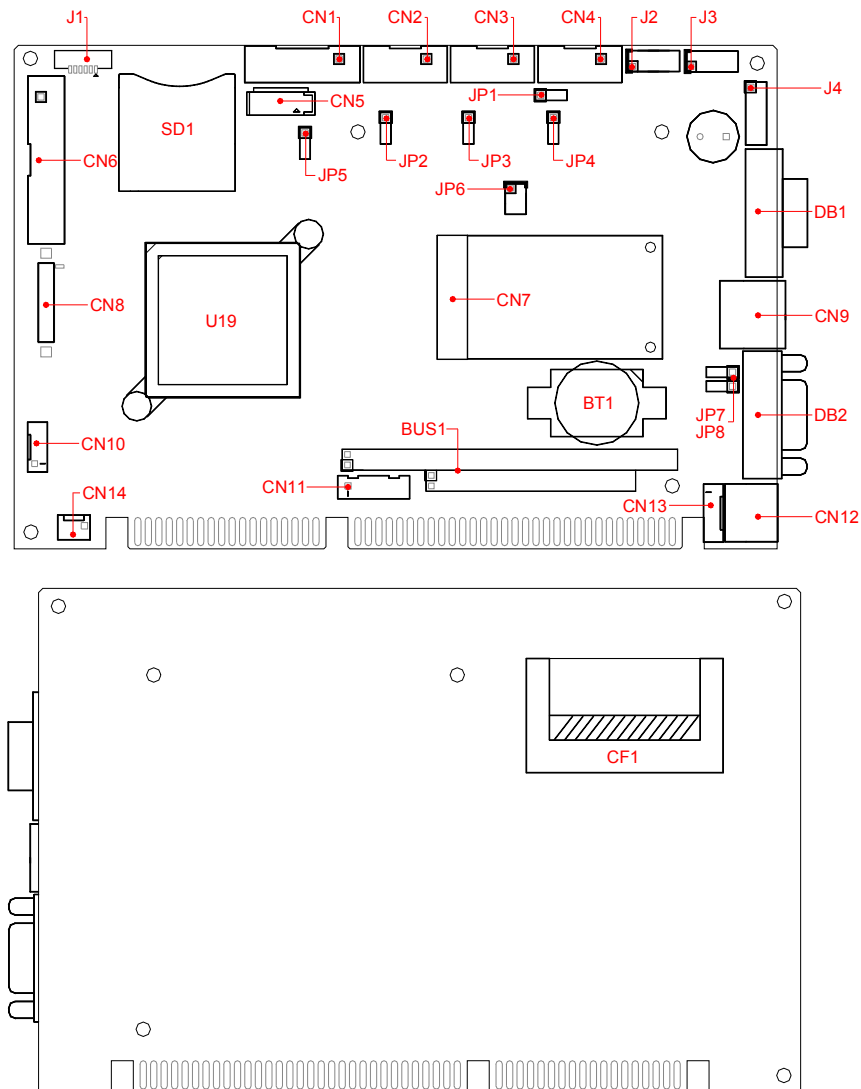


1. Brief

The FB2402 is a Low power Vortex86 DX3, 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 FB2402x all-in-one CPU board.
- 1 serial port interface cable with bracket.
- 1 PS/2 keyboard and mouse port adapter cable. (Optional)
- 1 or 2 USB adapter cables. (Optional)
- 1 SATA interface cable (Optional)
- 1 compact disc includes software utilities and manuals.

4. Features

- * On-board Vortex86 DX3 CPU (512KB L2, running at 1GHz) with heat sink only. (Fanless operation)
- * Compact size slot card with fully compatible ISA and PC/104 bus.
- * On-board 512MB DDR3 RAM (1GB maximum)
- * 4 USB ports and 1 GbE with RJ-45 connector.
- * Supports VGA and LCD/LVDS (optional) with UMA architecture.
- * 1 SATA connector, 1 mSATA socket (optional), and 1 SD socket (optional) for storage devices.
- * 3 RS-232 and 1 RS-232/422/485 ports.
- * 1 parallel (optional) and 8 channel A/D inputs (optional).
- * CompactFlash socket for CompactFlash and MicroDrives.
- * On-board 128MB Flash Disk (optional).
- * PS/2 keyboard and mouse interface, On-board buzzer, and LED indicator.
- * Software programmable watchdog timer and Flash BIOS with easy upgrade utility.
- * Compact size, 185 mm x 122 mm.

5. Connectors and Jumpers List

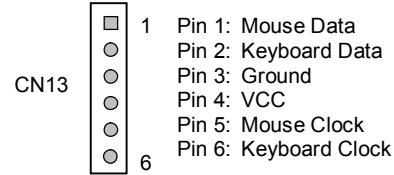
Name	Function	Name	Function
CN1	8 CH A/D Connector (optional)	J1	Reserved Connector (6-pin)
CN2	COM4 Connector (10-pin IDC)	J2	USB #3 & #4 Connector (J2*5)
CN3	COM3 Connector (10-pin IDC)	J3	USB #1 & #2 Connector (J2*5)
CN4	COM2 Connector (10-pin IDC)	J4	Multi-Function Header (J2*6)
CN5	SATA Connector	J5	Reserved Header (J1*8)
CN6	Parallel Port Connector (optional)	JP1	COM2 Terminator Select (3-pin)
CN7	mSATA Connector (optional)	JP2	COM4 Power Output Select (Reserved)
CN8	LCD Connector (40-pin DF13, option)	JP3	COM3 Power Output Select (Reserved)
CN9	LAN Connector (RJ45 w/LEDs)	JP4	COM2 Power Output Select (Reserved)
CN10	LCD Power Connector (optional)	JP5	Flash Disk* M/S Select (Reserved)
CN11	Aux. Power Connector (6-pin JST)	JP6	COM2 Mode Select (J2*3)
CN12	KB/MS Connector (6-pin mini-Din)	JP7	Int./Ext. Battery Select (3-pin)
CN13	Aux. KB/MS CN. (6-pin JST, optional)	JP8	COM1 Power Output Select (Reserved)
CN14	Cooling Fan Connector (optional)	DB1	CRT Connector (15-pin D-sub)
CF1	CompactFlash Socket (50-pin)	DB2	COM1 Connector (9-pin D-sub)
LED1	Power/Watchdog LED (Green)	BUS1	PC/104 Connector (64 and 40-pin)
SD1	SD Socket (optional)	BUS2	ISA Golden Finger (16-bit)
SP1	On-Board Buzzer	BUS3	ISA Golden Finger (8-bit)

Note*: CompactFlash Socket and On-board Flash Disk

6. Connectors and Their Relative Jumpers

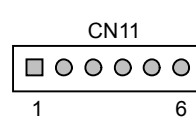
A. Keyboard and Mouse Connector (CN12 and CN13, optional)

CN12 is a standard PS/2 type keyboard connector and any PS/2 type keyboard can plug into CN12 directly without extra adapter cable. CN13 provides PS/2 mouse interface, use optional mouse adapter cable to connect between CN13 and standard PS/2 mouse.



Note that CN12 and CN13 all support PS/2 keyboard and mouse signals and have to order 3-head cable from your supplier.

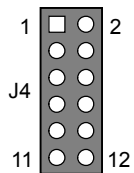
B. Auxiliary Power Connector (CN11)



Pin 1: Ground
Pin 2: +5V
Pin 3: +5V
Pin 4: Ground
Pin 5: Ground
Pin 6: +12V

Note 1: CN11 is ideal for standalone applications.
Note 2: +5V only, 2.5A Minimum.
Note 3: +12V is not necessary for this board running, it connects to LCD power connector (CN10) and cooling fan connector (CN14) only.

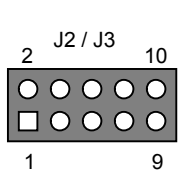
C. Multi-Function Header (J4, Including Reset, External Speaker, and Indicating LEDs)



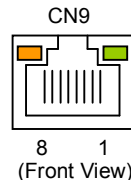
J4	Function	J4	Function
1	+5V (Ext. Speaker+)	2	-RESET (Reset Button-1)
3	Ext. Speaker-	4	Ground (Reset Button-2)
5	Ext. Speaker-	6	CF Access LED+
7	Ext. Speaker-	8	CF Access LED-
9	N.C.	10	PWR/WD LED+
11	N.C.	12	PWR/WD LED-

D. USB Connectors (J2 and J3), LAN Connector and LED Indicators (CN9: RJ45)

J2 and J3 support 2 port USB signals each. Use the additional adapter cables (Optional) for your USB applications. CN9 is a RJ45 connector with 2 LEDs. The orange LED indicates data is accessing and the green LED indicates on-line status.



J2/J3	Signal	J2/J3	Signal
1	USBV0/USBV2	2	Case Ground
3	USBD0-/USBD2-	4	USBG1/USBG3
5	USBD0+/USBD2+	6	USBD1+/USBD3+
7	USBG0/USBG2	8	USBD1-/USBD3-
9	Case Ground	10	USBV1/USBV3



E. SATA Connector and mSATA Socket (CN5 and CN7, optional)

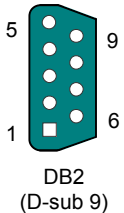
Use the optional 7-pin SATA cable, you can attach one SATA disk drive via CN5. CN7 is mSATA socket for M2 modules.

F. Serial Port Connectors & Selector (DB2, CN4, CN3, CN2, JP1, JP2, JP3, JP4, JP6, and JP8)

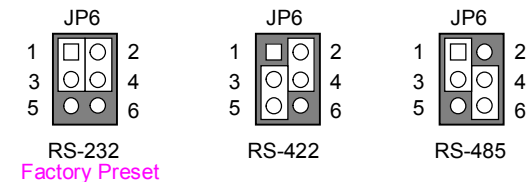
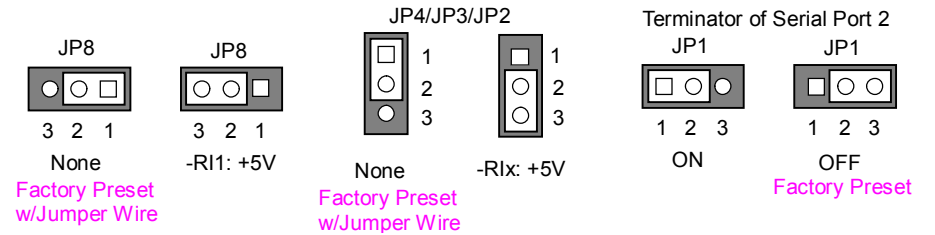
There are 4 connectors and 6 jumpers that served for on-board 4 serial ports. The following table and figure list the combination and pin definition of them:

Functional connector, header, and jumper of serial ports	Serial Port 1	Serial Port 2	Serial Port 3	Serial Port 4
RS-232 Signals	DB2	CN4	CN3	CN2
Power Output Select	JP8	JP4	JP3	JP2
Mode Select	-	JP6	-	-
RS-422 Signals	-	CN4	-	-
RS-485 Signals & Terminator	-	CN4 and JP1	-	-

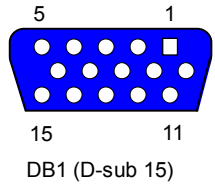
DB2	Signals	CN4/CN3/CN2	D-sub 9	RS-232	RS-422	RS-485
1	-DCD1	1	1	-DCD2/3/4	RX-	485-
6	-DSR1	2	6	-DSR2/3/4	-	-
2	RXD1	3	2	RXD2/3/4	RX+	485+
7	-RTS1	4	7	-RTS2/3/4	-	-
3	TXD1	5	3	TXD2/3/4	TX+	-
8	-CTS1	6	8	-CTS2/3/4	-	-
4	-DTR1	7	4	-DTR2/3/4	TX-	-
9	-RI1	8	9	-RI2/3/4	-	-
5	Ground1	9	5	Ground2/3/4	-	-
Metal	Case Ground	10	Metal	Case Ground	-	-



Note: Serial port 2, 3, 4 all are necessary to use included serial port interface cable for standard 9-pin D-sub output.



G. CRT Connector (DB1)

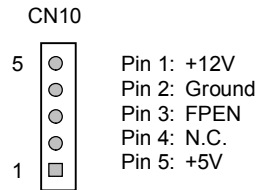


DB1	Signal	DB1	Signal
1	Red	13	Hsync
2	Green	14	Vsync
3	Blue	12	DDC Data
5, 10	Digital Ground	15	DDC Clock
6, 7, 8	Analog Ground	Others	Not Used

H. LCD Connectors (CN8 and CN10, all are Optional)

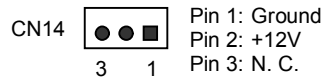
CN8	Signal	CN8	Signal
1	Ground	2	Y0+
3	Y0-	4	Ground
5	Y1+	6	Y1-
7	Ground	8	Y2+
9	Y2-	10	Ground
11	YCK+	12	YCK-
13	Ground	14	Y3+
15	Y3-	16	Ground
17	N.C.	18	N.C.
19	Ground	20	N.C.
21	N.C.	22	Ground
23	N.C.	24	N.C.
25	Ground	26	Ground
27	+3.3V	28	+3.3V
29	+3.3V	30	+3.3V

CN8 supports 24-bit TTL LCD signals, and CN10 is the power connector for LCD panel.

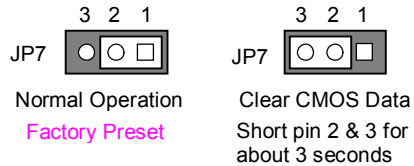


Note: If any question when connecting FB2402 with LCD panels, you could contact technical support division of FabiaTech Corporation.

I. CPU Cooling Fan Connector (CN14, optional)



J. Clear CMOS RAM (JP7)

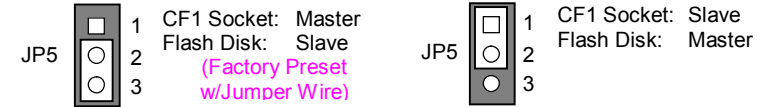


K. Parallel Port Connector (CN6: 26-pin 2.54mm IDC, optional)

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

L. CompactFlash Socket and Master/Slave Select (CF1 and JP5)

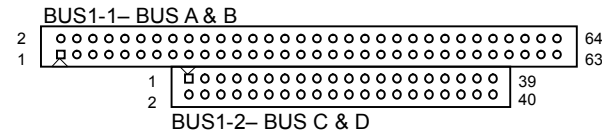
The CompactFlash socket CF1 (on the solder side) supports 3.3V CompactFlash and MicroDrives. JP5 is used to select master/slave device of this socket and optional on-board Flash Disk.



M. A/D Input Connector (CN1: 16-pin 2.54mm IDC, Optional)

CN1	Signals	CN1	Signals
1	Analog I/P 0	2	Ground
3	Analog I/P 1	4	Ground
5	Analog I/P 2	6	Ground
7	Analog I/P 3	8	Ground
9	Analog I/P 4	10	Ground
11	Analog I/P 5	12	Ground
13	Analog I/P 6	14	Ground
15	Analog I/P 7	16	Ground

N. PC/104 Connectors (BUS1: 64-pin IDC & 40-pin IDC)



End of Document