard 4MB SPI Flash Disk Onboard eMMC 512MB (Optional) SD card slot (Optional) SATA 7pin connector
LAN	Integrated 10/100Mbps Ethernet x1	Integrated 10/100Mbps Ethernet x1	Integrated 10/100Mbps Ethernet x1
I/O interface	4S/3USB/LAN/GPIO/I ² C/CAN BUS/AUDIO/AD/eMMC(or SD card slot)	8S/2USB/LAN/eMMC(or SD card slot)	1S/2USB/LAN/SATA/X-ISA
Power Requirement	Single Voltage +5V@400mA	Single Voltage +5V@380mA	Single Voltage +5V@400mA
Dimensions	96mm X 90.2mm (3.78 x 3.55 inches)	96mm X 90.2mm (3.78 x 3.55 inches)	96mm X 90.2mm (3.78 x 3.55 inches)
Operating Temperature	-20°C ~ +70 °C	-20°C ~ +70 °C	-20°C ~ +70 °C



Vortex86DX & Vortex86SX

Vortex86DX is a high performance (800MHz) and fully static 32-bit x86 based processor while Vortex86SX, on the other hand, is an ultra low power consumption 300MHz x86 based SoC. Besides the rich I/O these two CPU's have to offer, long term availability, legacy bus, support the Internet under DOS, wide temperature make the existing derivative products of these two CPU the best hassle-free upgrade solution for conventional system.



2.5" Tiny Module

VDX-6314RD	Vortex86DX Tiny CPU Module 256MB/4S/2USB/VGA/LVDS/LAN/GPIO/ PWMx16
VDX-6314RD-AU	Vortex86DX Tiny CPU Module 256MB/4S/2USB/VGA/LVDS/AUDIO/LAN/ GPIO/PWMx16
VDX-6315RD	Vortex86DX Tiny CPU Module 256MB/4S/2USB/LAN/2GPIO/PWMx24
VDX-6317RD-X	Vortex86DX Mity-Mite CPU Module 256MB/1S/LAN/GPIO/PWMx16
VDX-6318RD	Vortex86DX Tiny CPU Module 256MB/4S/4USB/VGA/LCD/AUDIO/ LAN/2GPIO/PWMx24
VSX-6114-V2	Vortex86SX Tiny CPU Module 128MB/4S/2USB/VGA/LVDS/LAN/GPIO
VSX-6115-V2	Vortex86SX Tiny CPU Module 128MB/4S/2USB/LAN/2GPIO
VSX-6116-V2	Vortex86SX Tiny CPU Module 128MB/2S/2USB/2GPIO
VSX-6117-X-V2	Vortex86SX Mity-Mite CPU Module 128MB/1S/LAN/GPIO
VSX-6118-V2	Vortex86SX Tiny CPU Module 128MB/4S/4USB/VGA/LCD/ LAN/2GPIO



PC/104 CPU Module

VDX-6353RD	Vortex86DX PC/104 CPU Module 256MB/4S/2USB/VGA/LCD/LVDS/LAN/GPIO/ CF/PWMx16
VDX-6354RD	Vortex86DX PC/104 CPU Module 256MB/4S/2USB/VGA/LCD/AUDIO/LAN/ GPIO/PWMx16
VDX-6350RDE	Vortex86DX PC/104 CPU Module 256MB/4S/2USB/LAN/GPIO/PWMx16
VDX-6358RD	Vortex86DX PC/104 CPU Module 256MB/4S/2USB/VGA/LCD/2LAN/GPIO/ PWMx16
VDX-6357RD	Vortex86DX PC/104 CPU Module 256MB/4S/2USB/VGA/LCD/3LAN/GPIO/ PWMx16
VDX-6356RD	Vortex86DX PC/104 CPU Module 256MB/4S/2USB/3LAN/GPIO/PWMx16
VDX-6372RD	Vortex86DX PC/104 CPU Module 600MHz 128MB/2S/2USB/VGA/LCD/GPIO/PWMx16
VSX-6153-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/VGA/LCD/LVDS/LAN/GPIO
VSX-6154-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/VGA/LCD/LAN/GPIO
VSX-6150-V2	Vortex86SX PC/104 CPU Module 128MB/2S/2USB/GPIO
VSX-6150E-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/LAN/GPIO
VSX-6155-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/VGA/LCD/AUDIO/LAN/ GPIO
VSX-6158-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/VGA/LCD/2LAN/GPIO
VSX-6157-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/VGA/LCD/3LAN/GPIO
VSX-6156-V2	Vortex86SX PC/104 CPU Module 128MB/4S/2USB/3LAN/GPIO



Processor Module

VDX-6300RD	Vortex86DX DIP 68pin CPU Module 256MB/4S/3USB/LAN/2GPIO/CF/ PWMx24
VDX-DIP-ISARD	Vortex86DX DIP-204pin-ISA CPU module 256MB/5S/4USB/LAN/2GPIO
VDX-DIP-PCIRD	Vortex86DX DIP-204pin-PCI CPU module 256MB/5S/4USB/LAN/2GPIO
VDX-6319RD-FB-D	Vortex86DX Mity-SoC CPU module 256MB/2S/USB/GPIO/SST-512MB
VSX-6100-V2	Vortex86SX DIP 68pin CPU Module 128MB/3S/2USB/LAN/GPIO/CF
VSX-6101-V2	Vortex86SX DIP 48pin CPU Module 128MB/4S/3USB/LAN/GPIO/CF
VSX-DIP-ISA-V2	Vortex86SX/DX DIP-204pin-ISA CPU module 128MB/5S/4USB/LAN/2GPIO
VSX-DIP-PCI-V2	Vortex86SX/DX DIP-204pin-PCI CPU module 128MB/5S/4USB/LAN/2GPIO
VSX-6119-FB-D-V2	Vortex86SX Mity-SoC CPU module 128MB/2S/USB/GPIO/SST-512MB



Half-Size CPU Cards

VDX-6324RD	Vortex86DX Half-Size CPU Module 256MB/4S/4USB/VGA/LCD/LAN/GPIO/ CF/PWMx16
VDX-6324RD-FD	Vortex86DX Half-Size CPU Module 256MB/4S/4USB/VGA/LCD/LAN/GPIO/ CF/FDD/PWMx16
VDX-6324RD-FDA	Vortex86DX Half-Size CPU Module 256MB/4S/4USB/VGA/LCD/AUDIO/ LAN/GPIO/CF/FDD/PWMx16
VSX-6124-V2	Vortex86SX Half-Size CPU Module 128MB/4S/4USB/VGA/LCD/LAN/GPIO
VSX-6121-V2	Vortex86SX Half-Size CPU Module 128MB/2S/4USB/GPIO
VSX-6124-FD-V2	Vortex86SX Half-Size CPU Module 128MB/4S/4USB/VGA/LCD/LAN/GPIO/ FDD
VSX-6121-FD-V2	Vortex86SX Half-Size CPU Module 128MB/2S/4USB/GPIO/FDD

Box PC

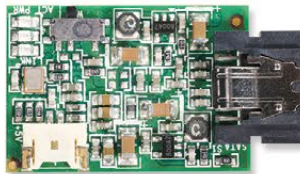
ICOP offers a new rugged embedded metal designed PC/104 system which features fanless, wide temperature and anti-vibration.



eBox

eBox-104-DX2	Vortex86DX2 1GB/4S/2USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/PWMx16
eBox-104-MX+	Vortex86MX+ 1GB/3S/4USB/VGA/LCD/LVDS/AUDIO/LAN/GPIO/CF/PWMx16
eBox-104-DX	Vortex86DX 512MB/4S/2USB/VGA/LCD/AUDIO/LAN/GPIO/PWMx16

SATA-DOM



SLC SATA-DOM

SST series	ICOP provides wide temperature SLC SST from 2G to 8G
ISATA series	ICOP provides SLC ISATA from 1G to 16G with wide temperature optional

MLC SATA-DOM

ISATA series	ICOP provides MLC ISATA from 4G to 32G with wide temperature optional
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