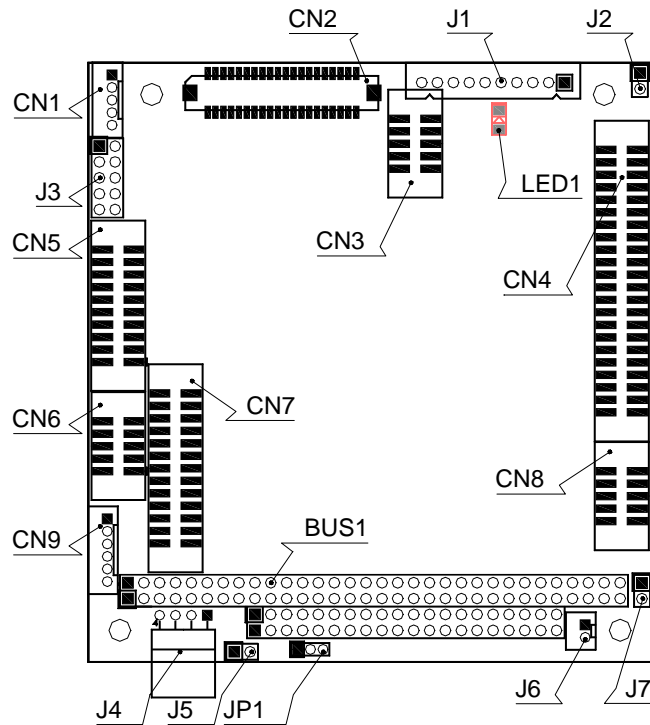


## 1. Brief

The FB2510 is an all-in-one, PC/104, NS Geode low power CPU module. This user's quick setting provides the jumper settings, connector location, and their pin assignment.

## 2. Board Placement



## 3. Packing List

- 1 FB2510x all-in-one PC/104 CPU board.
- 1 VGA (CRT interface) adapter cable.
- 1 44-pin hard disk drive interface cable.
- 1 20-pin to 34-pin floppy drive interface cable.
- 2 serial port adapter cable and 1 parallel port interface cable.
- 1 PS/2 keyboard and mouse port adapter cable.
- 1 USB adapter cable. (Optional)
- 1 10-pin LAN adapter cable with FB4605A transfer board.
- 1 compact disc includes software utility.
- 1 hard copies of this quick setup manual.

## 4. Features

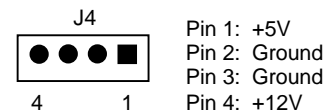
- \* On-board 200~300 MHz NS Geode GX1 CPU.
- \* NS CS5530A chipset with UMA architecture.
- \* 1 So-DIMM socket for up to 128MB PC-100 SDRAM.
- \* One 100/10 base-T Ethernet port.
- \* Provides CRT and LCD with 1.5MB to 4MB shared memory.
- \* 1 parallel port, 2 RS-232, 1 floppy port and 1 PCI IDE interface.
- \* PS/2 compatible keyboard and mouse interface.
- \* Provides header for external speaker and hard disk access LED.
- \* Flash BIOS with easy upgrade utility.
- \* 2 USB ports and software programmable watchdog timer.
- \* Power requires +5V only, 1.2A maximum.
- \* PC/104 form factor, 90.2 mm x 95.9 mm (3.55" x 3.775")

## 5. Connectors, Headers and Their Relative Jumpers

### A. Reset Header (J5)

J5 is a 2-pin header for connecting to system reset bottom. Close these 2 pins to hardware reset FB2510 and restart system booting.

### B. Power Connector (J4: 4-pin 2.5mm JST)

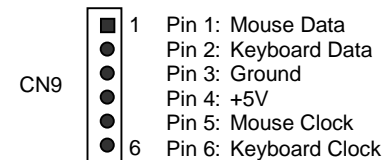


- Pin 1: +5V
- Pin 2: Ground
- Pin 3: Ground
- Pin 4: +12V

Note: FB2510 needs +5V only, +12V is not necessary.

### C. Keyboard and Mouse Connector (CN9)

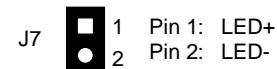
CN9 provides PS/2 keyboard and mouse interface, use the included adapter cable to connect between CN9 and standard PS/2 device.



- 1 Pin 1: Mouse Data
- Pin 2: Keyboard Data
- Pin 3: Ground
- Pin 4: +5V
- Pin 5: Mouse Clock
- 6 Pin 6: Keyboard Clock

### D. IDE Hard Disk Connector and Access LED Header (CN4 and J7)

Use 44-pin hard disk cable you can attach up to two 2.5" hard disk drives.



- 1 Pin 1: LED+
- 2 Pin 2: LED-

**E. Floppy Connector (CN5: 20-pin 2.0mm IDC)**

The included floppy drive interface cable is used to transfer 20-pin connector into standard 34-pin connector. Note that the included floppy cable supports only 720KB, 1.44MB, and 2.88MB floppy disk drives, not for 360KB and 1.2MB.

**F. Parallel Port Connector (CN7: 26-pin 2.0mm IDC)**

The included printer interface cable is used to transfer 26-pin connector into standard DB-25 connector.

**G. Serial Port Connectors (CN6 & CN8)**

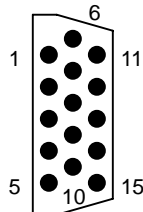
The included serial port cables are use to transfer CN6 and CN8 to 9-pin D-type male connector. The following table shows the pin definitions of CN6, CN8, and 9-pin D-sub connectors:

CN6	Signal	DB-9	Signal	CN8
1	-DCD1	1	-DCD2	1
2	-DSR1	6	-DSR2	2
3	RXD1	2	RXD2	3
4	-RTS1	7	-RTS2	4
5	TXD1	3	TXD2	5
6	-CTS1	8	-CTS2	6
7	-DTR1	4	-DTR2	7
8	-RI1	9	-RI2	8
9	Ground1	5	Ground2	9
10	Case Ground	-	Case Ground	10

**H. CRT Connector (CN3)**

The following table and figure illustrate the pin definition of CN3 and D-sub 15-pin on the CRT adapter cable:

CN3	Signal	DB-15	CN3	Signal	DB-15
1	RED	1	2	Case Ground	Case
3	GREEN	2	4	Digital Ground	5,10
5	BLUE	3	6	Analog Ground	6,7,8
7	VSYNC	14	8	DDC Data	12
9	HSYNC	13	10	DDC Clock	15



DB-15 (Front View)

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

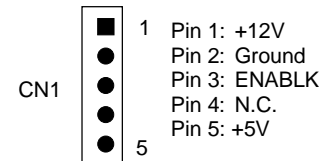
**I. LCD Connectors (CN2 & CN1)**

CN2 is 18-bit LCD interface connector and CN1 provides control signals and power source for LCD inverter.

CN2	Signal	CN2	Signal	CN2	Signal	CN2	Signal
1	+5V	21	FPD8	2	+5V	22	FPD9
3	Ground	23	FPD10	4	Ground	24	FPD11
5	+3.3V	25	N.C.	6	+3.3V	26	N.C.
7	N.C.	27	FPD12	8	Ground	28	FPD13
9	N.C.	29	FPD14	10	N.C.	30	FPD15
11	FPD0	31	FDP16	12	FPD1	32	FPD17
13	FPD2	33	Ground	14	FPD3	34	Ground
15	FPD4	35	FPCLK	16	FPD5	36	FPVSYNC
17	N.C.	37	DE	18	N.C.	38	FPHSYNC
19	FDP6	39	ENABLK	20	FPD7	40	ENAVEE

Note 1: N.C. means not connected, it is reserved for upgraded signals.

Note 2: If any trouble when connecting FB2510 with LCD panels, you could contact technical support division of FabiaTech Corporation.

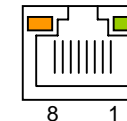


Note: +12V is come from J4  
 (power connector) only

**J. LAN Connector and LED Indicators (J1: 10-pin 2.5mm JST)**

J1 provides twist-pair signals of LAN port. Use the included adapter board (FB4605A) with cable to transfer to standard RJ45 connector. The left side LED (orange) indicates data is accessing and the right side LED (green) indicates on-line status. (When lighted indicates on-line and off indicates off-line). The following figure and table list the pin assignment of RJ45 connector on the FB4605A LAN adapter board:

RJ45 connector on  
 FB4605A adapter board



(Front View)

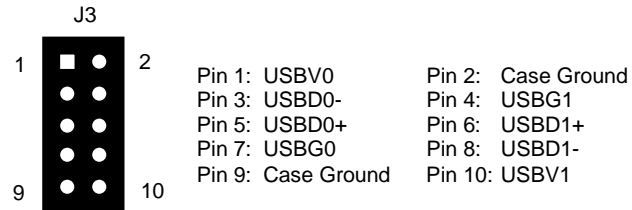
FB4605A	Signal	FB4605A	Signal
1	TPTX2+	5	FBG12
2	TPTX2-	6	TPRX2-
3	TPRX2+	7	FBG22
4	FBG12	8	FBG22

### K. External Speaker Header (J2)



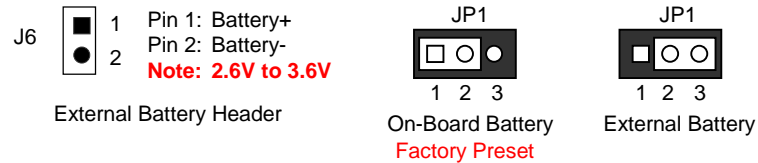
### L. USB Connector (J3)

Use the USB adapter cable (optional), you can attach up to 2 USB devices.

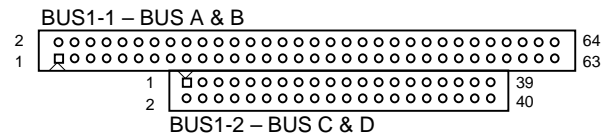


### M. External Battery Header and Battery Select Jumper (J6 & JP1)

J6 is used to connect an external battery pack if on-board Lithium battery is empty, and please setting JP1 properly of on-board battery or external battery.



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



### O. Power/Watchdog LED (LED1)

LED1 is used to indicate as powered-on when it lighted, and watchdog is enabled when it is blinking. The watchdog will be disabled and LED1 will always lighted after system reset.