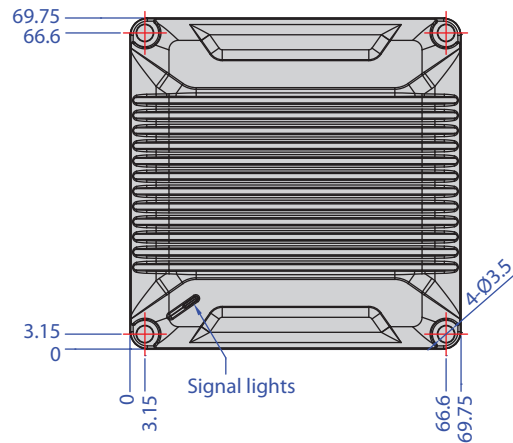
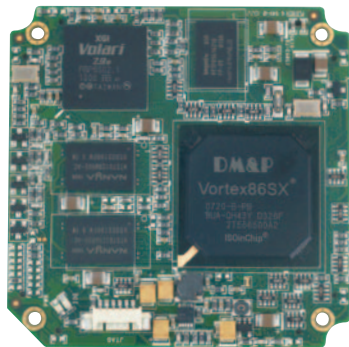


VSX-304-VI-B



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 bus standard compliant |
| BIOS | AMI BIOS |
| System Memory | 128/256 MB DDR2 Onboard |
| Watchdog Timer | Software programmable from 30.5 μ sec. to 512 sec. x 2 sets (Watchdog 1 fully compatible with M6117D) |
| VGA | XGI Volari Z9s Chipset VGA and TFT Flat Panel Interface Support Onboard 32MB VGA Memory, support resolution up to 1280x1024, 16M colors |
| LAN | Integrated 10/100Mbps Ethernet |
| Flash Disk Support | Onboard 2MB SPI Flash Disk Onboard 512MB SST Flash Disk (1GB/2GB/4GB are Optional) MSTI EmbedDisk Module (16MB and above) |
| Serial Console | Controlled by GP 36/37 |
| I/O Interface | Enhanced IDE port x1 RS-232 port x5 (TX/RX x1) USB port (Ver2.0) x4 Parallel port x1 16-bit GPIO port x2 10/100Mbps Ethernet port x1 |
| Connector | 1.27mm 76-pin box header for signal x4 1.25mm 6-pin wafer for JTAG x1 |
| Power Requirement | Single Voltage +5V @ 600mA |
| Dimensions | 66mm (L) x 66mm (W) |
| Weight | 25g |
| Operating Temperature | -20°C ~ +70°C -40°C ~ +85°C (Optional) |

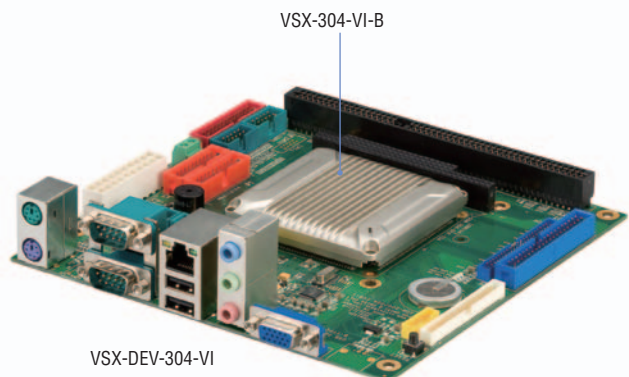
Packing List

- VSX-304-VI-B x1

Ordering Information

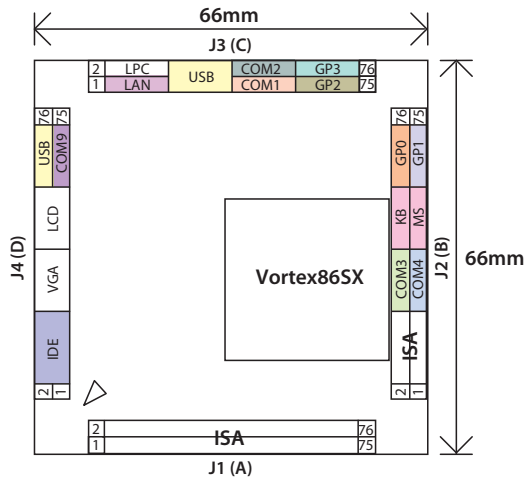
- **VSX-304-VI-B** Vortex86SX DIP-304pin CPU Module with 128MB DDR2
- **VSX-DEV-304-VI** VSX-304-VI-B Development board

VSX-DEV-304-VI Development Kit



VSX-DEV-304-VI

VSX-304-VI-B



VSX-304-VI-B Signal Assignment

| J1(A) | | J2(B) | | J3(C) | | J4(D) | | | | | | | | | |
|-------|-------------|-------|-------------|-------|-------------|-------|-------------|----|-----------|----|-------------|----|--------------|----|----------|
| Pin | Signal Name | Pin | Signal Name | Pin | Signal Name | Pin | Signal Name | | | | | | | | |
| 1 | GND | 2 | IOCHCK | 1 | DRQ6 | 2 | LA17 | 1 | IDERST | 2 | GND | | | | |
| 3 | RSTDRV | 4 | SD7 | 3 | DACK7 | 4 | MEMR | 3 | LAD0 | 4 | MTBF-OUT | 3 | IDED7 | 4 | IDED8 |
| 5 | IRQ9 | 6 | SD6 | 5 | DRQ7 | 6 | MEMW | 5 | LAD1 | 6 | LFRAME- | 5 | IDED6 | 6 | IDED9 |
| 7 | DRQ2 | 8 | SD5 | 7 | SD8 | 8 | SD9 | 7 | LAD2 | 8 | LDRQ- | 7 | IDED5 | 8 | IDED10 |
| 9 | OWS | 10 | SD4 | 9 | SD10 | 10 | SD11 | 9 | LAD3 | 10 | SERIRQ | 9 | IDED4 | 10 | IDED11 |
| 11 | SMEMW | 12 | SD3 | 11 | SD12 | 12 | SD13 | 11 | CLK24MOUT | 12 | PCIRST- | 11 | IDED3 | 12 | IDED12 |
| 13 | SMEMR | 14 | SD2 | 13 | SD14 | 14 | SD15 | 13 | PCICLK1 | 14 | GND | 13 | IDED2 | 14 | IDED13 |
| 15 | IOW | 16 | SD1 | 15 | GPCS0 | 16 | GPCS1 | 15 | GND | 16 | LINK/ACTIVE | 15 | IDED1 | 16 | IDED14 |
| 17 | IOR | 18 | SD0 | 17 | GND | 18 | GND | 17 | LANTX- | 18 | LANRX- | 17 | IDED0 | 18 | IDED15 |
| 19 | DACK3 | 20 | IOCHRDY | 19 | CTS3\ | 20 | DSR3\ | 19 | LANTX+ | 20 | LANRX+ | 19 | IDEREQ | 20 | IDECBLID |
| 21 | DRQ3 | 22 | AEN | 21 | DTR3\ | 22 | RXD3\ | 21 | DUPLEX | 22 | VCC3-OUT | 21 | IDEIOW | 22 | IDESA0 |
| 23 | DACK1 | 24 | SA19 | 23 | RI3\ | 24 | RTS3\ | 23 | GND | 24 | GND | 23 | IDEIOR | 24 | IDESA1 |
| 25 | DRQ1 | 26 | SA18 | 25 | TXD3\ | 26 | DCD3\ | 25 | USB03- | 26 | USB02- | 25 | IDERDY | 26 | IDESA2 |
| 27 | REFRESH | 28 | SA17 | 27 | CTS4\ | 28 | DSR4\ | 27 | USB03+ | 28 | USB02+ | 27 | IDEACK | 28 | IDEC0 |
| 29 | GND | 30 | SA16 | 29 | DTR4\ | 30 | RXD4\ | 29 | USB01- | 30 | USB00- | 29 | IDEINT | 30 | IDEC01 |
| 31 | SYSCLK | 32 | SA15 | 31 | RI4\ | 32 | RTS4\ | 31 | USB01+ | 32 | USB00+ | 31 | AIDELED | 32 | GND |
| 33 | IRQ7 | 34 | SA14 | 33 | TXD4\ | 34 | DCD4\ | 33 | GND | 34 | GND | 33 | HSYNC | 34 | BOUT |
| 35 | IRQ6 | 36 | SA13 | 35 | PPD0 | 36 | PSTB- | 35 | CTS2\ | 36 | DSR2\ | 35 | VSYNC | 36 | ROUT |
| 37 | IRQ5 | 38 | SA12 | 37 | PPD1 | 38 | PAFD- | 37 | DTR2\ | 38 | RXD2\ | 37 | DDCDAT | 38 | GOUT |
| 39 | IRQ4 | 40 | SA11 | 39 | PPD2 | 40 | PERROR- | 39 | RI2\ | 40 | RTS2\ | 39 | DDCCLK | 40 | GND |
| 41 | IRQ3 | 42 | SA10 | 41 | PPD3 | 42 | PINIT- | 41 | TXD2\ | 42 | DCD2\ | 41 | GND | 42 | LBACKL |
| 43 | DACK2 | 44 | SA9 | 43 | PPD4 | 44 | PSLIN- | 43 | TXDEN2 | 44 | TXDEN1 | 43 | LHSYNC | 44 | LVDDEN |
| 45 | TC | 46 | SA8 | 45 | PPD5 | 46 | PACK- | 45 | CTS1\ | 46 | DSR1\ | 45 | LDE | 46 | LVSYN |
| 47 | BALE | 48 | SA7 | 47 | PPD6 | 48 | PBUSY | 47 | DTR1\ | 48 | RXD1\ | 47 | LCLK | 48 | LG0 |
| 49 | OSC | 50 | SA6 | 49 | PPD7 | 50 | PPE | 49 | RI1\ | 50 | RTS1\ | 49 | LG1 | 50 | LB4 |
| 51 | MEMCS16 | 52 | SA5 | 51 | GND | 52 | PSLCT | 51 | TXD1\ | 52 | DCD1\ | 51 | LB5 | 52 | LB2 |
| 53 | IOCS16 | 54 | SA4 | 53 | RESET | 54 | GND | 53 | GND | 54 | GND | 53 | LB3 | 54 | LB0 |
| 55 | IRQ10 | 56 | SA3 | 55 | MSCLK | 56 | KBCLK | 55 | GP30 | 56 | GP31 | 55 | LB1 | 56 | LR4 |
| 57 | IRQ11 | 58 | SA2 | 57 | MSDATA | 58 | KBDATA | 57 | GP32 | 58 | GP33 | 57 | LR5 | 58 | LR2 |
| 59 | IRQ12 | 60 | SA1 | 59 | VBATT | 60 | SPEAKER | 59 | GP34 | 60 | GP35 | 59 | LR3 | 60 | LR0 |
| 61 | GND | 62 | SA0 | 61 | GP00 | 62 | GP01 | 61 | GP36 | 62 | GP37 | 61 | LR1 | 62 | LG4 |
| 63 | IRQ15 | 64 | SBHE | 63 | GP02 | 64 | GP03 | 63 | GP20 | 64 | GP21 | 63 | LG5 | 64 | LG2 |
| 65 | IRQ14 | 66 | LA23 | 65 | GP04 | 66 | GP05 | 65 | GP22 | 66 | GP23 | 65 | LG3 | 66 | GND |
| 67 | DACK0 | 68 | LA22 | 67 | GP06 | 68 | GP07 | 67 | GP24 | 68 | GP25 | 67 | GND | 68 | USBIN+ |
| 69 | DRQ0 | 70 | LA21 | 69 | GP10 | 70 | GP11 | 69 | GP26 | 70 | GP27 | 69 | SYS-FAIL-IN | 70 | USBIN- |
| 71 | DACK5 | 72 | LA20 | 71 | GP12 | 72 | GP13 | 71 | GND | 72 | GND | 71 | SYS-FAIL-OUT | 72 | GND |
| 73 | DRQ5 | 74 | LA19 | 73 | GP14 | 74 | GP15 | 73 | VCC | 74 | KEY1 | 73 | SYS-SW-IN | 74 | RXD9\ |
| 75 | DACK6 | 76 | LA18 | 75 | GP16 | 76 | GP17 | 75 | VCC | 76 | KEY0 | 75 | SYS-GPCS-IN | 76 | TXD9\ |

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