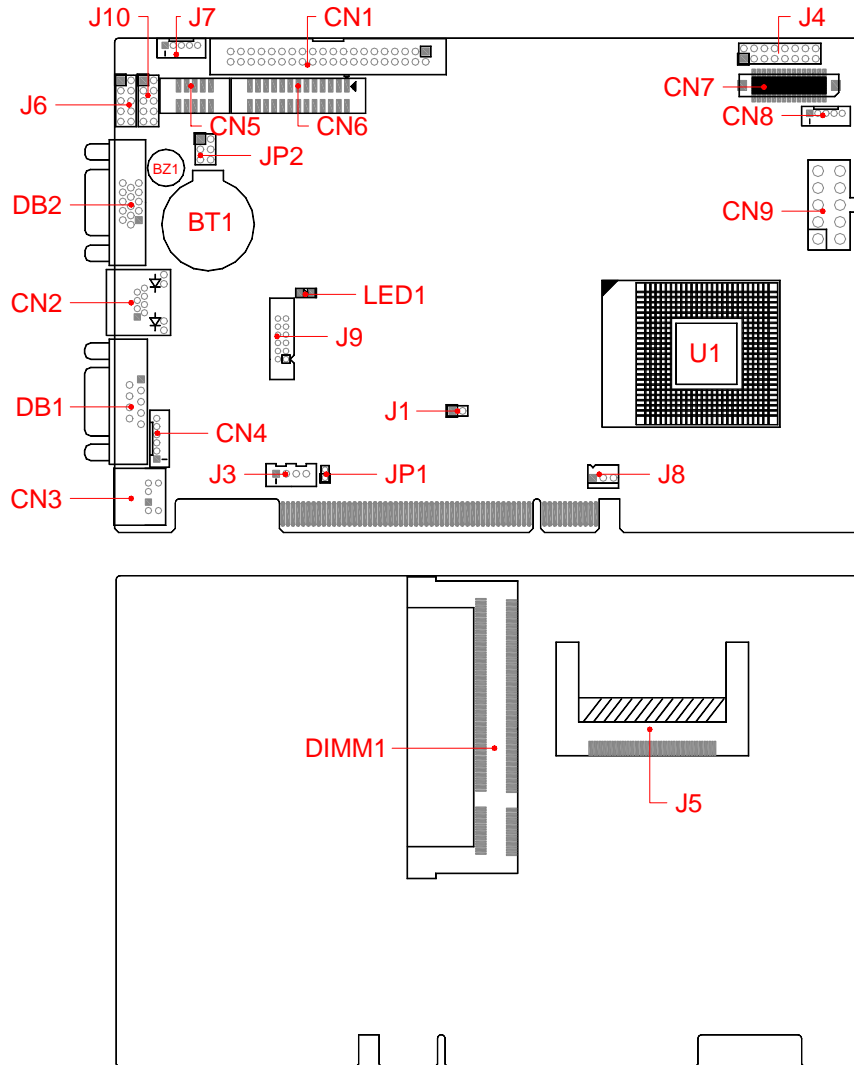


## 1. Brief

The FB2646 series is a Low power PII or PIII 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 FB2646(x) all-in-one CPU board.
- 1 40-pin hard disk drive interface cable.
- 1 serial port and parallel port interface cable with bracket.
- 1 Y-type keyboard and mouse port adapter cable.
- 1 USB and Audio adapter board with cables
- 1 CPU heat sink with cooling fan. (FB2646 only)
- 1 compact disc includes software utility.
- 1 hard copies of this quick setup manual.

## 4. Features

- \* On-board low power Intel Pentium-M (FB2646A) or socket for Celeron-M and Pentium-M CPUs
- \* Compact size slot card with PICMG PCI expansion bus.
- \* Intel 855GME+ICH4 chipset and 512KB or above L2 cache inside the CPUs.
- \* Supports 1 SoDIMM socket for up to 1GB DDR-333 RAM.
- \* 10/100/1000 base-TX (Giga) Ethernet with RJ-45 connector.
- \* Onboard VGA port (855GME embedded) supports CRT and LVDS interface.
- \* 1 PCI IDE and 1 CompactFlash socket for 3.3V CompactFlash and MicroDrive.
- \* 4 USB (V2.0), 1 parallel, 1 RS-232 and 1 RS-232/422/485 ports.
- \* PS/2 compatible keyboard and mouse interface.
- \* E2KEY functions for safe CMOS data keeping. (Optional)
- \* 4-line TTL I/O, On-board buzzer, and LED indicator.
- \* Hardware monitoring functions and 1 CPU cooling fan connector for monitoring.
- \* Provides AC97 Audio function and software programmable watchdog timer.
- \* Flash BIOS with easy upgrade utility.
- \* Compact size, 185 mm x 122 mm.

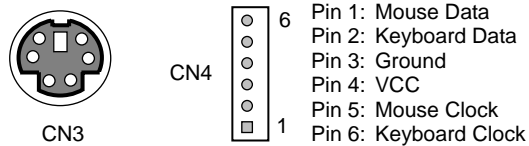
## 5. Connectors and Jumpers List

Name	Function	Name	Function
CN1	40-pin IDE Connector (40-pin IDC)	J1	Clear CMOS data Header (J1x2))
CN2	LAN Connector (RJ45 w/LEDs)	J2	n. a.
CN3	Keyboard and Mouse Connector	J3	ATX Signals Connector (4-pin JST)
CN4	Keyboard and Mouse Connector	J4	Integrated Signals Connector (J2x8)
CN5	COM2 Connector (10-pin IDC)	J5	CompactFlash Socket (50-pin)
CN6	Parallel Port Connector (26-pin IDC)	J6	USB #1 & #2 Connector (J2x5)
CN7	LVDS Connector (30-pin DF13)	J7	TTL I/O Connector (5-pin JST)
CN8	LCD Power Connector (5-pin JST)	J8	CPU Cooling Fan Connector (3-pin)
CN9	Mini ATX Connector (10-pin)	J9	AC97 Audio Connector (12-pin)
		J10	USB #3 & #4 Connector (J2x5)
DB1	COM1 Connector (9-pin D-sub)		
DB2	CRT Connector (15-pin D-sub)	JP1	PS2/ATX Power Select Jumper (J1x2))
		JP2	COM2 Mode Select Jumper (J2x3)
DIMM1	SoDIMM Socket (200-pin)		

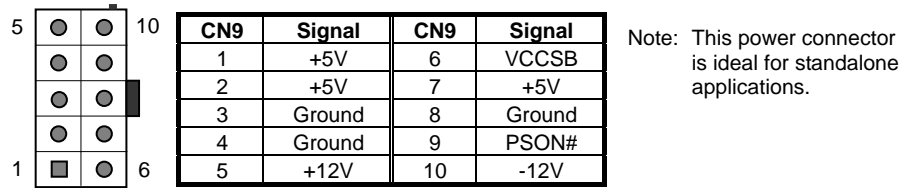
## 6. Connectors and Their Relative Jumpers

### A. Keyboard and Mouse Connectors (CN3 and CN4)

CN3 is a standard PS/2 type keyboard connector and any PS/2 type keyboard can plug into CN3 directly without extra adapter cable. Use the included keyboard+mouse adapter cable, you can connect keyboard and mouse simultaneously. CN4 is another way to attach keyboard and mouse with optional adapter cable.



### B. Auxiliary Power Connector (CN9), ATX Power Signal Connector and Jumper (J3 and JP1)



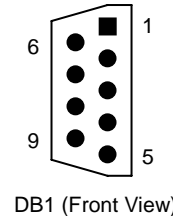
### C. Parallel Port Connector (CN6: 26-pin 2.0mm IDC)

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

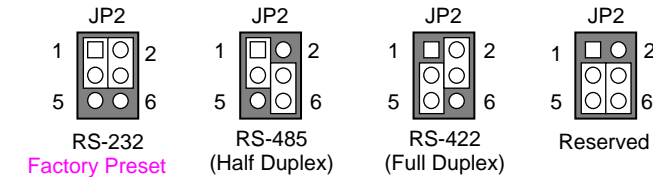
### D. Serial Port Connectors & Selector (DB1, CN5, and JP2)

There are 2 connectors and 1 jumper 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	DB1	CN5
RS-422 Signals	-	CN5
RS-485 Signals	-	CN5
Infra Red Signals	-	J4 (Please refer to 6.M section)
Mode Select	-	JP2



DB1	Signals	CN5	D-sub 9	RS-232	RS-422	RS-485
1	-DCD1	1	1	-DCD2		-
6	-DSR1	2	6	-DSR2		-
2	RXD1	3	2	RXD2	RX-	485-
7	-RTS1	4	7	-RTS2	TX-	-
3	TXD1	5	3	TXD2	RX+	485+
8	-CTS1	6	8	-CTS2	TX+	-
4	-DTR1	7	4	-DTR2		-
9	-RI1	8	9	-RI2		-
5	Ground1	9	5	Ground2		
Metal	Case Ground	10	Metal	Case Ground		

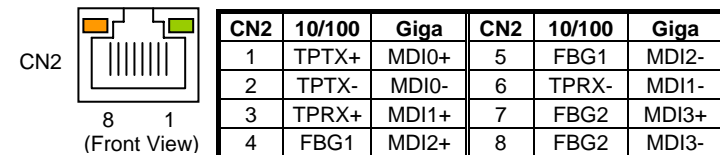


### E. IDE Hard Disk Connector (CN1 - 40-pin 2.54mm IDC)

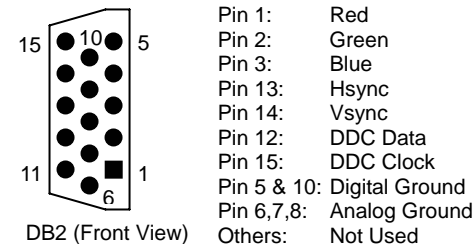
Use the included 40-pin hard disk cable, you can attach up to two 3.5" hard disk drives.

### F. LAN Connector and LED Indicators (CN2)

CN2 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)



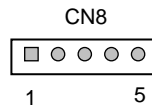
### G. CRT Connector (DB2)



## H. LCD Connectors (CN7 and CN8)

CN7 supports 36-bit LVDS LCD signals, and CN8 is the power connector for inverter board.

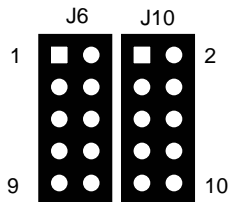
CN7	Signal	CN7	Signal
1	Ground	2	Y0+
3	Y0-	4	Ground
5	Y1+	6	Y1-
7	Ground	8	Y2+
9	Y2-	10	Ground
11	YCK+	12	YCK-
13	Ground	14	Z0+
15	Z0-	16	Ground
17	Z1+	18	Z1-
19	Ground	20	Z2+
21	Z2-	22	Ground
23	ZCK+	24	ZCK-
25	Ground	26	Ground
27	+3.3V	28	+3.3V
29	+5V	30	+5V



Pin 1: +12V  
Pin 2: Ground  
Pin 3: ENVDD  
Pin 4: N.C.  
Pin 5: +5V

Note: If any trouble when connecting FB2646 with LCD panels, you could contact technical support division of FabiaTech Corporation.

## I. USB Connectors (J6 and J10)



Note that only one USB adapter cable is included (FB4641 w/cable), the second one adapter cable is optional.

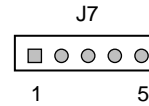
J6	Signal	J10	Signal
1	USBV0	1	USBV2
2	Case Ground	2	Case Ground
3	USBD0-	3	USBD2-
4	USBG1	4	USBG3
5	USBD0+	5	USBD2+
6	USBD1+	6	USBD3+
7	USBG0	7	USBG2
8	USBD1-	8	USBD3-
9	Case Ground	9	Case Ground
10	USBV1	10	USBV3

## J. Audio Connector (J9: 12-pin 2.0mm IDC)

J9	Signal	J9	Signal
1	AC97_CLK	2	+12V
3	+5V	4	AC97_SYNC
5	Ground	6	Ground
7	N. C.	8	AC97_RST#
9	AC97_SDO	10	AC97_SDI2
11	AC97_SDI0	12	AC97_SDI1

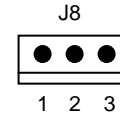
J9 provides AC97 signals for Audio function. Use the included FB4641 (Audio Adapter Board) and cable for your Audio applications.

## K. TTL I/O Connector (J7: 5-pin 2.0mm JST)



J7	TTL Lines	Bit Location
1	Output Line 0	Please refer to
2	Output Line 1	User's Manual
3	Input Line 0	for details.
4	Input Line 1	
5	Ground	-

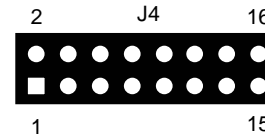
## L. Cooling Fan Connector (J8)



Pin1: Ground  
Pin2: +12V  
Pin3: Fan Speed

J8 is 3-pin Molex connector which is used to drive CPU cooling fan for FB2646.

## M. Multi-Function Header (J4)



J4	Signal	J4	Signal
1	Power LED+	2	Power LED-
3	HDD LED+	4	HDD LED-
5	LAN LED+	6	LAN LED-
7	Temperature Sensor+	8	Temperature Sensor-
9	IRTX	10	IRRX
11	Ground	12	Ground
13	Reset+	14	Reset-
15	Soft Start SW+	16	Soft Start SW-

## N. SoDIMM Socket (DIMM1)

DIMM1 (Located on the solder side) supports 200-pin, 2.5V, and DDR-333 DRAM modules with size of 128MB, 256MB, 512MB, and 1GB.

## O. CompactFlash Socket (J5)

The CompactFlash socket J5 (Located on the solder side) supports 3.3V CompactFlash and MicroDrive. Its default setting is secondary master port.

## P. Clear CMOS Data (J1)



J1 is used to clear CMOS data by closing its 2-pin for about 3 seconds.