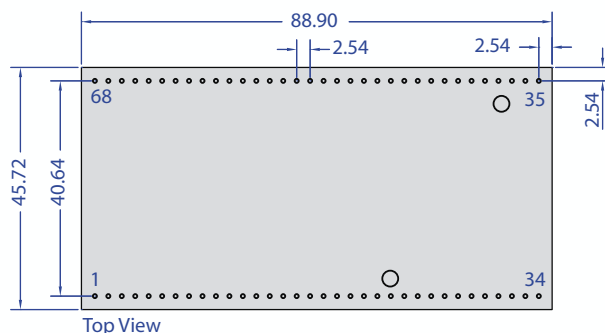
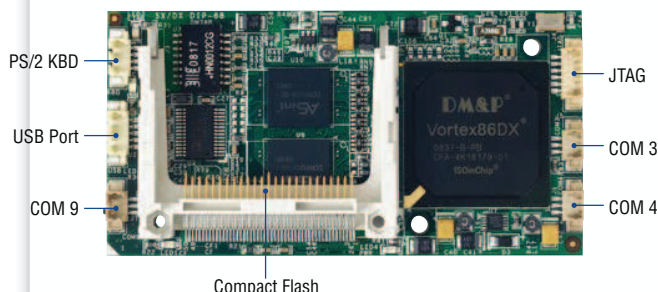


Processor Module

are designed as the kernel of customer own application, which integrates the DM&P SoC CPU, onboard DDR2, BIOS and multi I/O.



VDX-6300	Vortex86DX DIP 68pin CPU Module 256MB/3S/USB/LAN/CF	24
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Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86DX- 800MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache L2 Cache 128KB
BIOS	AMI BIOS
System Memory	256/512MB DDR2 Onboard
Watchdog Timer 0 & 1 Sets	Software programmable from 30.5μ sec.to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Compact Flash Type I/II Onboard 4MB SPI Flash Disk
PWM	24 Channels
I/O Interface	RS-232 port x4 (TX/RX x3) USB port (Ver2.0) x3 10/100Mbps Ethernet port x1
Connectors	1.25mm 3-pin wafer for RS-232 x3 1.25mm 5-pin wafer for USB x1 1.25mm 4-pin wafer for Keyboard x1 1.25mm 6-pin wafer for JTAG x1 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V @ 380mA
Weight	28g
Board Size	90 x 46mm (3.54 x 1.81 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

- VDX-6300 x1

Ordering Information

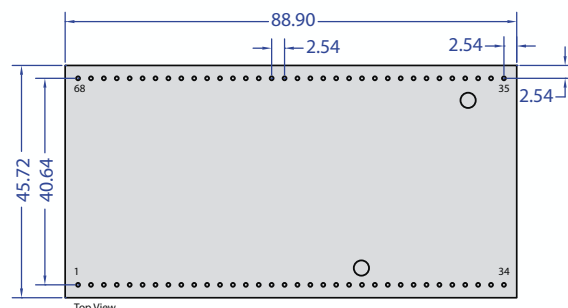
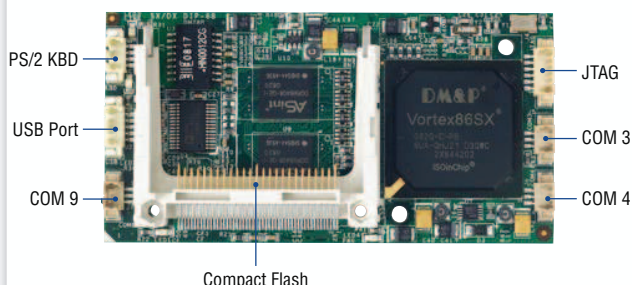
- VDX-6300** Vortex86DX DIP 68pin CPU Module with 256MB DDR2
- VDX-6300-512** Vortex86DX DIP 68pin CPU Module with 512MB DDR2
- V SX-6100-EVB** Vortex86SX DIP 48/68pin CPU Module Development Board

2.0mm 68-Pin Signal Assignment for VDX-6300

PIN#	Signal Name	PIN#	Signal Name
1	GND	35	GND
2	Reset	36	TXDEN2
3	GP00 /PWM0	37	CTS2\
4	GP01 /PWM1	38	DSR2\
5	GP02 /PWM2	39	DTR2\
6	GP03 /PWM3	40	RXD2\
7	GP04 /PWM4	41	RI2\
8	GP05 /PWM5	42	RTS2\
9	GP06 /PWM6	43	TXD2\
10	GP07 /PWM7	44	DCD2\
11	SPICS / GP30	45	GND
12	SPICLK / GP31	46	GP23 /PWM19
13	SPIDO / GP32	47	GP24 /PWM20
14	SPIDI / GP33	48	GP25 /PWM21
15	GP34	49	GP26 /PWM22
16	GP35	50	GP27 /PWM23
17	GP36	51	CTS1\
18	GP37	52	DSR1\
19	SPEAKER	53	DTR1\
20	GP20 /PWM16	54	RXD1\
21	GP21 /PWM17	55	RI1\
22	GP22 /PWM18	56	RTS1\
23	VBATT	57	TXD1\
24	VCC	58	DCD1\
25	GP10 /PWM8	59	GND
26	GP11 /PWM9	60	LUSBD2-
27	GP12 /PWM10	61	LUSBD2+
28	GP13 /PWM11	62	LUSBD3-
29	GP14 /PWM12	63	LUSBD3+
30	GP15 /PWM13	64	LAN-RX-
31	GP16 /PWM14	65	LAN-RX+
32	GP17 /PWM15	66	LAN-TX-
33	SYSCLK	67	LAN-TX+
34	IRQ6	68	VCC

VSX-6100-V2

128MB/4S/3USB/LAN/GPIO/CF



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86SX- 300MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache
BIOS	AMI BIOS
System Memory	128/256MB DDR2 Onboard
Watchdog Timer 0 & 1 Sets	Software programmable from 30.5μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Compact Flash Type I/II Onboard 2MB SPI Flash Disk
I/O Interface	RS-232 port x4 (TX/RX x3) USB port (Ver2.0) x3 10/100Mbps Ethernet port x1
Connectors	1.25mm 3-pin wafer for RS-232 x3 1.25mm 5-pin wafer for USB x1 1.25mm 4-pin wafer for Keyboard x1 1.25mm 6-pin wafer for JTAG x1 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V @ 340mA
Weight	28g
Board Size	90 x 46mm (3.54 x 1.81 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

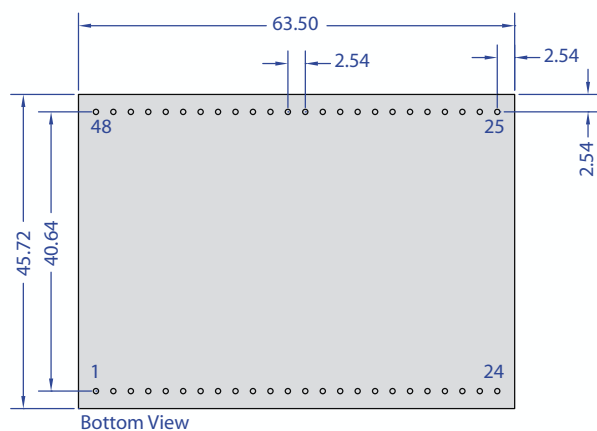
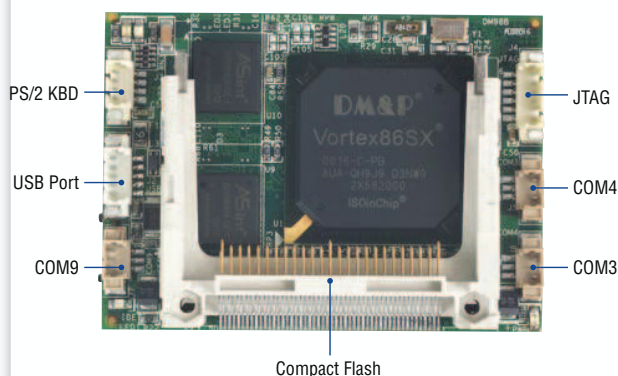
- VSX-6100-V2 x1

Ordering information

- VSX-6100-V2** Vortex86SX DIP 68pin CPU Module with 128MB DDR2
- VSX-6100-EVB** Vortex86SX DIP 48/68pin CPU Module Development Board

2.0mm 68-Pin Signal Assignment for VSX-6100-V2

PIN#	Signal Name	PIN#	Signal Name
1	GND	35	GND
2	PWRGND	36	TXDEN2
3	GP00	37	CTS2\
4	GP01	38	DSR2\
5	GP02	39	DTR2\
6	GP03	40	RXD2\
7	GP04	41	RI2\
8	GP05	42	RTS2\
9	GP06	43	TXD2\
10	GP07	44	DCD2\
11	SPICS/GP30	45	GND
12	SPICLK/GP31	46	GP23
13	SPIDO/GP32	47	GP24
14	SPIDI/GP33	48	GP25
15	GP34	49	GP26
16	GP35	50	GP27
17	GP36	51	CTS1\
18	GP37	52	DSR1\
19	SPEAKER	53	DTR1\
20	GP20	54	RXD1\
21	GP21	55	RI1\
22	GP22	56	RTS1\
23	VBATT	57	TXD1\
24	VCC	58	DCD1\
25	GP10	59	GND
26	GP11	60	LUSBD2-
27	GP12	61	LUSBD2+
28	GP13	62	LUSBD3-
29	GP14	63	LUSBD3+
30	GP15	64	LAN-RX-
31	GP16	65	LAN-RX+
32	GP17	66	LAN-TX-
33	SYSCCLK	67	LAN-TX+
34	IRQ6	68	VCC



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86SX- 300MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache
BIOS	AMI BIOS
System Memory	128/256MB DDR2 Onboard
Watchdog Timer0 & 1 Sets	Software programmable from 30.5μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Compact Flash Type I/II Onboard 2MB SPI Flash Disk
I/O Interface	RS-232 port x4 (TX /RX x3) USB port (Ver2.0) x3 10/100Mbps Ethernet port x1
Connectors	1.25mm 3-pin wafer for RS-232 x3 1.25mm 5-pin wafer for USB x1 1.25mm 4-pin wafer for Keyboard x1 1.25mm 6-pin wafer for JTAG x1 Type I/II Compact Flash slot x1
Power Requirement	Single Voltage +5V @ 320mA
Weight	24g
Board Size	64 x 46mm (2.52 x 1.81 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

- VSX-6101-V2 x1

Ordering information

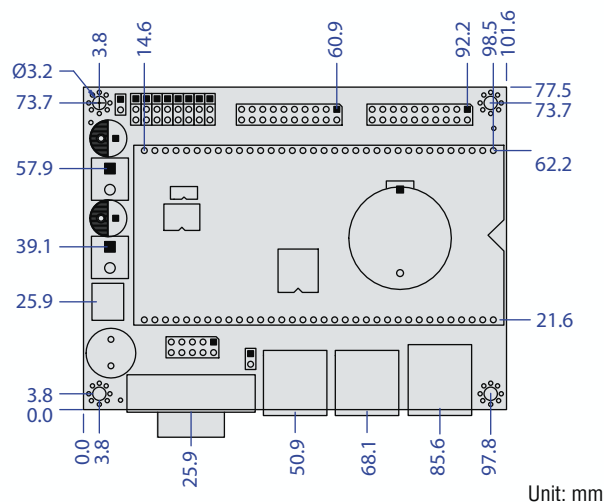
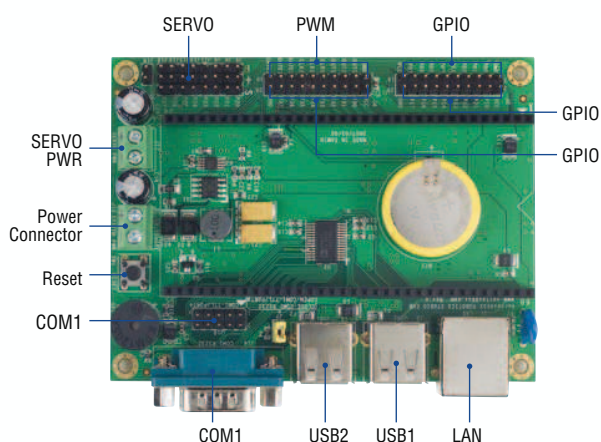
- VSX-6101-V2** Vortex86SX DIP 48pin CPU Module with 128MB DDR2
- VSX-6100-EVB** Vortex86SX DIP 48/68pin CPU Module Development Board

2.0mm 48-Pin Signal Assignment for VSX-6101-V2

PIN#	Signal Name	PIN#	Signal Name
1	GND	25	GND
2	PWRGND	26	GP23
3	GP00	27	GP24
4	GP01	28	GP25
5	GP02	29	GP26
6	GP03	30	GP27
7	GP04	31	CTS1\
8	GP05	32	DSR1\
9	GP06	33	DTR1\
10	GP07	34	RXD1\
11	SPICS/GP30	35	RI1\
12	SPICLK/GP31	36	RTS1\
13	SPID0/GP32	37	TXD1\
14	SPID1/GP33	38	DCD1\
15	GP34	39	GND
16	GP35	40	LUSBD2-
17	GP36	41	LUSBD2+
18	GP37	42	LUSBD3-
19	SPEAKER	43	LUSBD3+
20	GP20	44	LAN-RX-
21	GP21	45	LAN-RX+
22	GP22	46	LAN-TX-
23	VBATT	47	LAN-TX+
24	VCC	48	VCC

VSX-6100-EVB

VSX/VDX DIP 48/68pin Development Board



Specifications

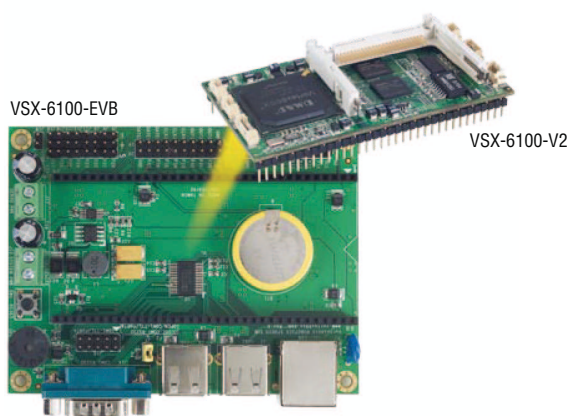
Connectors	2.0mm 10-pin header for RS-232 x1 2.54mm 10-pin header for GPIO x3 2.54mm 10-pin header for PWM x1 2.54mm 3-pin header for SERVO x8 External RJ-45 connector for Ethernet x1 External USB connector x2 External 9-pin D-Sub male connector for RS-232 x1
Power Requirement	Single Voltage +5V @ 250mA
Weight	70g
Board Size	101 x 78 mm (3.97 x 3.07 inches)
Operating Temperature	-40°C ~ +85°C

Packing List

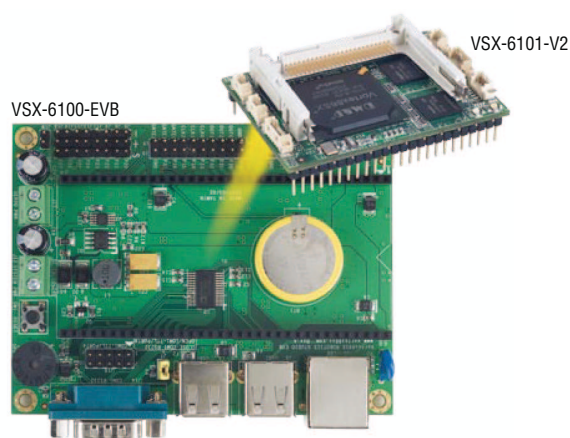
- VSX-6100-EVB x1
- CD for User's Manual & Driver x1

Ordering information

- VSX-6100-EVB** Vortex86SX DIP 48/68pin CPU Module Development Board



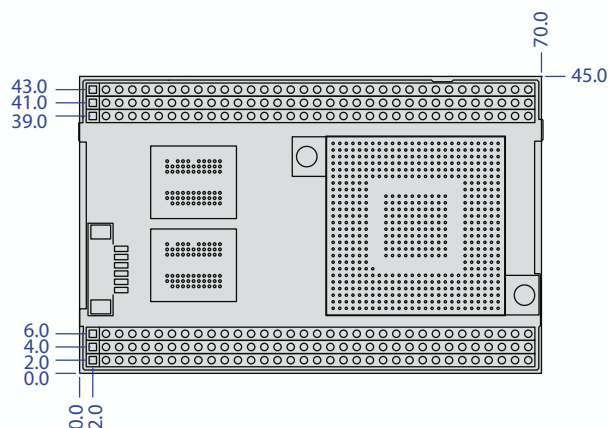
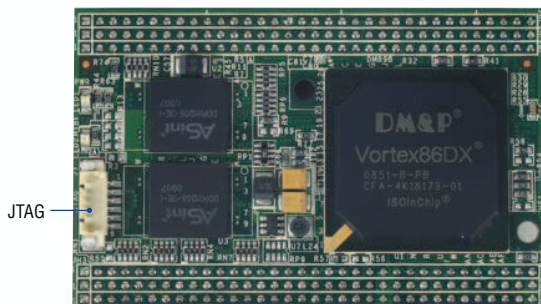
VSX-6100-V2 Development Kit



VSX-6101-V2 Development Kit

- 1 **μProcessor Module**
- 2 **Mity/Tiny CPU Module**
- 3 **PC/104 CPU Module**
- 4 **Half-Size CPU Module**
- 5 **3.5" CPU Module**
- 6 **Peripheral Module**
- 7 **Display Product Series**
- 8 **Accessories & Technical Information**

VDX-DIP-ISA



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86DX- 800MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache L2 Cache 128KB
Bus	ISA interface
BIOS	AMI BIOS
System Memory	256/512MB DDR2 Onboard
Watchdog Timer 0 & 1 Sets	Software programmable from 30.5μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Onboard 4MB SPI Flash Disk
I/O Interface	Enhanced IDE port (UltraDMA-100/66/33) x1 RS-232 port x5 (TX/RX x1) USB port x4 16-bit GPIO port x2
Connectors	1.25mm 6-pin wafer for JTAG x1
Power Requirement	Single Voltage +5V @ 320mA
Weight	23g
Board Size	70 x 45mm (2.75 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

- VDX-DIP-ISA x1

Ordering Information

- **VDX-DIP-ISA** Vortex86DX DIP-204pin-ISA CPU Module with 256MB DDR2
- **VDX-DIP-ISA-512** Vortex86DX DIP-204pin-ISA CPU Module with 512MB DDR2

DIP-204pin-ISA Module

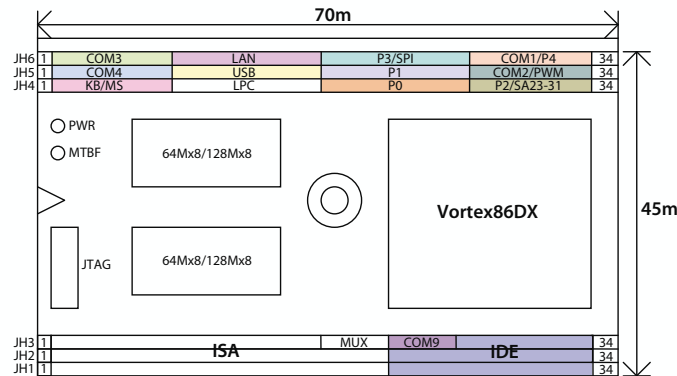
DIP-204pin-ISA module, measured at only 70 x 45mm, is designed particularly as the kernel for the diverse expandable applications. Through 6 rows of 34pin connector, DIP-204pin-ISA module is able to provide multiple functions, such as PCI BUS, RS-232, IDE, LAN, USB and GPIO.

To assist users easily adapt DIP-204pin-ISA Module into their applications, ICOP offers the complete development board for DIP-204pin-ISA Module. ICOP also supplies customers with the referential circuit diagram reducing their time and effort during the development process.

Please visit the website below for further information

<http://www.dmp.com.tw/tech/vortex86dx/>

As to the referential circuit drawing, please contact info@icop.com.tw

VDX-DIP-ISA**DIP-204pin-ISA Signal Assignment**

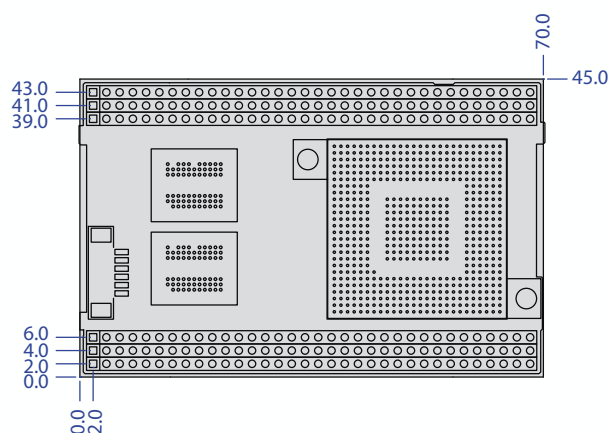
Pin	JH1	JH2	JH3	JH4	JH5	JH6
1	VCC-IN	VCC-IN	VCC3-OUT	VBATT	DCD4\	DCD3\
2	SD7	SD8	SA19	PWRGD	RXD4\	RXD3\
3	SD6	SD9	SA18	SPEAKER	TXD4\	TXD3\
4	SD5	SD10	SA17	KBCLK	DTR4\	DTR3\
5	SD4	SD11	SA16	KBCLK	DSR4\	DSR3\
6	SD3	SD12	SA15	MSCLK	RTS4\	RTS3\
7	SD2	SD13	SA14	MSDATA	CTS4\	CTS3\
8	SD1	SD14	SA13	24MHZ	RI4\	RI3\
9	SD0	SD15	SA12	LINK/ACTIVE	GND	GND
10	RSTDRV	IRQ5	SA11	DUPLEX	LANTX+	LANTX-
11	AEN	IRQ6	SA10	LFRAME-	LANRX+	LANRX-
12	SMEW	IRQ7	SA9	LDRQ-	LUSBD0+	LUSBD0-
13	SMEMR	IRQ9	SA8	SERIRQ	LUSBD1+	LUSBD1-
14	IOW	IRQ12	SA7	LAD0	LUSBD2+	LUSBD2-
15	IOR	IRQ15	SA6	LAD1	LUSBD3+	LUSBD3-
16	REFRESH	MUX1	SA5	LAD2	GND	GND
17	SYSCLK	MUX2	SA4	GP00	GP10	SPICS
18	OSC	MUX3	SA3	GP01	GP11	SPICLK
19	MEMCS16	MUX4	SA2	GP02	GP12	SPIDO
20	IOCS16	MUX5	SA1	GP03	GP13	SPIDI
21	SBHE	MUX6	SA0	GP04	GP14	GP34
22	ROMCS	GPCS0	IOCHRDY	GP05	GP15	GP35
23	GND	GND	GND	GP06	GP16	GP36
24	IDESA0	IDESA1	TXD9\	GP07	GP17	GP37
25	IDED0	IDED8	RXD9\	LAD3	DCD2\	DCD1\
26	IDED1	IDED9	IDESA2	GP20	RXD2\	RXD1\
27	IDED2	IDED10	IDERST	GP21	TXD2\	TXD1\
28	IDED3	IDED11	IDEINT	GP22	DTR2\	DTR1\
29	IDED4	IDED12	IDEREQ	GP23	DSR2\	DSR1\
30	IDED5	IDED13	IDERDY	GP24	RTS2\	RTS1\
31	IDED6	IDED14	IDEIOW	GP25	CTS2\	CTS1\
32	IDED7	IDED15	IDEACK	GP26	RI2\	RI1\
33	IDECs0	IDECs1	IDECBLID	GP27	TXDEN2	TXDEN1
34	GND	GND	IDEIOR	VCC1.8-OUT	GND	GND

DIP-204pin-ISA Signal Assignment (Optional)

Pin	JH4	JH5	JH6
1	VBATT	DCD4\	DCD3\
2	PWRGD	RXD4\	RXD3\
3	SPEAKER	TXD4\	TXD3\
4	KBCLK	DTR4\	DTR3\
5	KBCLK	DSR4\	DSR3\
6	MSCLK	RTS4\	RTS3\
7	MSDATA	CTS4\	CTS3\
8	24MHZ	RI4\	RI3\
9	LINK/ACTIVE	GND	GND
10	DUPLEX	LANTX+	LANTX-
11	LFRAME-	LANRX+	LANRX-
12	LDRQ-	LUSBD0+	LUSBD0-
13	SERIRQ	LUSBD1+	LUSBD1-
14	LAD0	LUSBD2+	LUSBD2-
15	LAD1	LUSBD3+	LUSBD3-
16	LAD2	GND	GND
17	GP00	GP10	GP30
18	GP01	GP11	GP31
19	GP02	GP12	GP32
20	GP03	GP13	GP34
21	GP04	GP14	GP34
22	GP05	GP15	GP35
23	GP06	GP16	GP36
24	GP07	GP17	GP37
25	LAD3	PWM0CLK	GP40
26	SA24	PWM2CLK	GP44
27	SA25	PWM0OUT	GP41
28	SA26	PWM2OUT	GP45
29	SA27	PWM0GATE	GP46
30	SA28	PWM1OUT	GP42
31	SA29	PWM1GATE	GP47
32	SA30	PWM1CLK	GP43
33	SA31	PWM2GATE	TXDEN1
34	VCC1.8-OUT	GND	GND

1
μProcessor
Module2
Mity/Tiny CPU
Module3
PC/104 CPU
Module4
Half-Size CPU
Module5
3.5" CPU
Module6
Peripheral
Module7
Display Product
Series8
Accessories &
Technical Information

VDX-DIP-PCI



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86DX- 800MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache L2 Cache 128KB
Bus	PCI interface
BIOS	AMI BIOS
System Memory	256/512MB DDR2 on board
Watchdog Timer	Software programmable from 30.5μ sec.to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Onboard 4MB SPI Flash Disk
I/O Interface	Enhanced IDE port (UltraDMA-100/66/33) x1 RS-232 port x5 (TX/RX x1) USB port x4 16-bit GPIO port x2
Connectors	1.25mm 6-pin wafer for JTAG x1
Power Requirement	Single Voltage +5V @ 340mA
Weight	23g
Board Size	70 x 45mm (2.75 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

- VDX-DIP-PCI x1

Ordering Information

- **VDX-DIP-PCI** Vortex86DX DIP-204pin-PCI CPU Module with 256MB DDR2
- **VDX-DIP-PCI-512** Vortex86DX DIP-204pin-PCI CPU Module with 512MB DDR2

DIP-204pin-PCI Module

DIP-204pin-PCI Module (70 x 45mm) is designed as the kernel of your own application, which integrates the Vortex86DX CPU, onboard 256MB DDR2, BIOS and multi I/O. The I/O interface of DIP-204pin-PCI Module are 34-pin (1 x 34, pitch 2.0mm) connector x6 which including PCI bus, RS-232, Printer, IDE, LAN, USB, and GPIO.

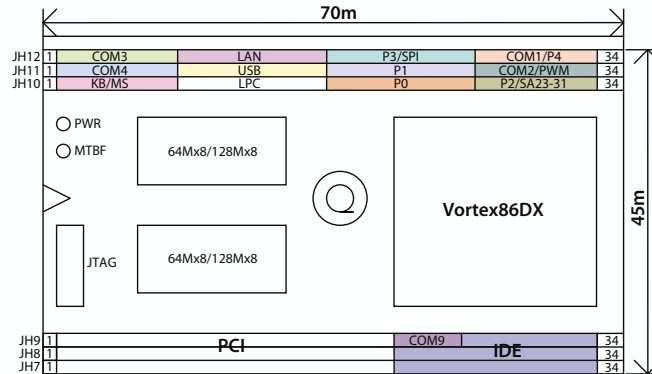
For assisting users easily use our DIP-204pin- PCI Module, ICOP provides complete development kit of DIP-204pin- PCI Development Board for DIP-204pin- PCI Module.

We also supply our customers with referential circuit diagram for easing user's effort during development process. Meanwhile, you can design your own based board which only equips I/O functions you need.

Please visit our website for getting further information you need:

<http://www.dmp.com.tw/tech/vortex86dx/>

You also can contact us for getting referential circuit drawing: info@icop.com.tw

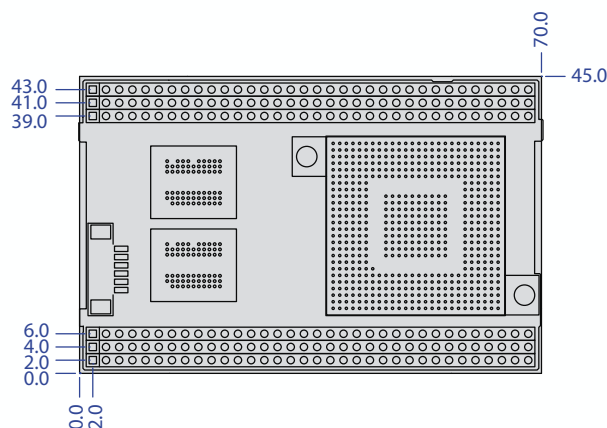
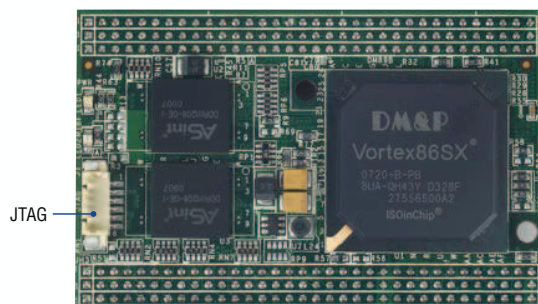
VDX-DIP-PCI**DIP-204pin-PCI Signal Assignment**

Pin	JH7	JH8	JH9	JH10	JH11	JH12
1	VCC-IN	VCC-IN	VCC3-OUT	VBATT	DCD4\	DCD3\
2	PCICLK0	PGNT-0	PREQ-0	PWRGD	RXD4\	RXD3\
3	PCICLK1	PGNT-1	PREQ-1	SPEAKER	TXD4\	TXD3\
4	PCICLK2	PGNT-2	PREQ-2	KBCLK	DTR4\	DTR3\
5	GND	GND	GND	KBDATA	DSR4\	DSR3\
6	INT-A	AD30	AD31	MSCLK	RTS4\	RTS3\
7	INT-B	AD28	AD29	MSDATA	CTS4\	CTS3\
8	INT-C	AD26	AD27	24MHZ	RI4\	RI3\
9	INT-D	AD24	AD25	LINK/ACTIVE	GND	GND
10	PCIRST-	AD22	AD23	DUPLEX	LANTX+	LANTX-
11	FRAME-	AD20	AD21	LFRAME-	LANRX+	LANRX-
12	IRDY-	AD18	AD19	LDRQ-	LUSBD0+	LUSBD0-
13	TRDY-	AD16	AD17	SERIRQ	LUSBD1+	LUSBD1-
14	DEVSEL-	AD14	AD15	LAD0	LUSBD2+	LUSBD2-
15	STOP-	AD12	AD13	LAD1	LUSBD3+	LUSBD3-
16	PAR	AD10	AD11	LAD2	GND	GND
17	CBE-3	AD8	AD9	GP00	GP10	SPICS
18	CBE-2	AD6	AD7	GP01	GP11	SPICLK
19	CBE-1	AD4	AD5	GP02	GP12	SPIDO
20	CBE-0	AD2	AD3	GP03	GP13	SPIDI
21	NC	AD0	AD1	GP04	GP14	GP34
22	NC	NC	NC	GP05	GP15	GP35
23	GND	GND	GND	GP06	GP16	GP36
24	IDESA0	IDESA1	TXD9\	GP07	GP17	GP37
25	IDE0	IDED8	RXD9\	LAD3	DCD2\	DCD1\
26	IDE1	IDED9	IDESA2	GP20	RXD2\	RXD1\
27	IDE2	IDED10	IDERST	GP21	TXD2\	TXD1\
28	IDE3	IDED11	IDEINT	GP22	DTR2\	DTR1\
29	IDE4	IDED12	IDEREQ	GP23	DSR2\	DSR1\
30	IDE5	IDED13	IDERDY	GP24	RTS2\	RTS1\
31	IDE6	IDED14	IDEIOW	GP25	CTS2\	CTS1\
32	IDE7	IDED15	IDEACK	GP26	RI2\	RI1\
33	IDECs0	IDECs1	IDECBLID	GP27	TXDEN2	TXDEN1
34	GND	GND	IDEIOR	VCC1.8-OUT	GND	GND

DIP-204pin-PCI Signal Assignment (Optional)

Pin	JH10	JH11	JH12
1	VBATT	DCD4\	DCD3\
2	PWRGD	RXD4\	RXD3\
3	SPEAKER	TXD4\	TXD3\
4	KBCLK	DTR4\	DTR3\
5	KBDATA	DSR4\	DSR3\
6	MSCLK	RTS4\	RTS3\
7	MSDATA	CTS4\	CTS3\
8	24MHZ	RI4\	RI3\
9	LINK/ACTIVE	GND	GND
10	DUPLEX	LANTX+	LANTX-
11	LFRAME-	LANRX+	LANRX-
12	LDRQ-	LUSBD0+	LUSBD0-
13	SERIRQ	LUSBD1+	LUSBD1-
14	LAD0	LUSBD2+	LUSBD2-
15	LAD1	LUSBD3+	LUSBD3-
16	LAD2	GND	GND
17	GP00	GP10	GP30
18	GP01	GP11	GP31
19	GP02	GP12	GP32
20	GP03	GP13	GP34
21	GP04	GP14	GP34
22	GP05	GP15	GP35
23	GP06	GP16	GP36
24	GP07	GP17	GP37
25	LAD3	PWM0CLK	GP40
26	SA24	PWM2CLK	GP44
27	SA25	PWM0OUT	GP41
28	SA26	PWM2OUT	GP45
29	SA27	PWM0GATE	GP46
30	SA28	PWM1OUT	GP42
31	SA29	PWM1GATE	GP47
32	SA30	PWM1CLK	GP43
33	SA31	PWM2GATE	TXDEN1
34	VCC1.8-OUT	GND	GND

VSX-DIP-ISA-V2



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86SX- 300MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache
Bus	ISA interface
BIOS	AMI BIOS
System Memory	128/256MB DDR2 Onboard
Watchdog Timer 0 & 1 Sets	Software programmable from 30.5 μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Onboard 2MB SPI Flash Disk
I/O Interface	Enhanced IDE port (UltraDMA-100/66/33) x1 RS-232 port x5 (TX/RX x1) USB port x4 16-bit GPIO port x2
Connectors	1.25mm 6-pin wafer for JTAG x1
Power Requirement	Single Voltage +5V @ 260mA
Weight	23g
Board Size	70 x 45mm (2.75 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

- VSX-DIP-ISA-V2 x1

Ordering Information

- VSX-DIP-ISA-V2** Vortex86SX DIP-204pin-ISA CPU Module with 128MB DDR2

DIP-204pin-ISA Module

DIP-204pin-ISA module, measured at only 70 x 45mm, is designed particularly as the kernel for the diverse expandable applications. Through 6 rows of 34pin connector, DIP-204pin-ISA module is able to provide multiple functions, such as PCI BUS, RS-232, IDE, LAN, USB and GPIO.

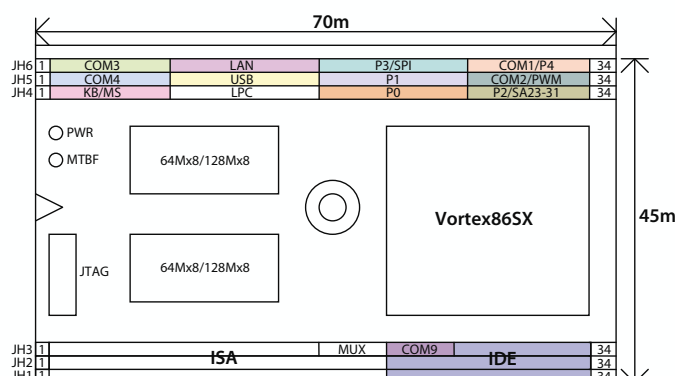
To assist users easily adapt DIP-204pin-ISA Module into their applications, ICOP offers the complete development board for DIP-204pin-ISA Module. ICOP also supplies customers with the referential circuit diagram reducing their time and effort during the development process.

Please visit the website below for further information

<http://www.dmp.com.tw/tech/vortex86sx/>

As to the referential circuit drawing, please contact info@icop.com.tw

VSX-DIP-ISA-V2



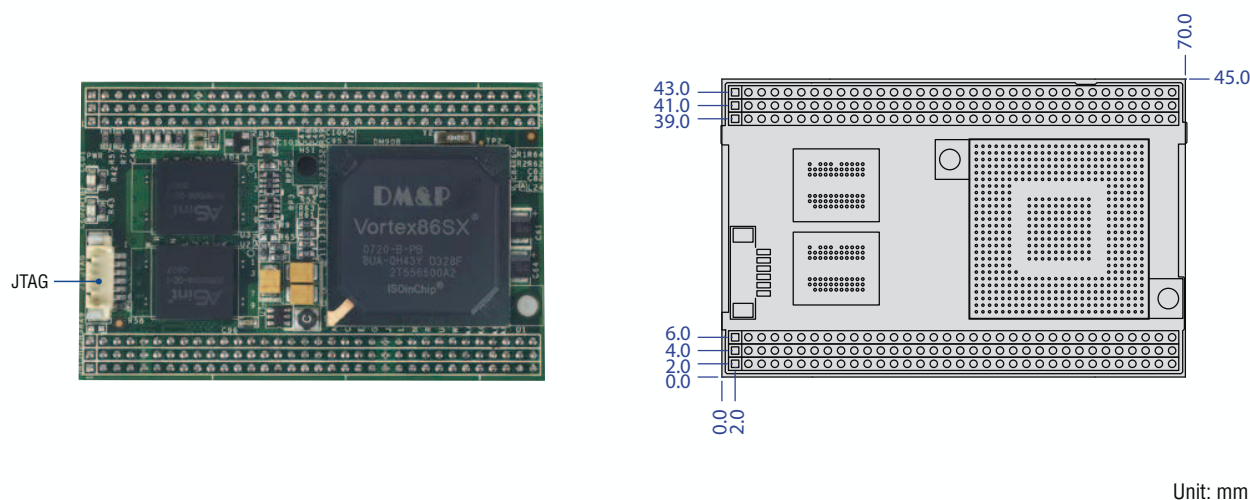
DIP-204pin-ISA Signal Assignment

Pin	JH1	JH2	JH3	JH4	JH5	JH6
1	VCC-IN	VCC-IN	VCC3-OUT	VBATT	DCD4\	DCD3\
2	SD7	SD8	SA19	PWRGD	RXD4\	RXD3\
3	SD6	SD9	SA18	SPEAKER	TXD4\	TXD3\
4	SD5	SD10	SA17	KBCLK	DTR4\	DTR3\
5	SD4	SD11	SA16	KBCLK	DSR4\	DSR3\
6	SD3	SD12	SA15	MSCLK	RTS4\	RTS3\
7	SD2	SD13	SA14	MSDATA	CTS4\	CTS3\
8	SD1	SD14	SA13	24MHZ	RI4\	RI3\
9	SD0	SD15	SA12	LINK/ACTIVE	GND	GND
10	RSTDRV	IRQ5	SA11	DUPLEX	LANTX+	LANTX-
11	AEN	IRQ6	SA10	LFRAME-	LANRX+	LANRX-
12	SMEW	IRQ7	SA9	LDRQ-	LUSBD0+	LUSBD0-
13	SMEMR	IRQ9	SA8	SERIRQ	LUSBD1+	LUSBD1-
14	IOW	IRQ12	SA7	LAD0	LUSBD2+	LUSBD2-
15	IOR	IRQ15	SA6	LAD1	LUSBD3+	LUSBD3-
16	REFRESH	MUX1	SA5	LAD2	GND	GND
17	SYSCLK	MUX2	SA4	GP00	GP10	SPICS
18	OSC	MUX3	SA3	GP01	GP11	SPICLK
19	MEMCS16	MUX4	SA2	GP02	GP12	SPIDO
20	IOCS16	MUX5	SA1	GP03	GP13	SPIDI
21	SBHE	MUX6	SA0	GP04	GP14	GP34
22	ROMCS	GPCS0	IOCHRDY	GP05	GP15	GP35
23	GND	GND	GND	GP06	GP16	GP36
24	IDESA0	IDESA1	TXD9\	GP07	GP17	GP37
25	IDED0	IDED8	RXD9\	LAD3	DCD2\	DCD1\
26	IDED1	IDED9	IDESA2	GP20	RXD2\	RXD1\
27	IDED2	IDED10	IDERST	GP21	TXD2\	TXD1\
28	IDED3	IDED11	IDEINT	GP22	DTR2\	DTR1\
29	IDED4	IDED12	IDEREQ	GP23	DSR2\	DSR1\
30	IDED5	IDED13	IDERDY	GP24	RTS2\	RTS1\
31	IDED6	IDED14	IDELOW	GP25	CTS2\	CTS1\
32	IDED7	IDED15	IDEACK	GP26	RI2\	RI1\
33	IDECs0	IDECs1	IDECBLID	GP27	TXDEN2	TXDEN1
34	GND	GND	IDEIOR	VCC1.8-OUT	GND	GND

DIP-204pin-ISA Signal Assignment (Optional)

Pin	JH4	JH5	JH6
1	VBATT	DCD4\	DCD3\
2	PWRGD	RXD4\	RXD3\
3	SPEAKER	TXD4\	TXD3\
4	KBCLK	DTR4\	DTR3\
5	KBCLK	DSR4\	DSR3\
6	MSCLK	RTS4\	RTS3\
7	MSDATA	CTS4\	CTS3\
8	24MHZ	RI4\	RI3\
9	LINK/ACTIVE	GND	GND
10	DUPLEX	LANTX+	LANTX-
11	LFRAME-	LANRX+	LANRX-
12	LDRQ-	LUSBD0+	LUSBD0-
13	SERIRQ	LUSBD1+	LUSBD1-
14	LAD0	LUSBD2+	LUSBD2-
15	LAD1	LUSBD3+	LUSBD3-
16	LAD2	GND	GND
17	GP00	GP10	GP30
18	GP01	GP11	GP31
19	GP02	GP12	GP32
20	GP03	GP13	GP34
21	GP04	GP14	GP34
22	GP05	GP15	GP35
23	GP06	GP16	GP36
24	GP07	GP17	GP37
25	LAD3	PWM0CLK	GP40
26	SA24	PWM2CLK	GP44
27	SA25	PWM0OUT	GP41
28	SA26	PWM2OUT	GP45
29	SA27	PWM0GATE	GP46
30	SA28	PWM1OUT	GP42
31	SA29	PWM1GATE	GP47
32	SA30	PWM1CLK	GP43
33	SA31	PWM2GATE	TXDEN1
34	VCC1.8-OUT	GND	GND

VSX-DIP-PCI-V2



Specifications

SoC	DM&P SoC CPU Vortex86SX- 300MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache
Bus	PCI interface
BIOS	AMI BIOS
System Memory	128/256MB DDR2 Onboard
Watchdog Timer 0 & 1 Sets	Software programmable from 30.5μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
LAN	Integrated 10/100Mbps Ethernet
Flash Disk Support	Onboard 2MB SPI Flash Disk
I/O Interface	Enhanced IDE port (UltraDMA-100/66/33) x1 RS-232 port x5 (TX/RX x1) USB port x4 16-bit GPIO port x2
Connectors	1.25mm 6-pin wafer for JTAG x1
Power Requirement	Single Voltage +5V @ 280mA
Weight	23g
Board Size	70 x 45mm (2.75 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Packing List

- VSX-DIP-PCI-V2 x1

Ordering Information

- VSX-DIP-PCI-V2** Vortex86SX DIP-204pin-PCI CPU Module with 128MB DDR2

DIP-204pin-PCI Module

DIP-204pin-PCI Module (70x45mm) is designed as the kernel of your own application, which integrates the Vortex86SX CPU, onboard 128MB DDR2, BIOS and multi I/O. The I/O interface of DIP-204pin-PCI Module are 34-pin (1x34, pitch 2.0mm) connector x6 which including PCI bus, RS-232, IDE, LAN, USB, and GPIO.

For assisting users easily use our DIP-204pin-PCI Module, ICOP provides complete development kit of DIP-204pin-PCI Development Board for DIP-204pin-PCI Module.

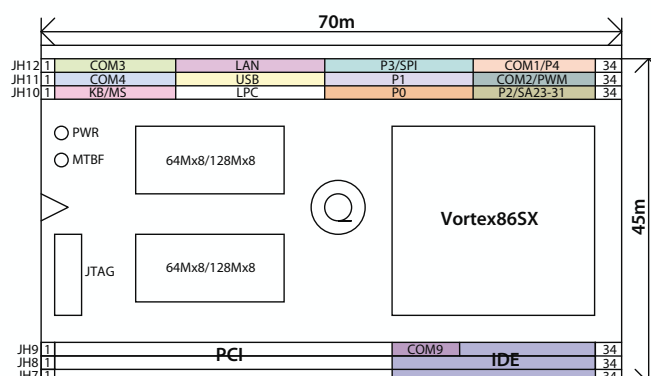
We also supply our customers with referential circuit diagram for easing user's effort during development process. Meanwhile, you can design your own based board which only equips I/O functions you need.

Please visit our website for getting further information you need:

<http://www.dmp.com.tw/tech/vortex86sx/>

You also can contact us for getting referential circuit drawing: info@icop.com.tw

VSX-DIP-PCI-V2



DIP-204pin-PCI Signal Assignment

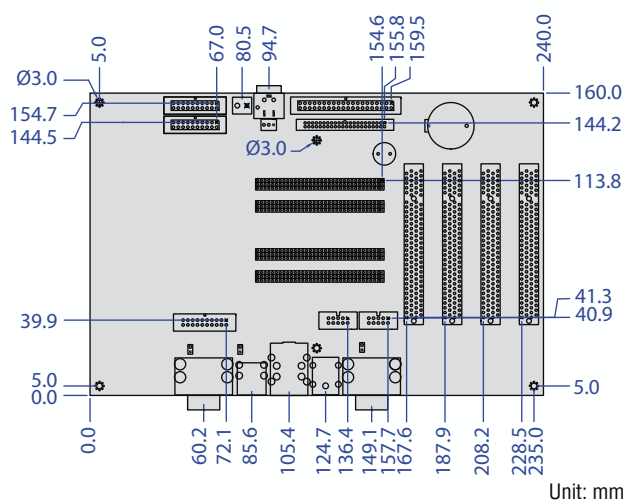
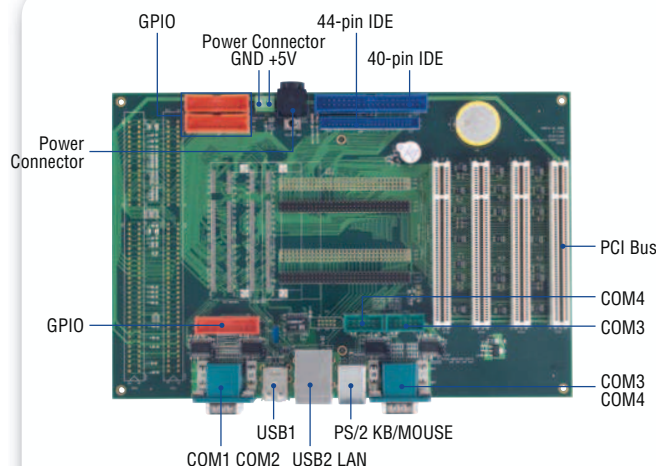
Pin	JH7	JH8	JH9	JH10	JH11	JH12
1	VCC-IN	VCC-IN	VCC3-OUT	VBATT	DCD4\	DCD3\
2	PCICLK0	PGNT-0	PREQ-0	PWRGD	RXD4\	RXD3\
3	PCICLK1	PGNT-1	PREQ-1	SPEAKER	TXD4\	TXD3\
4	PCICLK2	PGNT-2	PREQ-2	KBCLK	DTR4\	DTR3\
5	GND	GND	GND	KBCLK	DSR4\	DSR3\
6	INT-A	AD30	AD31	MSCLK	RTS4\	RTS3\
7	INT-B	AD28	AD29	MSDATA	CTS4\	CTS3\
8	INT-C	AD26	AD27	24MHZ	RI4\	RI3\
9	INT-D	AD24	AD25	LINK/ACTIVE	GND	GND
10	PCIRST-	AD22	AD23	DUPLEX	LANTX+	LANTX-
11	FRAME-	AD20	AD21	LFRAME-	LANRX+	LANRX-
12	IRDY-	AD18	AD19	LDRQ-	LUSBD0+	LUSBD0-
13	TRDY-	AD16	AD17	SERIRQ	LUSBD1+	LUSBD1-
14	DEVSEL-	AD14	AD15	LAD0	LUSBD2+	LUSBD2-
15	STOP-	AD12	AD13	LAD1	LUSBD3+	LUSBD3-
16	PAR	AD10	AD11	LAD2	GND	GND
17	CBE-3	AD8	AD9	GP00	GP10	SPICS
18	CBE-2	AD6	AD7	GP01	GP11	SPICLK
19	CBE-1	AD4	AD5	GP02	GP12	SPIDO
20	CBE-0	AD2	AD3	GP03	GP13	SPIDI
21	NC	AD0	AD1	GP04	GP14	GP34
22	NC	NC	NC	GP05	GP15	GP35
23	GND	GND	GND	GP06	GP16	GP36
24	IDESA0	IDESA1	TXD9\	GP07	GP17	GP37
25	IDE0	IDED8	RXD9\	LAD3	DCD2\	DCD1\
26	IDE1	IDED9	IDESA2	GP20	RXD2\	RXD1\
27	IDE2	IDED10	IDERST	GP21	TXD2\	TXD1\
28	IDE3	IDED11	IDEINT	GP22	DTR2\	DTR1\
29	IDE4	IDED12	IDEREQ	GP23	DSR2\	DSR1\
30	IDE5	IDED13	IDERDY	GP24	RTS2\	RTS1\
31	IDE6	IDED14	IDEIOW	GP25	CTS2\	CTS1\
32	IDE7	IDED15	IDEACK	GP26	RI2\	RI1\
33	IDECs0	IDECs1	IDECBLID	GP27	TXDEN2	TXDEN1
34	GND	GND	IDEIOR	VCC1.8-OUT	GND	GND

DIP-204pin-PCI Signal Assignment (Optional)

Pin	JH10	JH11	JH12
1	VBATT	DCD4\	DCD3\
2	PWRGD	RXD4\	RXD3\
3	SPEAKER	TXD4\	TXD3\
4	KBCLK	DTR4\	DTR3\
5	KBCLK	DSR4\	DSR3\
6	MSCLK	RTS4\	RTS3\
7	MSDATA	CTS4\	CTS3\
8	24MHZ	RI4\	RI3\
9	LINK/ACTIVE	GND	GND
10	DUPLEX	LANTX+	LANTX-
11	LFRAME-	LANRX+	LANRX-
12	LDRQ-	LUSBD0+	LUSBD0-
13	SERIRQ	LUSBD1+	LUSBD1-
14	LAD0	LUSBD2+	LUSBD2-
15	LAD1	LUSBD3+	LUSBD3-
16	LAD2	GND	GND
17	GP00	GP10	GP30
18	GP01	GP11	GP31
19	GP02	GP12	GP32
20	GP03	GP13	GP34
21	GP04	GP14	GP34
22	GP05	GP15	GP35
23	GP06	GP16	GP36
24	GP07	GP17	GP37
25	LAD3	PWM0CLK	GP40
26	SA24	PWM2CLK	GP44
27	SA25	PWM0OUT	GP41
28	SA26	PWM2OUT	GP45
29	SA27	PWM0GATE	GP46
30	SA28	PWM1OUT	GP42
31	SA29	PWM1GATE	GP47
32	SA30	PWM1CLK	GP43
33	SA31	PWM2GATE	TXDEN1
34	VCC1.8-OUT	GND	GND

VSX-DEV-204-PCI

VSX-DIP-PCI Development Board



Specifications

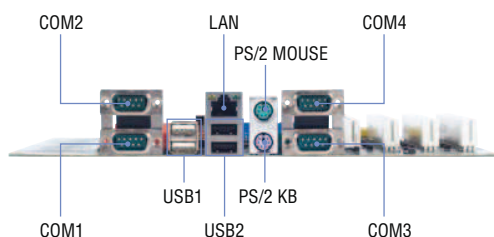
Connectors	2.54mm 40-pin header for IDE x1 2.54mm 20-pin box header for GPIO x3 2.54mm 10-pin box header for RS-232 x2 2.0mm 44-pin header for IDE x1 124-pin slot for PCI x4 External RJ-45 connector for Ethernet x1 External USB connector x4 External 9-pin D-Sub male connector for RS-232 x4 External 6-pin Mini DIN connector for Keyboard x1 External 6-pin Mini DIN connector for Mouse x1
Power Requirement	Single Voltage +5V @ 250mA
Weight	300g
Board Size	240 x 160 mm (9.45 x 6.3 inches)
Operating Temperature	-40°C ~ +85°C

Packing List

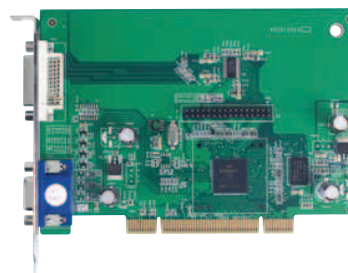
- VSX-DEV-204-PCI x1
- Cable
 - HDD 40P (2.54) x1
 - RS-232 (2.54) x2
 - GPIO (2.54) x3
 - HDD 44P (2.0) x1

Ordering Information

- VSX-DEV-204-PCI** VSX-DIP-PCI Development Board
- PCI-VGA-Z9s** XGI Z9s VGA/DVI PCI Board



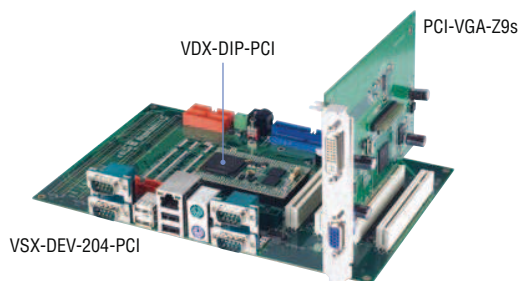
PCI-VGA-Z9s



Features

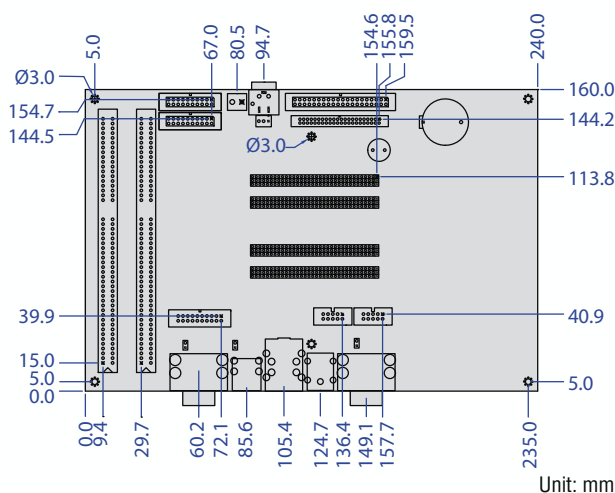
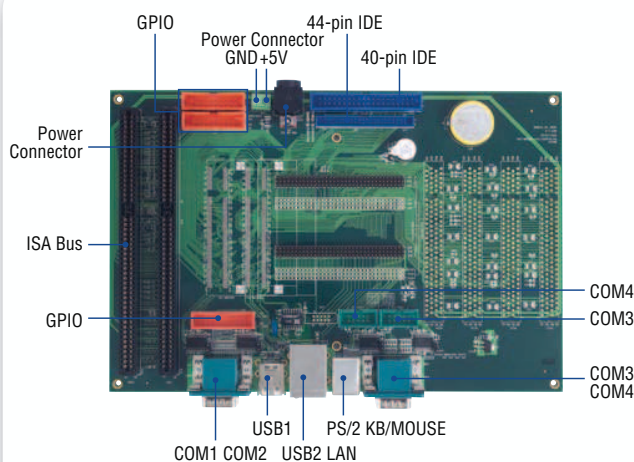
- XGI Volari Z9s Chipset
- PCI Bus
- 32MB DDR2 VGA Memory
- 1600 x 1200 @16M Colors Resolution
- VGA & DVI Support

VSX-DIP-PCI Development Kit



VSX-DEV-204-ISA

VSX-DIP-ISA Development Board



Specifications

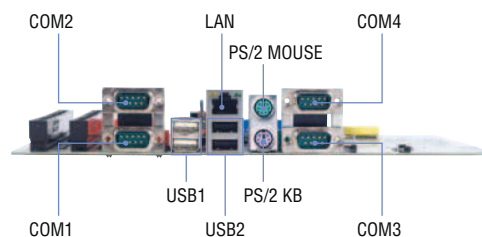
Connectors	2.54mm 40-pin header for IDE x1 2.54mm 20-pin box header for GPIO x3 2.54mm 10-pin box header for RS-232 x2 2.0mm 44-pin header for IDE x1 98-pin slot for ISA x2 External RJ-45 connector for Ethernet x1 External USB connector x4 External 9-pin D-Sub male connector for RS-232 x4 External 6-pin Mini DIN connector for Keyboard x1 External 6-pin Mini DIN connector for Mouse x1
Power Requirement	Single Voltage +5V @ 250mA
Weight	300g
Board Size	240 x 160 mm (9.45 x 6.3 inches)
Operating Temperature	-40°C ~ +85°C

Packing List

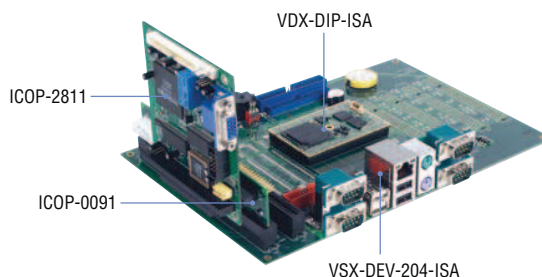
- VSX-DEV-204-ISA x1
- Cable
 - HDD 40P (2.54) x1
 - RS-232 (2.54) x2
 - GPIO (2.54) x3
 - HDD 44P (2.0) x1

Ordering information

- VSX-DEV-204-ISA** VSX-DIP-ISA Development Board
- ICOP-2811** PC/104 VGA/LCD Module
- ICOP-0091** PC/104 Interface to ISA Bus



VSX-DIP-ISA Development Kit



1

μProcessor
Module

2

Mity/Tiny CPU
Module

3

PC/104 CPU
Module

4

Half-Size CPU
Module

5

3.5" CPU
Module

6

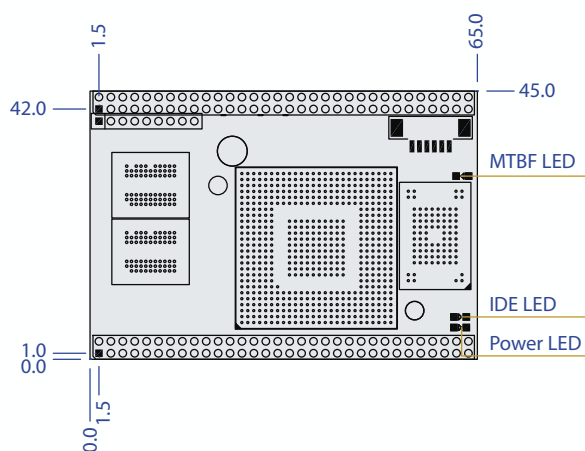
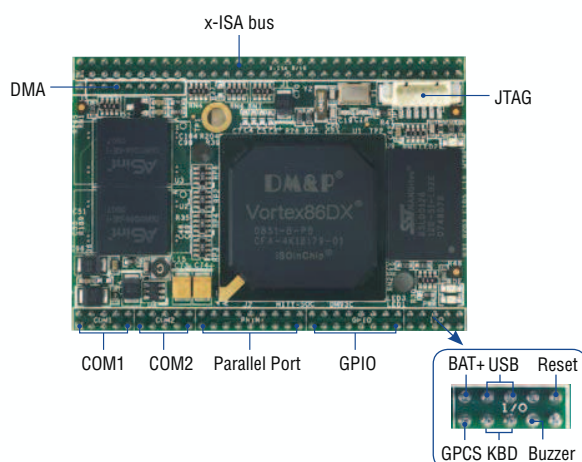
Peripheral
Module

7

Display Product
Series

8

Accessories &
Technical Information



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86DX- 800MHz Real Time Clock with Lithium Battery Backup
Cache	L1:16K I-Cache, 16K D-Cache L2 Cache 128KB
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	256MB DDR2 Onboard
Watchdog Timer	Software programmable from 30.5μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
Flash Disk Support	Onboard 4MB SPI Flash Disk Onboard EmbedDisk 128MB
I/O Interface	RS-232 port x2 (TTL x2) USB port (Ver2.0) x1 Parallel port x1 16-bit GPIO port x1
Connectors	2.0mm 64-pin header for 16-bit x-ISA interface x1 2.0mm 64-pin header for I/O interface x1 2.0mm 9-pin header for DMA x1 1.25mm 6-pin wafer for JTAG x1
Power Requirement	Single Voltage +5V @ 400mA
Weight	30g
Board Size	65 x 45mm (2.56 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C(Optional)

Mity-SoC Module

Mity-SoC Module: VDX-6319-F-D (65 x 45mm) is designed as the kernel of your own application, which integrates the Vortex86DX CPU, onboard 256/512MB DDR2, EmbedDisk-128/256/512MB, BIOS and multi I/O. The I/O interface of Mity-SoC are 64-pin (2 x 32, pitch 2.0mm) connector x2; one is for x-ISA bus, another is for all I/O functions which including RS-232, Printer, IDE, and GPIO.

For assisting users easily use our Mity-SoC Module, ICOP provides complete development kit of Mity-SoC Development Board and Mity-SoC VGA/LCD Development Kit for Mity-SoC Module.

We also supply our customers with referential circuit diagram for easing user's effort during development process. Meanwhile, you can design your own based board which only equips I/O functions you need.

Please visit our website for getting further information you need:

<http://www.dmp.com.tw/tech/vortex86dx/>

You also can contact us for getting referential circuit drawing: info@icop.com.tw

Mity-SoC CPU Module Ordering Selection

Ordering Type No.	SST-128MB	SPI-4MB	TTL	RS-232
VDX-6319-F-A	V		V	
VDX-6319-F-B	V			V
VDX-6319-F-C	V	V	V	
VDX-6319-F-D	V	V		V

Packing List

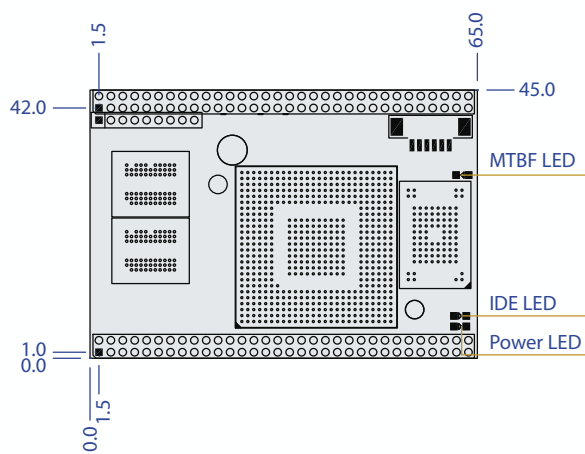
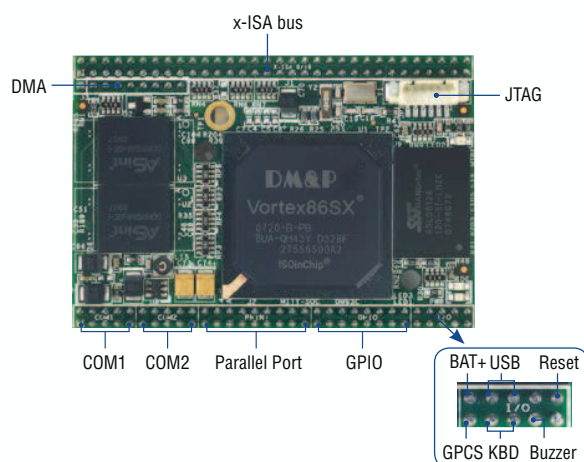
- VDX-6319-F-D x1

Ordering information

- **VDX-6319-F-D** Vortex86DX Mity-SoC CPU Module with 256MB DDR2
- **V SX-6119-1** Mity-SoC Development Board
- **ICOP-6019-VGA** Mity-SoC VGA/LCD Development Kit

VSX-6119-F-D-V2

128MB/2S/USB/GPIO



Unit: mm

Specifications

SoC	DM&P SoC CPU Vortex86SX- 300 MHz Real Time Clock with Lithium Battery Backup
Cache	L1: 16K I-Cache, 16K D-Cache
Bus	16-bit x-ISA interface
BIOS	AMI BIOS
System Memory	128/256MB DDR2 Onboard
Watchdog Timer	Software programmable from 30.5μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D)
Flash Disk Support	Onboard 2MB SPI Flash Disk Onboard EmbedDisk 128MB
I/O Interface	RS-232 port x 2 (TTL x2) USB port (Ver2.0) x 1 Parallel port x 1 16-bit GPIO port x 1
Connectors	2.0mm 64-pin header for 16-bit x-ISA interface x 1 2.0mm 64-pin header for I/O interface x 1 2.0mm 9-pin header for DMA x 1 1.25mm 6-pin wafer for JTAG x 1
Power Requirement	Single Voltage +5V @ 320mA
Weight	30g
Board Size	65 x 45mm (2.56 x 1.77 inches)
Operating Temperature	-20°C ~ +70°C -40°C ~ +85°C (Optional)

Mity-SoC Module

Mity-SoC Module: VSX-6119-F-D (65x45mm) is designed as the kernel of your own application, which integrates the Vortex86SX CPU, Onboard 128MB DDR2, EmbedDisk-128MB, BIOS and multi I/O. The I/O interface of Mity-SoC are 64-pin (2 x 32, pitch 2.0 mm) connector x 2; one is for x-ISA bus, another one for all I/O functions which including RS-232, Printer, IDE, and GPIO.

For assisting users easily use our Mity-SoC Module, ICOP provides complete development kit of Mity-SoC Development Board and Mity-SoC VGA/LCD Development Kit for Mity-SoC Module.

We also supply our customers with referential circuit diagram for easing user's effort during development process. Meanwhile, you can design your own based board which only equips I/O functions you need.

Please visit our website for getting further information you need:

<http://www.dmp.com.tw/tech/vortex86sx/>

You also can contact us for getting referential circuit drawing: infor@icop.com.tw

Mity-SoC CPU Module Ordering Selection

Ordering Type No.	SST-128MB	SPI-2MB	TTL	RS-232
VSX-6119-F-A	V		V	
VSX-6119-F-B	V			V
VSX-6119-F-C	V	V	V	
VSX-6119-F-D	V	V		V

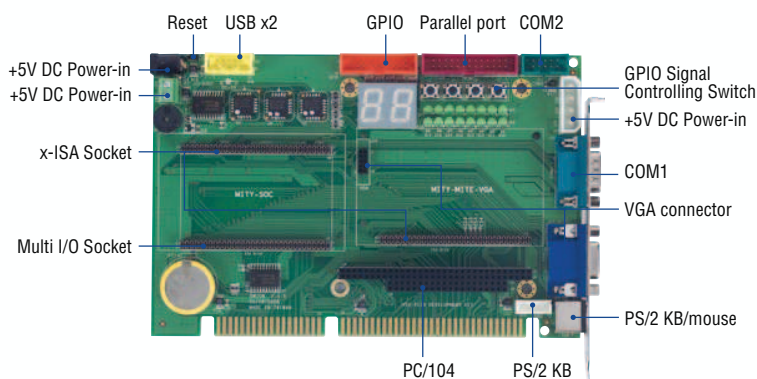
Packing List

- VSX-6119-F-D-V2 x1

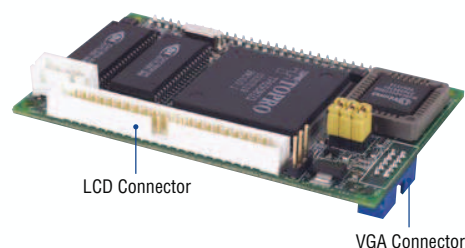
Ordering information

- VSX-6119-F-D-V2** Vortex86SX Mity-SoC CPU Module with 128MB DDR2
- VSX-6119-1** Mity-SoC Development Board
- ICOP-6019-VGA** Mity-SoC VGA/LCD Development Kit

VSX-6119-1



ICOP-6019-VGA



Specifications

Bus	16-bit x-ISA interface PC/104 standard compliant
Status Indicator	Digit Type 7-Segment LED Display for POST Code x2 GPIO LED x16
Connectors	2.54mm 26-pin box header for Printer x1 2.54mm 20-pin box header for 16-bit GPIO x1 2.54mm 10-pin box header for RS-232 x1 2.54mm 5-pin box header for Keyboard x1 2.54mm 2-pin header for Reset x1 32-pin DIP socket for DDC x1 External 15-pin D-Sub female connector for VGA External 9-pin D-Sub male connector for RS-232 x1 External Mini DIN connector for Keyboard/Mouse x1 4-pin Molex connector for Power input x1 2-pin Terminal strip for Power input x1 DC Jack for Power input x1
Power Requirement	Single Voltage +5V @ 150mA
Dimension	185 X 122mm (7.28 x 4.8 inches)
Weight	172g
Operating Temperature	-40°C ~ +85°C

Packing List

- VSX-6119-1
- CD for User's Manual & Driver x1
- Cable
 - RS-232 (2.54) x1
 - Printer (2.54) x1
 - GPIO (2.54) x1
 - YKB x1

Specifications

Chipset	TOPRO TP6508IQ VGA and Mono/STN/DSTN/TFT Flat Panel interface support
Bus	16-bit x-ISA interface
VGA Memory	Onboard 1MB EDO RAM, support resolution up to 1024 x 768, 256 colors
Connectors	2.0mm 44-pin box header for LCD x1 2.0mm 10-pin box header for VGA x1 2.54mm 4-pin wafer for +12V, -12V, -5V DC-in x1
Power Requirement	Single Voltage +5V @ 200mA
Weight	32g
Board Size	80 X 50mm (3.14 x 1.96 inches)
Operating Temperature	-20°C ~ +60°C

Packing List

- ICOP-6019-VGA x1

Ordering Information

- **VSX-6119-1** Mity-SoC Development Board
- **ICOP-6019-VGA** Mity-SoC VGA/LCD Development Kit

Mity-SoC Development Kit

