IT8712F & IT8702F APPLICATION CIRCUIT

REVISION HISTORY

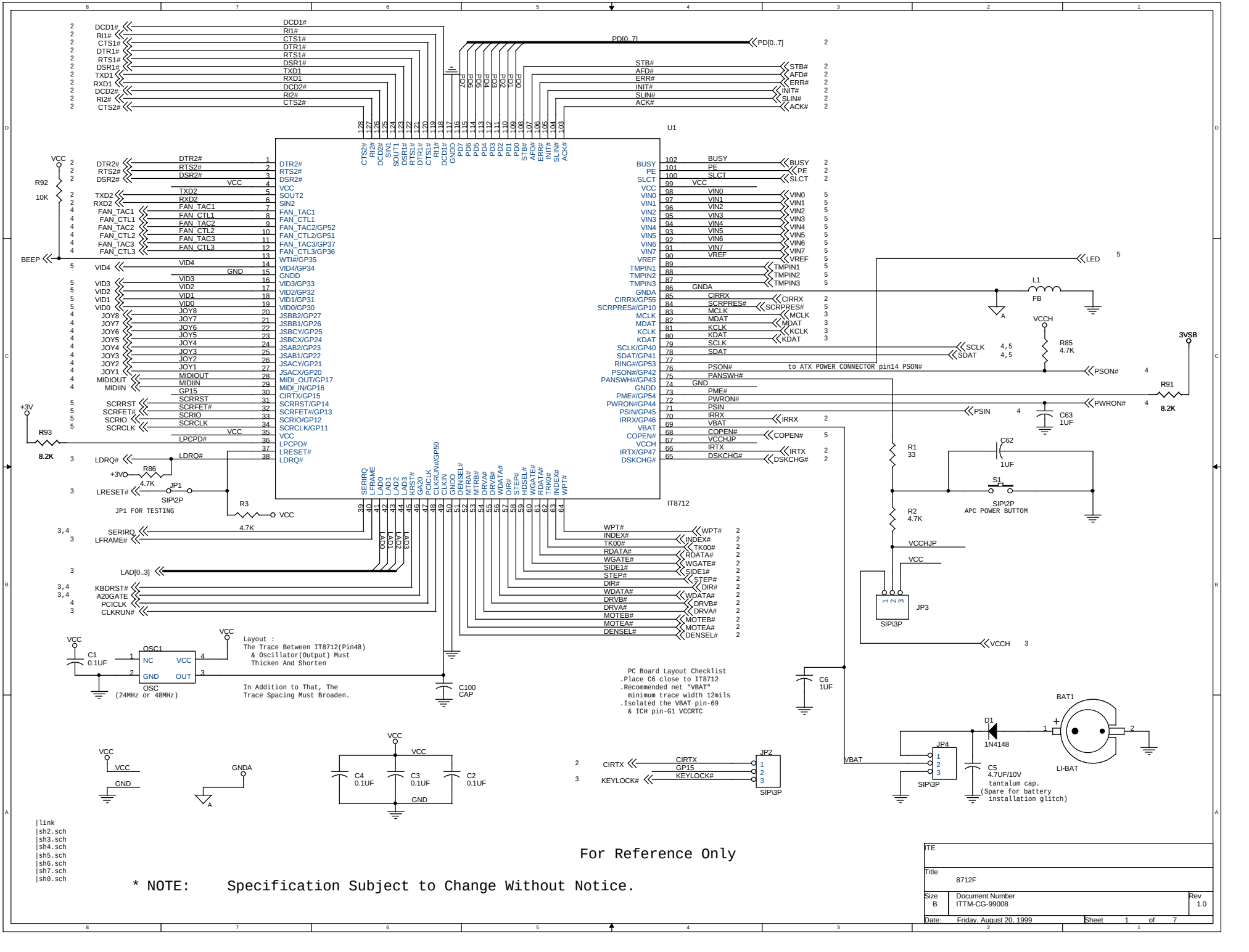
SCHEMATICS REVISION	PCB REVISION	DATE	MODIFICATION ITEM	DRAWING AND P.C.B. MODIFICATION DESCRIPTION
ITTM-CG-99008 VER 1.0		Aug.20,99	Subject : IT8712F & IT8702F APPLICATION CIRCUIT	FIRST DRAFT

SH1:IT8712
Sh2:FDC,LPT & COM,IR & CIR & RING IN
SH3:LPC,KBC,MOUSE
SH4:GAME,MIDI,FAN CTRL
SH5:THERMISTOR & SMART CARD READER & VOLTAGE MONITOR
SH6:IT8712 SPECIAL APPLICATIONS CIRCUITRY FOR Intel ICH
SH7:Layout/routing guidelines

PRELIMINARY

* NOTE: Specification Subject to Change Without Notice.

ITE		
Title	IT8712F & IT8702F APPLICATION CKT	
Size B	Document Number ITTM-CG-99008	Rev 1.0
Date: Friday, August 20, 1999	Sheet 0 of 7	



For Reference Only

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ITE			
Title	8712F		
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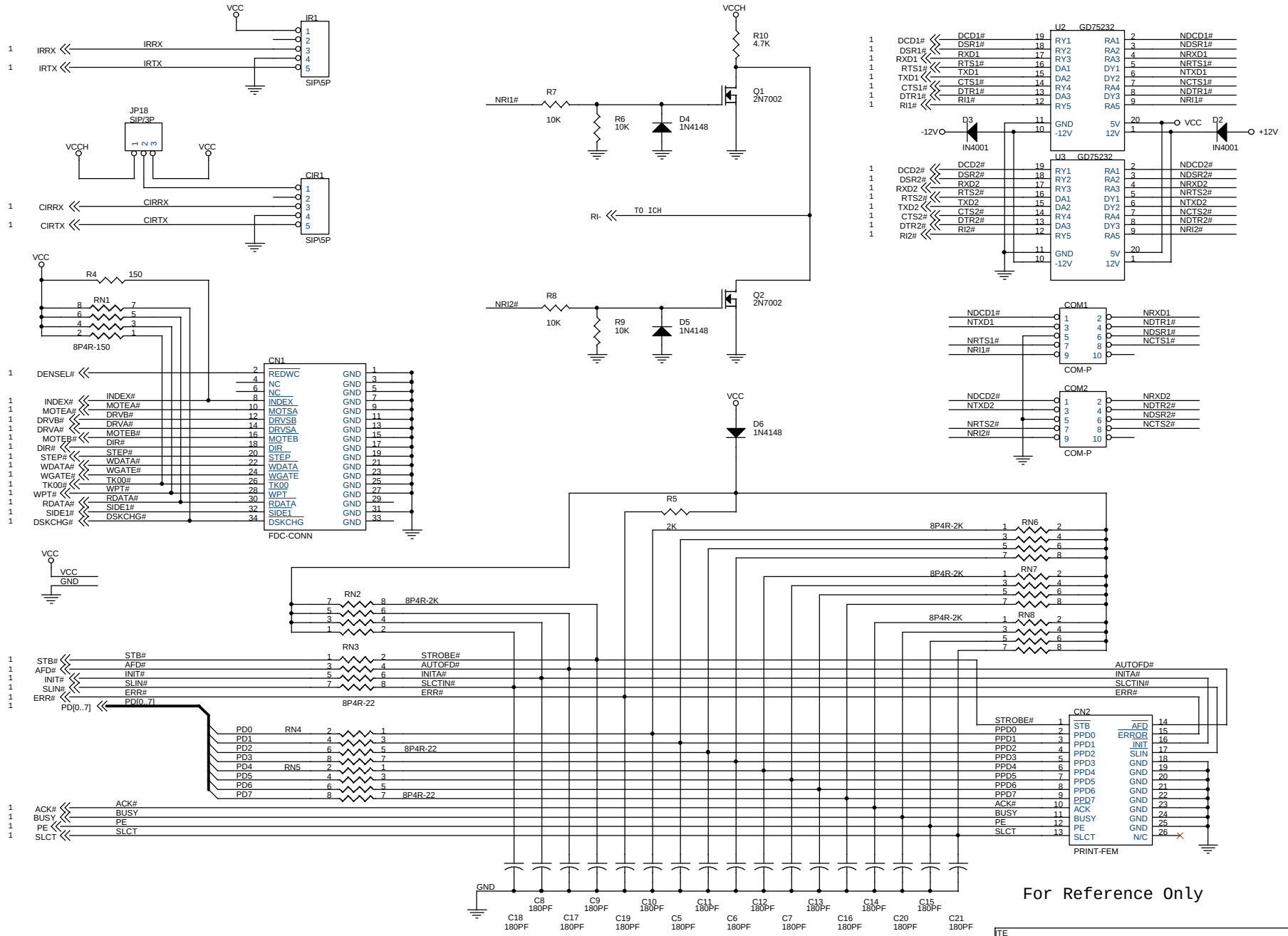

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ITE		
Title	I/O CONNECTOR	
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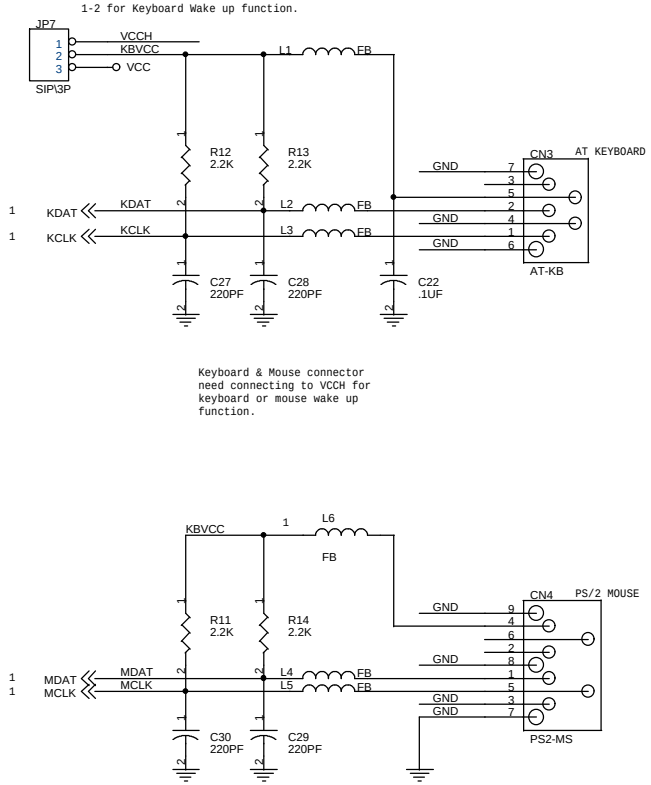
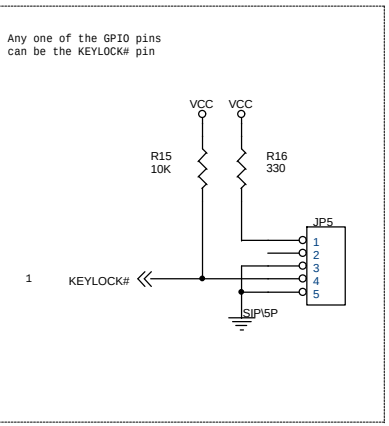
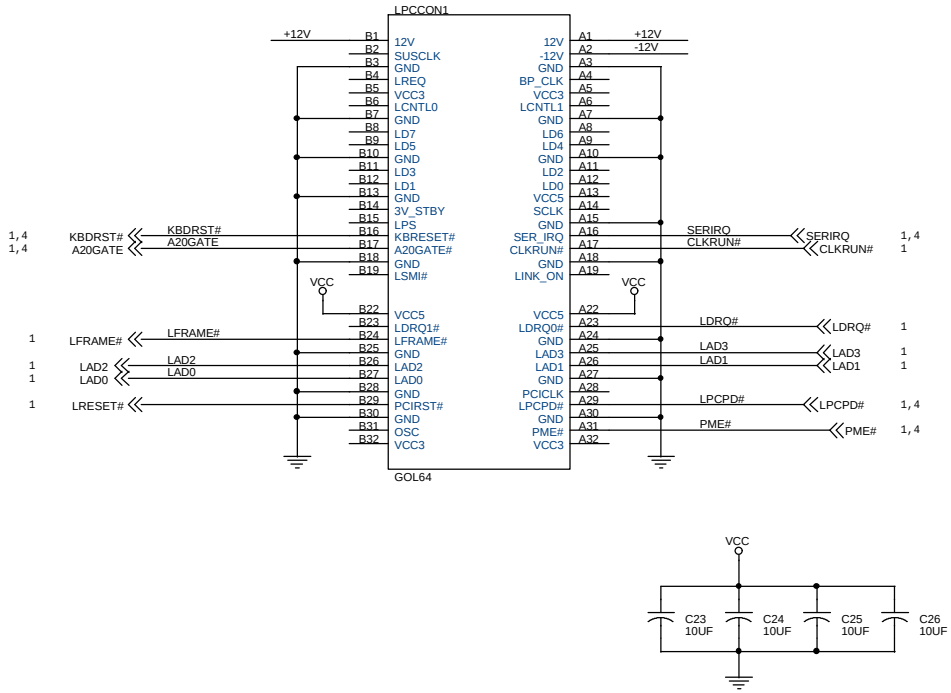
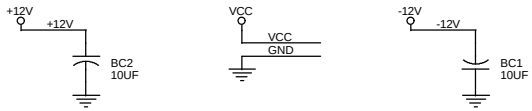
KBD & Mouse Connectors





LPC Connector





For Reference Only

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ITE		
Title	KBC, MOUSE, LPC	
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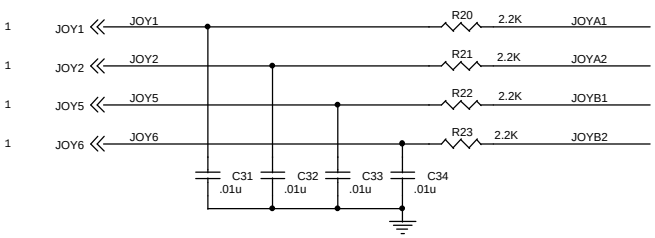
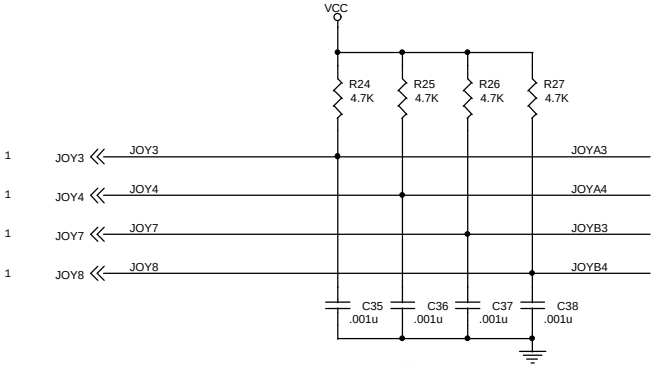
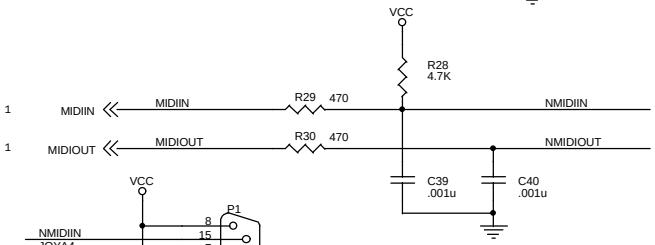
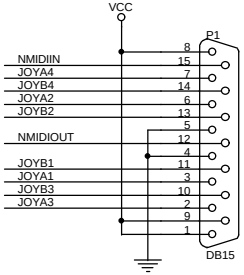


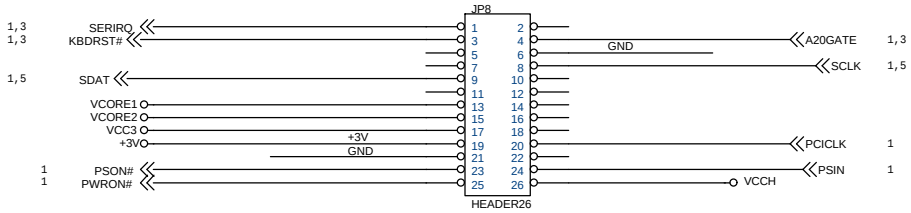




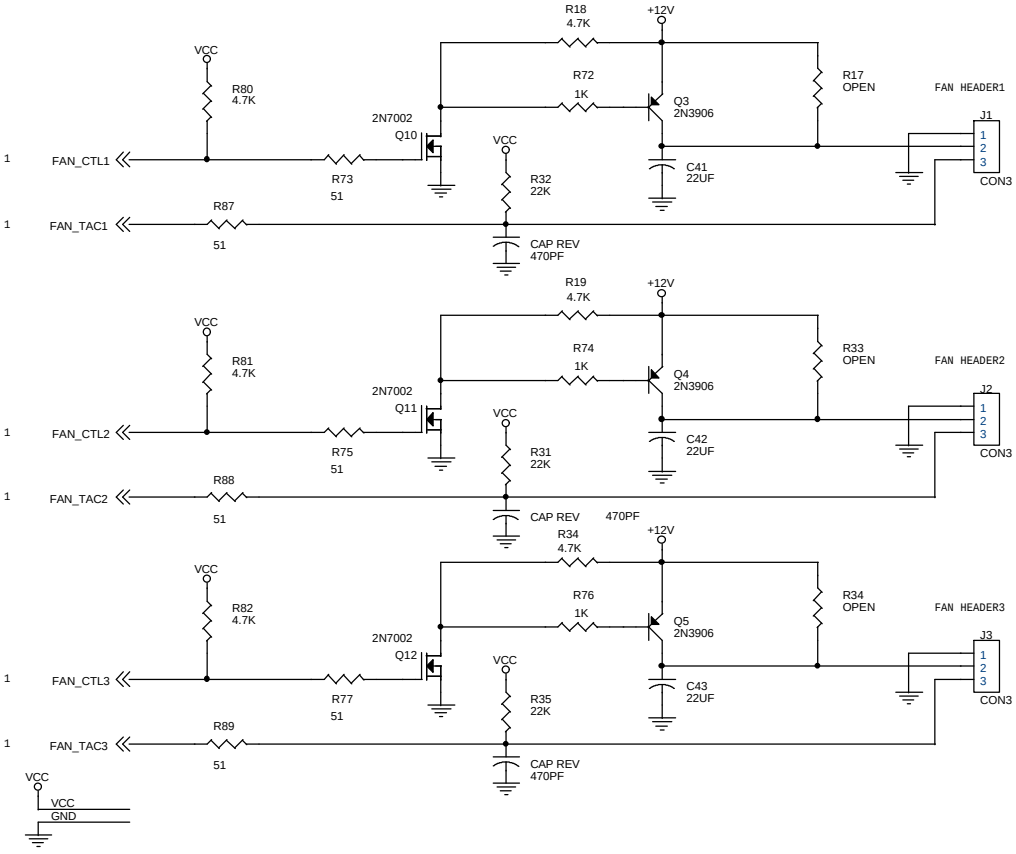


Joystick & MIDI

Jumpers For ISA test



FAN Input and Output



For Reference Only

ITE, Inc.		
Title: Game, MIDI Connector		
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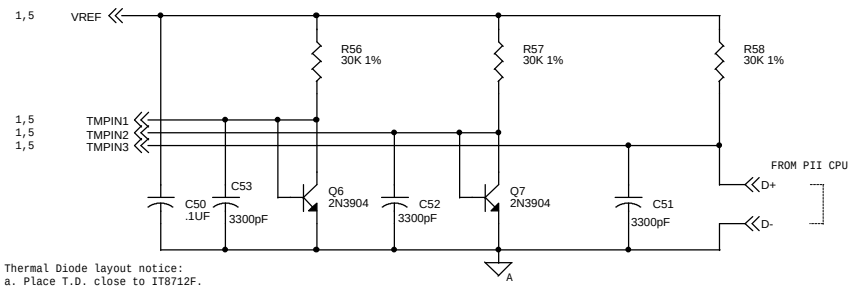
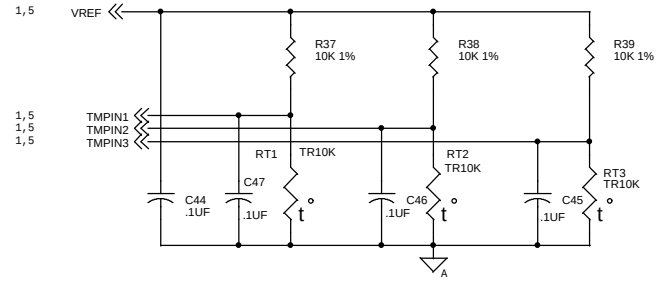
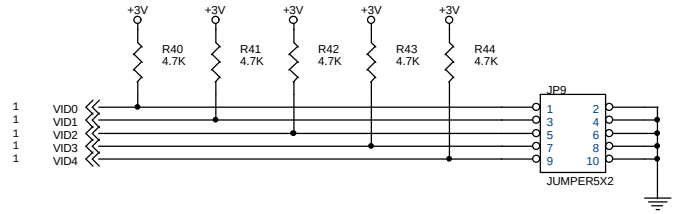
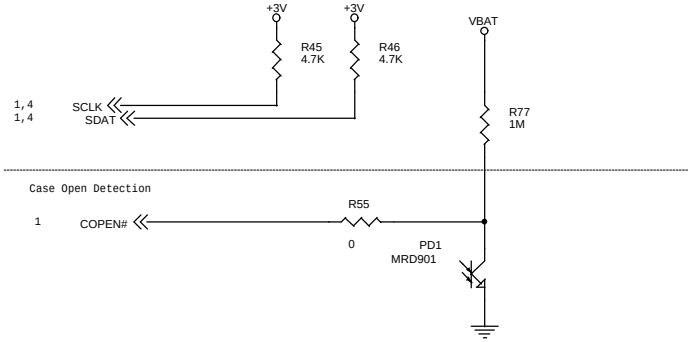
Choosing method of measuring temperature by either thermistor or diode

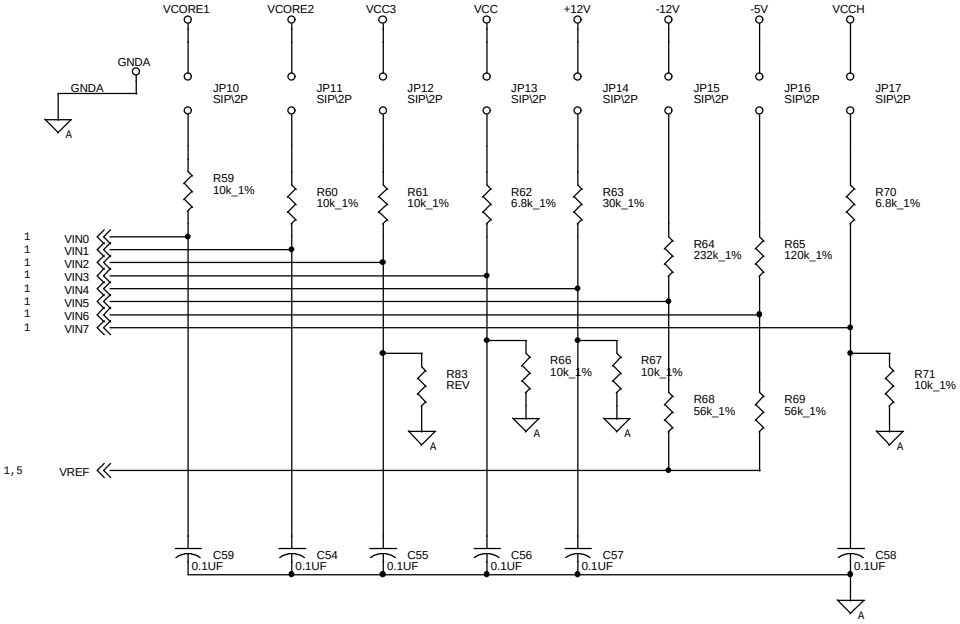


Thermal Diode layout notice:
a. Place T.D. close to IT8712F.
b. Keep the trace away from; +12V, Fast data bus, CRTs.
c. Recommanded trace widths & spacings is 10 miles.
d. Isolate GNDA, GND.

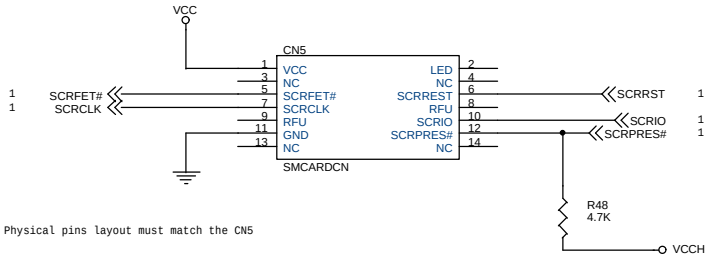




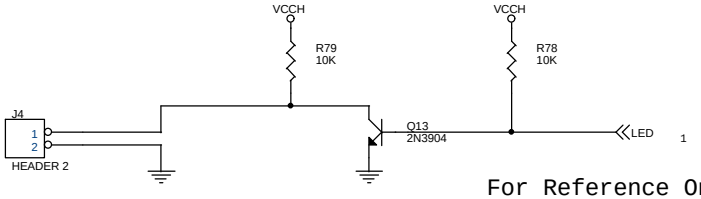




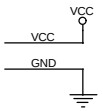
Smart Card Reader



Physical pins layout must match the CN5



For Reference Only



Specification Subject to Change Without Notice.

ITE		
Title	THERMISTOR,SMART CARD READER	
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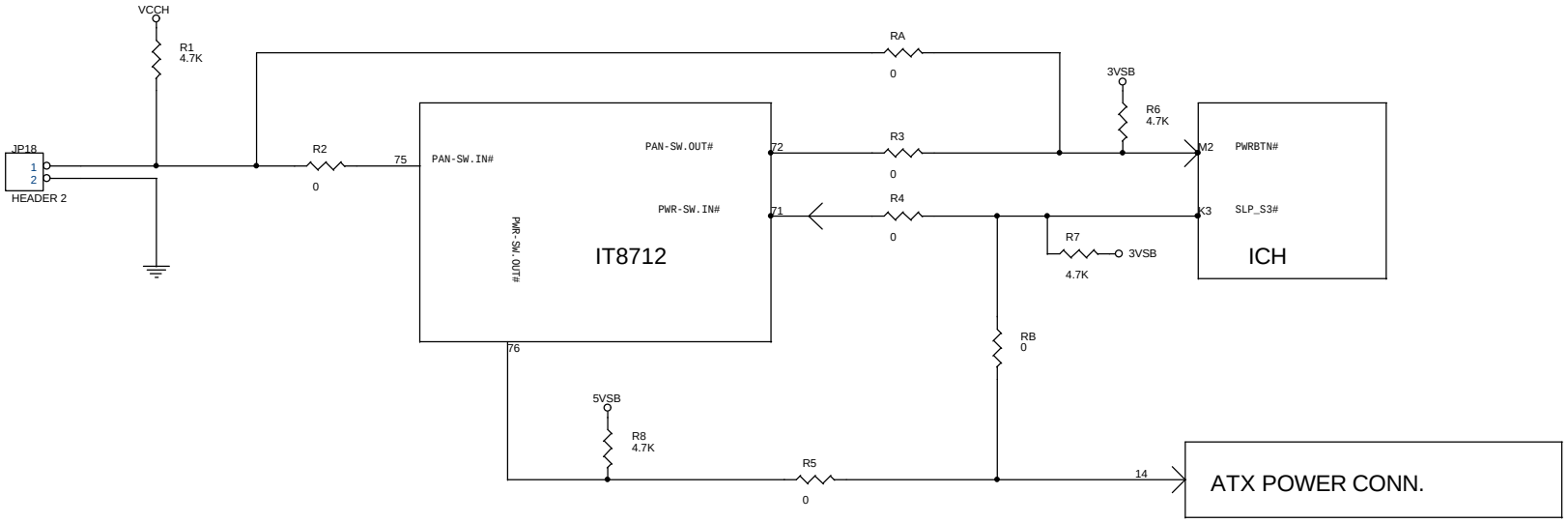

R2,R3,R4,R5 FOR IT8712 SUPPORT POWER FAIL

RA,RB FOR ICH SUPPORT POWER FAIL

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LAYOUT/ROUTING GUIDELINES

1.For CLOCK LINES,

1)If possible, please avoid using any through-hole.

2)Please make the trace length short, and the trace width wide enough.

3)The spacing to the closest neighbor should be wide enough.

4)The discrete damping resistors and capacitors are recommended.

2.For the VBAT circuits,

1)Place the 1u capacitor(C6) of pin69/Vbat close to IT8702/12.

2)Vbat should be routed with a minimum trace width of 12 mils.

3)Isolate the pin69/Vbat of IT8702/12 and pinG1/VCCRTC of ICH.

4)The 4.7u/10V(C5) tantalum capacitor connected to D1+ is spare for battery installation glitch.

3.Please reserve an area for Analog Ground on your board. Moreover, connect the D- of CPU Thermal Diode and other components should be connected with AGND to this area.

4.For the temperature sensor circuits,

1)Please don't remove the 0.1u capacitor between Vref and AGND.

2)Place the thermal diode close to IT8712.

3)Keep the trace away from +12V, fast data bus, and CRTs.

4)Recommended trace widths and spacings are 10 mils.

5)Isolate AGND and DGND.

5.Please don't remove the pull-up resistor of pin38/LDRQ#.

6.Please don't remove any components in the VINx circuits and the FANx control circuits.

7.For the SmartGuardian software compatibility,

1)Please don't change the sequence of VIN0~VIN7.

2)Please let FAN_CTL1/FAN_TAC1 circuit control and report the specific temperture which is detected by TMPIN1, let FAN_CTL2/FAN_TAC2 circuit control and report the specific temperature which is detected by TMPIN2, and let FAN_CTL3/FAN_TAC3 circuit control and report the specific temperature which is detected by TMPIN3.

8.Don't use the FAN_CTL3/FAN_TAC3 circuit for low speed FAN which is under 2,000 RPM.

9.Please don't change the resistors and capacitors values in the Game and MIDI circuits.

10.If BEEP is adopted, please give the chosen GPIO pin an external pull-up resistor.

11.The physical pins layout of Smart Card Reader 2x7 connector must match with the CN5.

Title: Layout/routing guidelines		
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