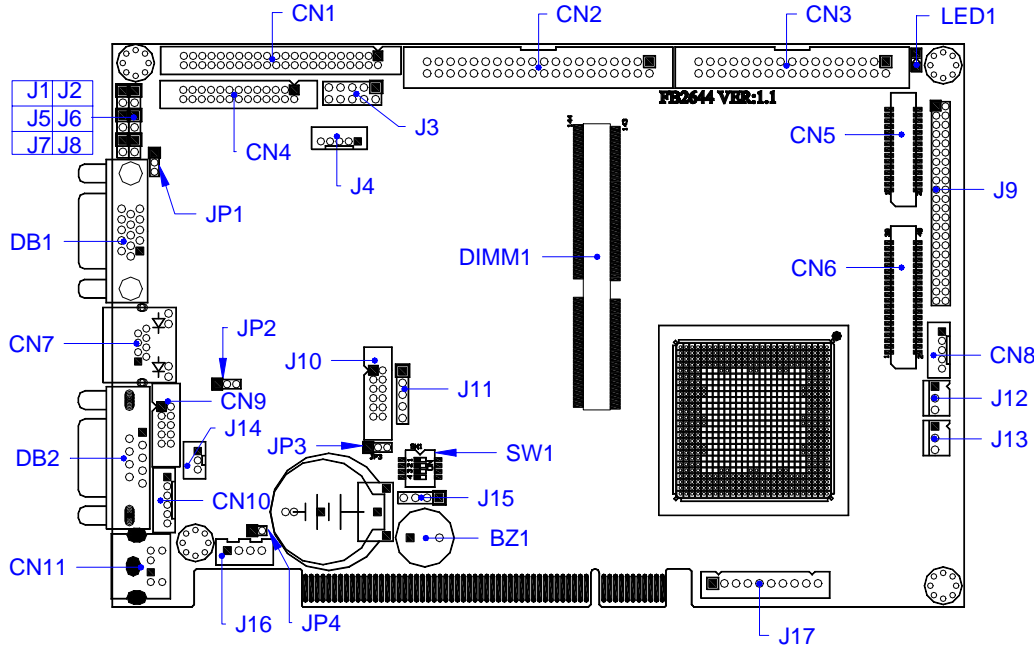


1. Brief

The FB2644 is a Low power PII Grade, all in one, half-size CPU card. This user's quick setting provides the jumper and switch settings, connector location, and their pin assignment.

2. Board Placement



3. Packing List

- 1 FB2644 all-in-one CPU board.
- 1 40-pin hard disk drive interface cable.
- 1 34-pin floppy drive interface cable.
- 1 serial port and parallel port interface cable with bracket.
- 1 mouse port adapter cable with bracket.
- 1 2-port USB adapter cable with bracket. (Optional item)
- 1 compact disc includes software utility.
- 1 hard copies of this quick setup manual.

4. Features

- * On-board up to 1GHz VIA Eden (Fanless)/1GHz VIA C3 (with fan) CPU w/heat sink.
- * Compact size slot card with PICMG PCI expansion bus.
- * VIA VT8606+VT82C696B chipset and 64KB or above L2 cache inside the CPUs.
- * On-board up to 128MB SDRAM and 1 SoDIMM socket for up to 640MB maximum.
- * 10/100M-TX Ethernet with RJ-45 connector.
- * Onboard VGA port (VT8606 embedded) supports CRT, TTL/LVDS LCD with up to 32MB shared memory.
- * 1 floppy, 2 PCI IDE, 1 parallel, 1 RS-232 and 1 RS-232/422/485/IrDA ports.
- * Optional CompactFlash socket for 3.3V CompactFlash and MicroDrives.
- * PS/2 compatible keyboard and mouse interface.
- * E2KEY function for safe CMOS data keeping. (Optional)
- * On-board buzzer and LED indicator.
- * 2 USB ports and hardware monitoring functions.
- * Provides 2 (CPU & case) cooling fan connector for monitoring.
- * Software programmable watchdog timer.
- * Provides 1 AC97 and 1 feature connector for **Audio**, and **Video In/Out** solutions. (Optional)
- * Flash BIOS with easy upgrade utility.
- * Compact size, 185 mm x 122 mm.

5. Connectors and Their Relative Jumpers

A. CPU Base Clock and PCI Clock Select (SW1-1 and SW1-2)

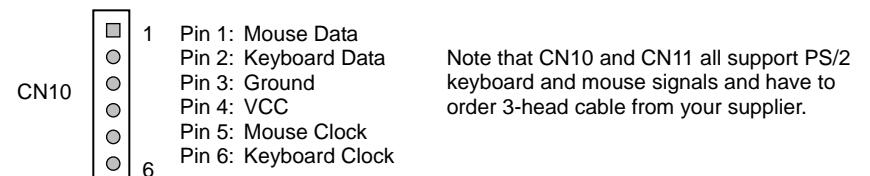
| SW1-1 | SW1-2 | CPU Base Clock | PCI Clock | Remark |
|-------|-------|----------------|-----------|----------------|
| Off | Off | 133.3 MHz | 33.3 MHz | Factory Preset |
| Off | On | 100.0 MHz | 33.3 MHz | |
| On | Off | 105.0 MHz | 33.3 MHz | |
| On | On | 66.7 MHz | 33.3 MHz | |

B. Reset Header (J5)

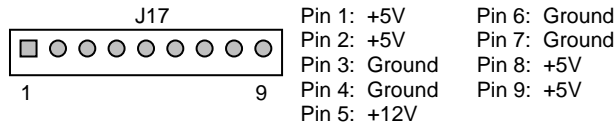
J5 is a 2-pin header for connecting to system reset bottom. Close these 2 pins to hardware reset FB2644 and restart system booting.

C. Keyboard and Mouse Connector (CN10 and CN11)

CN11 is a standard PS/2 type keyboard connector and any PS/2 type keyboard can plug into CN11 directly without extra adapter cable. CN10 provides PS/2 mouse interface, use the included mouse adapter cable to connect between CN11 and standard PS/2 mouse.



D. Auxiliary Power Connector (J17: 9-pin 2.5mm JST)



Note: This power connector is ideal for standalone applications.

E. Floppy Connector (CN3: 34-pin 2.54mm IDC)

Note that the included floppy cable supports only 720KB, 1.44MB, and 2.88MB disk drives.

F. IDE Hard Disk Connectors (CN2 - 40-pin 2.54mm IDC, & CN1 -44-pin 2.0mm IDC)

Use the included 40-pin hard disk cable, you can attach up to two 3.5" hard disk drives. The 44-pin HDD cable is optional.

G. Parallel Port Connector (CN4: 26-pin 2.0mm IDC)

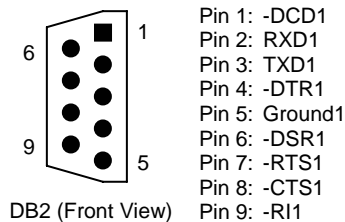
The included printer interface cable is used to transfer 26-pin connector into standard parallel port connector (D-sub 25-pin).

H. Serial Port Connectors & Selector (DB2, CN9, J11, J14, SW1-3, SW1-4, and JP2)

There are 4 connectors and 1 switch that served for onboard 2 serial ports. The following table and figure list the combination and pin definition of them:

| Functional connector, header, and jumper of serial ports | Serial Port 1 | Serial Port 2 |
|--|---------------|---------------|
| RS-232 Signals | DB2 | CN9 and SW1 |
| RS-422 Signals | - | CN9 and SW1 |
| RS-485 Signals | - | CN9 and SW1 |
| Terminator for RS-422 & RS-485 | - | JP2 |
| Infrared Signals | - | J11 |
| Internal TXD/RXD | - | J14 |

(1) Serial Port 1 (DB2, 9-pin D-sub connector)



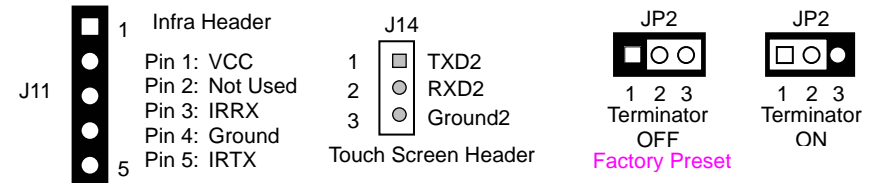
(2) Serial Port 2 (CN9, J11, J14, SW1-3, SW1-4, and JP2)

| CN9 | D-sub 9 | RS-232 | RS-422 | RS-485 |
|-----|---------|-------------|--------|--------|
| 1 | 1 | -DCD2 | | - |
| 2 | 6 | -DSR2 | | - |
| 3 | 2 | RXD2 | RX- | 485- |
| 4 | 7 | -RTS2 | TX- | - |
| 5 | 3 | TXD2 | RX+ | 485+ |
| 6 | 8 | -CTS2 | TX+ | - |
| 7 | 4 | -DTR2 | | - |
| 8 | 9 | -RI2 | | - |
| 9 | 5 | Ground2 | | |
| 10 | Metal | Case Ground | | |

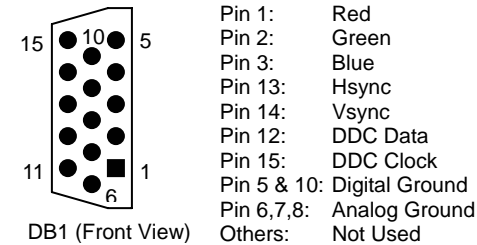
| SW1-3 | SW1-4 | Mode |
|-------|-------|----------|
| Off | Off | RS-232 |
| Off | On | RS-422 |
| On | Off | RS-485 |
| On | On | Reserved |

Note 1: The included serial port cable is use to transfer CN9 into standard 9-pin D-sub male connector.

Note 2: RS-232 is factory preset

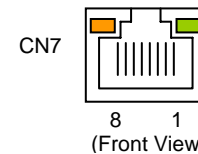


I. CRT Connector (DB1)

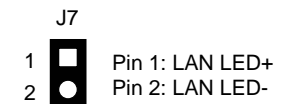


J. LAN Connector and LED Indicators (CN7: RJ45, and J7)

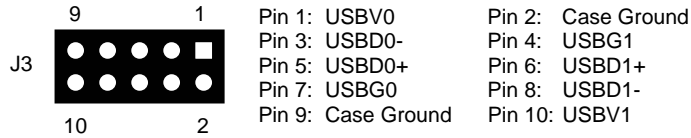
CN7 is a RJ45 connector with 2 LEDs. The up side LED (orange) indicates data is accessing and the down side LED (green) indicates on-line status. (When lighted indicates on-line and off indicates off-line) The following lists the pin assignment of CN7 and J7:



| CN7 | Signal | CN7 | Signal |
|-----|--------|-----|--------|
| 1 | TPTX+ | 5 | FBG1 |
| 2 | TPTX- | 6 | TPRX- |
| 3 | TPRX+ | 7 | FBG2 |
| 4 | FBG1 | 8 | FBG2 |

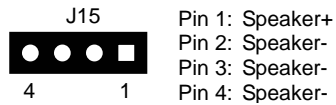


K. USB Connector (J3)



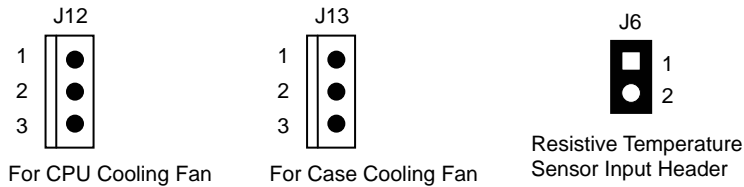
L. On-Board Buzzer and External Speaker Header (BZ1 and J15)

BZ1 is the on-board buzzer and you can use one 2-pin or 4-pin cable connects between an extra 8 ohms speaker with J15 header.



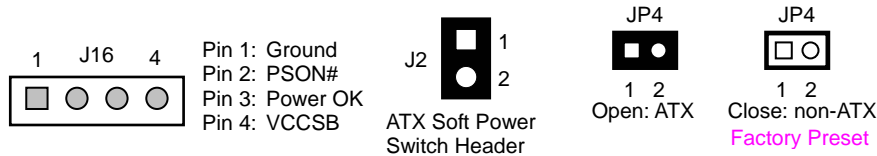
M. Cooling Fan Connectors and Temperature Sensor Header(J12, J13 and J6)

J12 & J13 are all 3-pin Molex connector which are use to drive CPU cooling fan and case cooling fan respectively. FB2644 provides one 2-pin header (J6) for connecting a temperature sensor anywhere the system case.



N. Soft Start Connector (J16, J2 and JP4) – for ATX Power Supply Only

When ATX power supply is used, you can connect J16 to ATX control signals from the back plane, and connect J2 to a push bottom switch as soft power switch. If non-ATX power supply is used, please short JP4 with jumper and you don't need to connect J16 and J2.

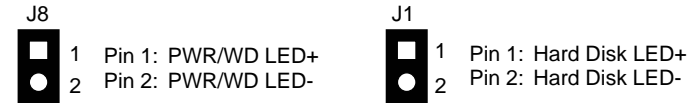


O. SoDIMM Socket (DIMM1)

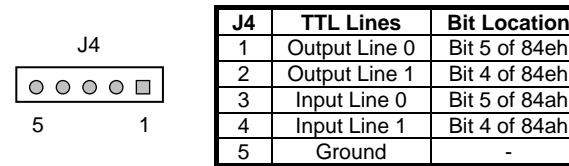
DIMM1 supports 144-pin, 3.3V, and PC-133 SDRAM with size of 32MB, 64MB, 128MB, 256MB, and 512MB.

P. Power/Watchdog and HDD LED Indicators (J8 and J1)

LED1 is the on-board Power/Watchdog (PWR/Wd) LED and J8 (3-pin header) is used to connect an external PWR/Wd LED. J1 is the hard disk LED header.



Q. TTL I/O Connector (J4: 5-pin 2.0mm JST)



R. CompactFlash Socket and Master/Slave Select (J18 and JP1)

The CompactFlash socket J18 (on the solder side) is optional and supports 3.3V CompactFlash and MicroDrives. JP1 is used to select master/slave device of this socket. Be sure to avoid the same master/slave setting with which connects to IDE#2 (CN1) connector, if you use J18 and CN1 simultaneously.



S. AMR Connector (J10)

| J10 | Signal | J10 | Signal |
|-----|--------|-----|--------|
| 1 | BITCLK | 2 | +12V |
| 3 | +5V | 4 | SYNC |
| 5 | Ground | 6 | Ground |
| 7 | +3.3V | 8 | ACRST# |
| 9 | SDOUT | 10 | SPKR |
| 11 | SDIN | 12 | SDIN2 |

J10 provides AC97 signals for Audio and Modem functions. FB4641 (Audio Adapter Board, Optional) is recommended for your best Audio solutions.

T. LCD Connectors (CN5, CN6, and CN8)

CN6 supports 24-bit TTL LCD signals, CN5 supports 36-bit LVDS LCD signals, and CN8 is the power connector for inverter board.

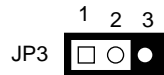
| CN5 | Signal | CN5 | Signal |
|-----|--------|-----|--------|
| 1 | Ground | 2 | Y0+ |
| 3 | Y0- | 4 | Ground |
| 5 | Y1+ | 6 | Y1- |
| 7 | Ground | 8 | Y2+ |
| 9 | Y2- | 10 | Ground |
| 11 | YCK+ | 12 | YCK- |
| 13 | Ground | 14 | Z0+ |
| 15 | Z0- | 16 | Ground |
| 17 | Z1+ | 18 | Z1- |
| 19 | Ground | 20 | Z2+ |
| 21 | Z2- | 22 | Ground |
| 23 | ZCK+ | 24 | ZCK- |
| 25 | Ground | 26 | Ground |
| 27 | +3.3V | 28 | +3.3V |
| 29 | +5V | 30 | +5V |

CN8

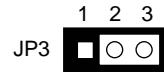
| | | |
|---|---|---------------|
| □ | 1 | Pin 1: +12V |
| ○ | 2 | Pin 2: Ground |
| ○ | 3 | Pin 3: ENVDD |
| ○ | 4 | Pin 4: N.C. |
| ○ | 5 | Pin 5: +5V |

| CN6 | Signal | CN6 | Signal | CN6 | Signal | CN6 | Signal |
|-----|--------|-----|--------|-----|--------|-----|--------|
| 1 | +5V | 21 | FP12 | 2 | +5V | 22 | FP13 |
| 3 | Ground | 23 | FP14 | 4 | Ground | 24 | FP15 |
| 5 | +3.3V | 25 | FP16 | 6 | +3.3V | 26 | FP17 |
| 7 | N.C. | 27 | FP18 | 8 | Ground | 28 | FP19 |
| 9 | FP0 | 29 | FP20 | 10 | FP1 | 30 | FP21 |
| 11 | FP2 | 31 | FP22 | 12 | FP3 | 32 | FP23 |
| 13 | FP4 | 33 | Ground | 14 | FP5 | 34 | Ground |
| 15 | FP6 | 35 | FPCLK | 16 | FP7 | 36 | FPVS |
| 17 | FP8 | 37 | DE | 18 | FP9 | 38 | PHS |
| 19 | FP10 | 39 | ENVDD | 20 | FP11 | 40 | ENAVEE |

Note: If any trouble when connecting FB2644 with LCD panels, you could contact technical support division of FabiaTech Corporation.

U. Clear CMOS Data (JP3)

Normal Operation



Clear CMOS Data

V. Main Extension BUS (BUS1: PICMG PCI)**W. Feature Connector (J9: 44-pin 2.0mm IDC)**

J9 is a feature connector and which supports signals for Video In/Out solutions. All of these functions consist in FB4644 adapter board (optional). The following table lists the pin definitions of J9 connector:

| J9 | Signal | Note | J9 | Signal | Note |
|----|-----------|------|----|-------------|------|
| 1 | +5V | | 2 | +5V | |
| 3 | ZVHS | | 4 | ZWS | |
| 5 | ZVCLK | | 6 | Ground | |
| 7 | ZVD0 | | 8 | ZVD1 | |
| 9 | ZVD2 | | 10 | ZVD3 | |
| 11 | ZVD4 | | 12 | ZVD5 | |
| 13 | ZVD6 | | 14 | ZVD7 | |
| 15 | ZVD8 | | 16 | ZVD9 | |
| 17 | ZVD10 | | 18 | ZVD11 | |
| 19 | ZVD12 | | 20 | ZVD13 | |
| 21 | ZVD14 | | 22 | ZVD15 | |
| 23 | SPDAT | | 24 | SPCLK | |
| 25 | Ground | | 26 | TVD0/FP28 | *1 |
| 27 | TVD1/FP29 | *1 | 28 | TVD2/FP33 | *1 |
| 29 | TVD3/FP30 | *1 | 30 | TVD4/FP25 | *1 |
| 31 | TVD5/FP26 | *1 | 32 | TVD6/FP24 | *1 |
| 33 | TVD7/FP27 | *1 | 34 | TVD8 | |
| 35 | TVD9 | | 36 | TVD10 | |
| 37 | TVD11 | | 38 | TVBLK# | |
| 39 | TVHS/FP34 | *1 | 40 | TWS/FP31 | *1 |
| 41 | GOPO | | 42 | TVCLK/FP32 | *1 |
| 43 | Ground | | 44 | TVCLKR/FP35 | *1 |

Note *1: These signals also are used to cooperate with CN6 for connecting 36-bit TTL LCD panels.