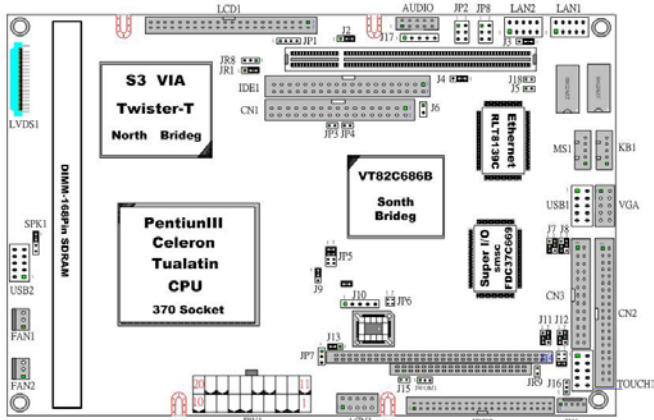


MAT686

Quick Reference Guide

Rev. V0



J2: LCD Panel Voltage Select

1-2 ON	+5V		
2-3 ON	+3.3V		

J3/J4: PCI OR PICMG INTERFACE SELECT

J3 AND J4 1-2 ON	PCI INTERFACE
J3 AND J4 2-3 ON	PICMG INTERFACE

J5: LAN ENABLED OR DISABLED J6: HDD LED

1-2 ON	1-2 OFF	PIN1	PIN2
DISABLED	ENABLED	VCC	SIGNAL

J7: COM2 D-SUB PIN 1, 9 VOLTAGE OR SIGNALSELECT

1-3 ON	2-4 ON	3-5 ON	4-6 ON
+12V	DCD (Default)	RI (Default)	VCC5V

J8: COM1 D-SUB PIN 1, 9 VOLTAGE OR SIGNALSELECT

1-3 ON	2-4 ON	3-5 ON	4-6 ON
+12V	DCD (Default)	RI (Default)	VCC5V

J9: BATTERY CMOS CLEAR JUMPER

1-2 ON	Default	
2-3 ON	Clear CMOS	

J11: COM3 D-SUB PIN 1, 9 VOLTAGE OR SIGNALSELECT

1-3 ON	2-4 ON	3-5 ON	4-6 ON
+12V	DCD (Default)	RI (Default)	VCC5V

J12: COM4 D-SUB PIN 1, 9 VOLTAGE OR SIGNALSELECT

1-3 ON	2-4 ON	3-5 ON	4-6 ON
+12V	DCD (Default)	RI (Default)	VCC5V

J13: WDT OUTPUT SELECT

WatchDog Timer Output for System Reset or IRQ11 Selection. When Jumper 1-2 ON, then output signal of WDT will generate a interrupt signal to IRQ11. Once the system accept the interrupt request, will release a ISR address (CS:E000 IP:0000) for user. User can write some interrupt service routine here, to develop application software.

1-2 ON: IRQ11. 2-3 ON: SYSTEM RESET.

J14: COM2 RS-232/422/485 SELECT

1-2 ON	3-4 ON	5-6 ON
RS-485	RS-422	RS-232

J15: IBM MicroDrive MASTER OR SLAVE SELECT

1-2 ON: Master 1-2 OFF: SLAVE

J16: RS-422/485 VOLTAGE OUTPUT SELECT (CABLE-RI)

1-2 ON	+5V for RS-422/485 connector PIN5 (D-SUB PIN9)
2-3 ON	+12V for RS-422/485 connector PIN5 (D-SUB PIN9)

SUPPORT FOR W1 PIN 5

W1: RS-422 CONNECTOR

PIN1	PIN2	PIN3	PIN4	PIN5
RXD/TX+	DTR/RX-	DCD/TX-	TXD/RX+	CABLE-RI

J17: IR DEFINITION

PIN1	PIN2	PIN3	PIN4	PIN5
VCC5V	NC	IRRXD	GND	IRTXD

JR9: RS-422 ALWAYS ENABLED JUMPER NO RS-485

PIN1: +5V

PIN2: RTSB-

IDE1: IDE1 CONNECTOR

IDE2: IDE2 CONNECTOR

USB1: USB0 AND USB1

USB2: USB2 AND USB3

LAN1: LAN CONNECTOR

LAN2: LAN CONNECTOR

VGA: VGA CONNECTOR

CN2: FDD

CN3: PRINTER

G1: PCI CONNECTOR

CN4: CompactFlash I/II or MicroDrive SOCKET

PW1: ATX POWER CONNECTOR KB1: KEYBOARD CONNECTOR

MS1: MOUSE CONNECTOR

JP1: FOR DVI CONNECTOR

PIN1	PIN2	PIN3	PIN4
SPD1	SPCLK1	GOP0	FPDET

JP2 AND JP8 : LAN LED CONNECTOR

1-2	3-4	5-6
LAN ACTIVE	10M ACTIVE	100M ACTIVE

JP3: POWER BOTTOM

JP4: RESET CONNECTOR

JP5: CPU CLK SETTING

	1-2	3-4	5-6	7-8
AUTO	ON	ON	OFF	OFF
66M Hz	OFF	OFF	ON	ON
100M Hz	OFF	OFF	OFF	ON
133M Hz	OFF	OFF	OFF	OFF

JP6: 4 BIT DIO PORT ADDRESS SELECT

ALL OFF	1-2 ON	3-4 ON	ALL ON
320 H	280 H	260 H	240 H

TOUCH1: TOUCH PANEL CONNECTOR

PIN1	PIN2	PIN3	PIN4	PIN5	PIN6	PIN7	PIN8	PIN9
X+	SX+	X-	SX-	Y+	SY+	Y-	SY-	5W

4 WIRE: X+, X-, Y+, Y-

5 WIRE: X+, X-, Y+, Y-, 5W

8 WIRE: X+, X-, Y+, Y-, SX+, SX-, SY+, SY-

JR5/JR6/JR7: SELECT 4WIRE OR 5 WIRE OR 8 WIRE

	4 WIRE	5 WIRE	8 WIRE
JR5	2-3 ON	2-3 ON	2-3 ON
JR6	2-3 ON	1-2 ON	2-3 ON
JR7	2-3 ON	2-3 ON	1-2 ON

CN2: COM1, COM2, COM3, COM4 CONNECTOR

1	VCC	11	VCC	21	VCC	31	VCC
2	DSR1	12	DSR2	22	DSR3	32	DSR4
3	SIN1	13	SIN2	23	SIN3	33	SIN4
4	RTS1	14	RTS2	24	RTS3	34	RTS4
5	SOUT1	15	SOUT2	25	SOUT3	35	SOUT4
6	CTS1	16	CTS2	26	CTS3	36	CTS4
7	DTR1	17	DTR2	27	DTR3	37	DTR4
8	RI1/12V	18	RI2/12V	28	RI3/12V	38	RI4/12V
9	GND	19	GND	29	GND	39	GND
10	NC	20	NC	30	NC	40	NC

SPK1: EXTERNAL SPEAKER

PIN1	PIN2	PIN3	PIN4
SPKN	SPKA	NC	GND

JR10: AUDIO CONNECTOR

1	CLK	2	SPEAK	3	SDIN	4	VCC3
5	SDOUT	6	GND	7	SYNC	8	NC
9	ACRST	10	+12V				

ACN1: DIGITAL I/O 8 BIT PORT

PIN1	PIN2	PIN3	PIN4	PIN5
SD0	SD1	SD2	SD3	SD4
PIN6	PIN7	PIN8	PIN9	PIN10
SD5	SD6	SD7	GND	VCC

JWOM1: MODEM WAKE UP

PIN1	PIN2	PIN3
5V	GND	SIGNAL

FAN1 AND FAN2 : FAN COOLER CONNECTOR

PIN 1	PIN2	PIN3
FANCE	+12V	GND

MANUFACTURER DEFAULT JUMPER LIST

J10: PROGRAM CONNECTOR JR1: 2-3 ON

LVDS1: LVDS CONNECTOR DEFINITION

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	VDD	2	VDD
3	GND	4	GND
5	RX0-	6	RX0+
7	GND	8	RX1-
9	RX1+	10	GND
11	RX2-	12	RX2+
13	GND	14	RXCK-
15	RXCK+	16	GND
17	RX3-	18	RX3+
19	GND	20	GND

LVDS2: LVDS CONNECTOR DEFINITION

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	VDD	2	VDD
3	GND	4	GND
5	RX0-	6	RX0+
7	GND	8	RX1-
9	RX1+	10	GND
11	RX2-	12	RX2+
13	GND	14	RXCK-
15	RXCK+	16	GND
17	RX3-	18	RX3+
19	GND	20	GND

LCD1: LCD CONNECTOR DEFINITION

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	+12V	2	+12V
3	GND	4	GND
5	+5V/3.3V (J1)	6	+5V/3.3V (J1)
7	ENAVEE	8	GND
9	PD0	10	PD1
11	PD2	12	PD3
13	PD4	14	PD5
15	PD6	16	PD7
17	PD8	18	PD9
19	PD10	20	PD11
21	PD12	22	PD13
23	PD14	24	PD15
25	PD16	26	PD17
27	PD18	28	PD19
29	PD20	30	PD21
31	PD22	32	PD23
33	PD24	34	PD25
35	SHFCLK	36	VSYNC
37	M(D.0)	38	HSYNC
39	GND	40	ENABLK
41	PD26	42	PD27
43	PD28	44	PD29
45	PD30	46	PD31
47	PD32	48	PD33
49	PD34	50	PD35

Note: 'Chapter 3' show Data Output PD0 ~ PD35 for different LCD.

TFT LCD OUTPUT DEFAULT IS (SR3D_3=1)

STN LCD OUTPUT DEFAULT IS (SR3D_3=1)

You can set LCD type by BIOS "Advanced Chipset Features" (Panel Type)

PIN				FUNCTION	
7-8	5-6	3-4	1-2		
ON	ON	ON	ON	640 X 480 TFT	(0)
ON	ON	ON	OFF	800 X 600 TFT	(1)
ON	ON	OFF	ON	1024X768 TFT 2pixel/clk at 32MHz	(2)
ON	ON	OFF	OFF	1280 X 1024 TFT	(3)
ON	OFF	ON	ON	640 X 480 DSTN	(4)
ON	OFF	ON	OFF	800 X 600 DSTN	(5)
ON	OFF	OFF	ON	1024 X 768 DSTN	(6)
ON	OFF	OFF	OFF	1024X768 TFT 1pixel/clk at 65MHz	(7)
OFF	ON	ON	ON	640 X 480 TFT	(8)
OFF	ON	ON	OFF	800 X 600 TFT	(9)
OFF	ON	OFF	ON	1024 X 768 TFT	(A)
OFF	ON	OFF	OFF	1280 X 1024 TFT	(B)
OFF	OFF	ON	ON	1400x1050 TFT 2pixel/clk at 54Mhz	(C)
OFF	OFF	ON	OFF	800 X 600 DSTN	(D)
OFF	OFF	OFF	ON	1024 X 768 DSTN	(E)
OFF	OFF	OFF	OFF	1280 X 1024 DSTN	(F)

WARNING: The resolution type of LCD and CRT must be the same.

Otherwise, when system reboot, it will show error on

CRT resolution and it need to change setup again.

TN LCD OUTPUT (SR3D_3=0)

Pin Name	STN 8	STN16	STN24	STN 8	DSTN 16	DSTN24	DSTN 16	DSTN 24
PD0	R0	R0	R0	LR0	LR0	LR0		LB3
PD1	G0	G0	G0			LR3		LB2
PD2	B0	B0	B0	LG0	LG0	LG0		LB1
PD3	R1	R1	R1					LB0
PD4	G1	G1	G1	LB0	LB0	LB0		UB3
PD5	B1	B1	B1					UB2
PD6	R2	R2	R2	LR1	LR1	LR1		UB1
PD7	G2	G2	G2			LG3		UB0
PD8		B2	B2		LG1	LG1		LG3
PD9		R3	R3					LG2
PD10		G3	G3		LR2	LB1		LG1
PD11		B3	B3					LG0
PD12		R4	R4		LG2	LR2		UG3
PD13		G4	G4			LB3		UG2
PD14		B4	B4			LG2		UG1
PD15		R5	R5					UG0
PD16			G5			LB2		LR3
PD17			B5					LR2
PD18			R6	UR0	UR0	UR0		LR1
PD19			G6			UR3		LR0
PD20			B6	UG0	UG0	UG0		UR3
PD21			R7					UR2
PD22			G7	UB0	UB0	UB0		UR1
PD23			B7					UR0
PD24				UR1	UR1	UR1		
PD25						UG3		
PD26					UG1	UG1		
PD27								
PD28						UB1		
PD29								
PD30					UR2	UR2		
PD31						UB3		
PD32					UG2	UG2		
PD33								
PD34						UB2		
PD35								

TFT LCD DATA OUTPUT (SR3D_3=0)

Pin Name	TFT 9	TFT 2x9	TFT 12	TFT 2x12	TFT 15	TFT 2x15	TFT 18	TFT 2x18	TFT 24	TFT 18	TFT 2X18	TFT 24
PD0							R0	R00	R2		R14	B0
PD1								R10	R0		R15	B1
PD2					R0	R00	R1	R01	R3	B0	B00	B2
PD3						R10		R11		B1	B01	B3
PD4			R0	R00	R1	R01	R2	R02	R4	B2	B02	B4
PD5				R10		R11		R12		B3	B03	B5
PD6	R0	R00	R1	R01	R2	R02	R3	R03	R5	B4	B04	B6
PD7		R10		R11		R12		R13	R1	B5	B05	B7
PD8	R1	R01	R2	R02	R3	R03	R4	R04	R6		R12	G0
PD9		R11		R12		R13		R14			R13	G1
PD10	R2	R02	R3	R03	R4	R04	R5	R05	R7	G0	G00	G2
PD11		R12		R13		R14		R15		G1	G01	G3
PD12							G0	G00	G2	G2	G02	G4
PD13								G10	G0	G3	G03	G5
PD14					G0	G00	G1	G01	G3	G4	G04	G6
PD15						G10		G11		G5	G05	G7
PD16			G0	G00	G1	G01	G2	G02	G4		R10	R0
PD17				G10		G11		G12			R11	R1
PD18	G0	G00	G1	G01	G2	G02	G3	G03	G5	R0	R00	R2
PD19		G10		G11		G12		G13	G1	R1	R01	R3
PD20	G1	G01	G2	G02	G3	G03	G4	G04	G6	R2	R02	R4
PD21		G11		G12		G13		G14		R3	R03	R5
PD22	G2	G02	G3	G03	G4	G04	G5	G05	G7	R4	R04	R6
PD23		G12		G13		G14		G15		R5	R05	R7
PD24							B0	B00	B2		G10	
PD25								B10	B0		G11	
PD26							B0	B00	B1	B01	B3	
PD27								B10			G13	
PD28			B0	B00	B1	B01	B2	B02	B4		G14	
PD29				B10		B11		B12			G15	
PD30	B0	B00	B1	B01	B2	B02	B3	B03	B5		B10	
PD31		B10		B11		B12		B13	B1		B11	
PD32	B1	B01	B2	B02	B3	B03	B4	B04	B6		B12	
PD33		B11		B12		B13		B14			B13	
PD34	B2	B02	B3	B03	B4	B04	B5	B05	B7		B14	
PD35		B12		B13		B14		B15			B15	