

Chapter 1

1.1 Introduction

The 630TM motherboard is designed for using Intel PIII Celeron and Tualatin CPU, which utilize the Socket-370 design and the memory size expandable to 1.0GB.

This motherboard use the newest SiS 630T chipset, applying 133MHz Front Side Bus frequency and 133MHz memory interface delivers a clear upgrade path to the future generation of 133MHz processors, PC-100/PC-133 SDRAM DIMM. The 630TM motherboard offers ULTRA ATA 100 to provide speedier HDD throughout that boosts overall system performance.

It is ideal for multi-tasking and fully supporting MS-DOS, Windows, Windows NT , Windows ME, Windows 2000, Novell, OS/2, Windows95/98, Windows 98SE, Windows XP, UNIX, Liunx , SCO UNIX etc. This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with the BIOS setup program.

1.2 Package Contents

- HDD UDMA66/100 Cable.
- FDD Cable.
- -Flash Memory written for BIOS update.
- USB2 Cable **(Optional)**.
- Fully Setup CD Driver built in utility(Ghost, Anitivirus, Adobe Acrobat).
- Manual.

1.3 Features

CPU Processor

- Support Pentium®III 500~1.2GHz processor.
- Support Celeron™533~1.2GHz or higher processor.
- Support 66, 100 and 133MHz CPU Bus clock.
- Reserves support for future Intel Pentium® III processors.

Chipset

- SiS 630T Chipset.

DIMM DRAM Memory

- Supports 64/128/256/512....MB SDRAM module socket.
- Supports Synchronous DRAM(3.3V)
- Supports a maximum memory size of 1GB with SDRAM.

Clock Generator

- Support 66/100/133MHz system Bus Clock (CPU Bus Clock).
- Support 100/133 MHz system memory clock.
- Support 33MHz PCI Bus clock.

Expansion Slots

- Provide one AMR slot.
- Three 32-bit PCI bus.

Flash Memory

- Support 2MB flash memory.
- Support ESCD Function.

1.3 Features

Integrate VGA

- 3D graphic acceleration.
- VGA Memory Selectable by BIOS from 2MB to 64MB.

Integrate LAN

- Fast Ethernet Controller 10/100 Mbps.

IDE Built-in On Board

- Supports four IDE devices.
- Supports PIO Mode 5, Master Mode, high performance hard disk drives.
- Support Ultra DMA 33/66/100 Bus Master Mode.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Support LBA mode.

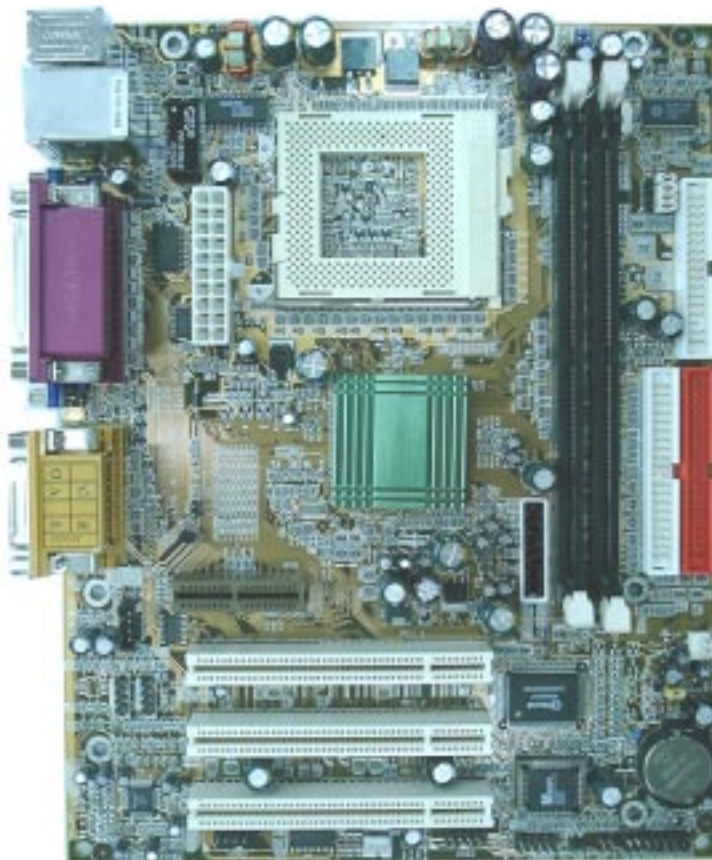
PCI-Based AC 97 Digital Audio Processor

- AC 97 2.1 interface.
- 16 channels of high-quality sample rate conversion.
- 16x8 channel digital mixer.
- Stereo 10 band graphic equalizer.
- Sound Blaster and Sound Blaster Pro emulation.

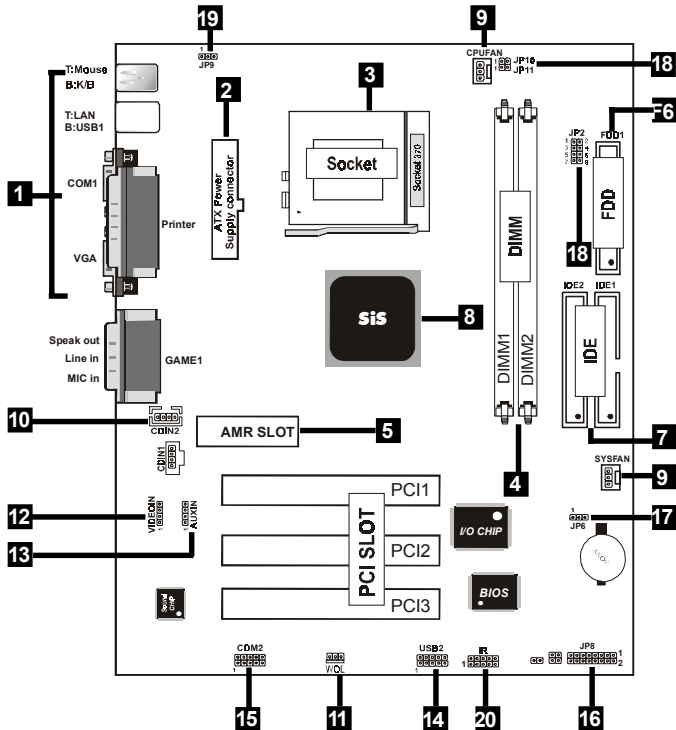
WOL (Wake On LAN)

- Supports system power up from LAN ring up.

1.4 630TM Motherboard Layout



1.4 630TM Layout



1. Back Panel I/O Connectors (Mouse, Keyboard, USB1, VGA, Printer, MIC in, Line in, Speaker out, Game stick)
2. ATX Power Connector (ATX)
3. CPU Processor (Socket 370)
4. DIMM SDRAM Sockets (DIMM1/DIMM2)
5. AMR Slot

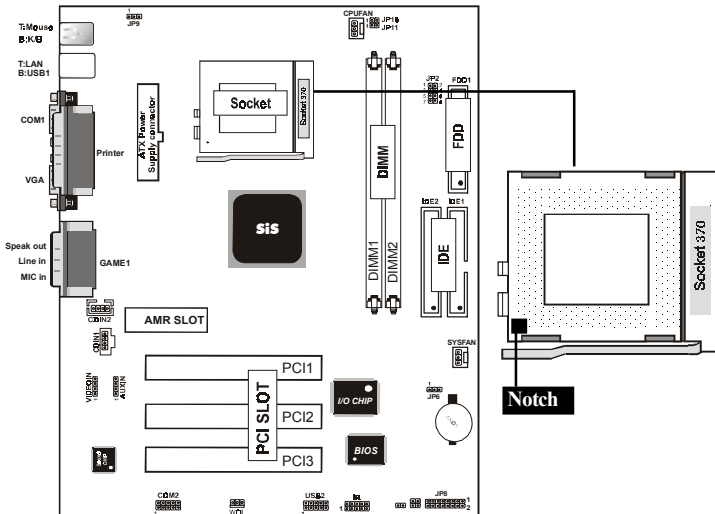
- 6. Floppy Connector**
- 7. IDE Connectors (IDE1/IDE2)**
- 8. Chipset (SiS 630T)**
- 9. Fan Connectors (CPUFan1/SYSFan)**
- 10. CD Audio-In Connectors (CDIN1/CDIN2)**
- 11. Wake-On-LAN Connector (WOL)**
- 12. Video in Connector (Video_IN)**
- 13. Aux in Connector (AUX_IN)**
- 14. Front USB2 Connector**
- 15. Front COM2 Connector**
- 16. Front Panel Connector (JP8)**
- 17. CMOS Function Selection (JP6)**
- 18. CPU Clock Freq. Setting (JP2/JP10/JP11)**
- 19. Keyboard Power on Function Setting (JP9)**
- 20. IR Connector**

1.5 CPU Installtion

The motherboard operates with Socket 370 for Intel PIII™ processor. The CPU should always have a Heat Sink and cooling fan attached to prevent overheating.

CPU Installation Procedures: Socket 370

1. Pull the lever sideways away from the socket then raise the lever to a 90-degree angle.
2. Locate Pin 1 in the socket and look for the white dot or cut edge in the CPU. Match Pin 1 with the white dot/cut edge then insert the CPU.
3. Press the lever down to complete the installation.
4. **Make sure the spec of the heatsink is good enough or the processor and motherboard will damage.**



1.6 DIMM DRAM Installtion

The motherboard supports a maximum 1GB memory. It provides two 168-pin unbuffered DIMM sockets. It supports 16MB to 1GB DIMM memory module.

DIMM DRAM Installation Procedures:

1. The DIMM socket has a “Plastic Safety Tab” and the DIMM memory module has an asymmetrical notch”, so the DIMM memory module can only fit into the slot in one direction.
2. Push the tabs out. Insert the DIMM memory modules into the socket at a 90-degree angle then push down vertically to fit onto place.
3. The Mounting Holes and plastic tabs should fit over the edge and hold the DIMM memory modules in place.

Bank	Memory module
DIMM 1	32MB, 64MB, 128MB, 256MB, 512MB
(Bank 0-1)	168 pin, 3.3V SDRAM
DIMM 2	32MB, 64MB, 128MB, 256MB, 512MB
(Bank 2-3)	168 pin , 3.3V SDRAM
Total System Memory (Max 1GB)	

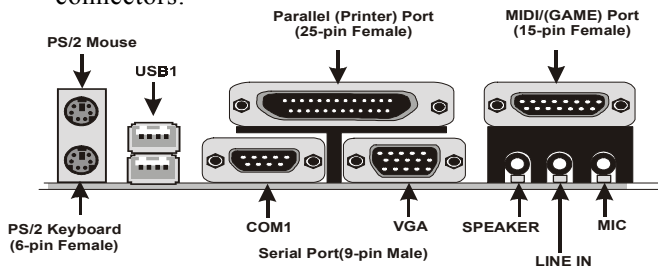
Note:

For the SDRAM CLOCK is set at 133MHz, use only PC133-compliant DIMMs. When this motherboard operate at 133Mhz, most system will not even boot if non-compliant modules are used because of the strict timing issues, if your DIMM are not PC133-compliant, set the SDRAM clock to 100MHz to ensure system stability.

1.7 Connectors & Jumpers Setting

1.7.1 Back Panel I/O Connectors

The motherboard provides the following back panel connectors:



1.7.1.1 PS/2 Mouse / Keyboard CONN.

The motherboard provides a standard PS/2 mouse / Keyboard mini DIN connector for attaching a PS/2 mouse. You can plug a PS/2 mouse / Keyboard directly into this connector.

1.7.1.2 USB Connector: USB1

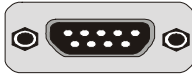
The motherboard provides a OHCI(Open Host Controller Interface)Universal Serial Bus Roots for attaching USB devices such as a keyboard, mouse and other USB devices. You can plug the USB devices directly into this connector.



Pin	Signal
1	+5V_SB
2	USBP0-(USBP1-)
3	USBP0+(USBP1+)
4	GND

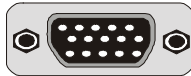
1.7.1.3 The Serial Interface: COM1

The serial interface port is sometimes referred to as an RS-232 port or an asynchronous communication port. Mice, printers, modems and other peripheral devices can be connected to a serial port. The serial port can also be used to connect your computer system. If you like to transfer the contents of your hard disk to another system, it can be accomplished by serial port.

COM1

1.7.1.4 VGA Interface Connector:VGA(15 Pin)

This connector is for output to VGA-compatible devices.

VGA

1.7.1.5 Parallel Interface Port

Unlike serial ports, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system has a 25-pin, DB 25 connector.

1.7.1.6 Joystick / Midi Connector

You can connect a joystick or game pad to this connector.

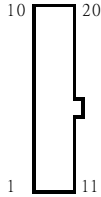
1.7.1.7 Audio Port Connectors

Speaker out is a connector for Speakers or Headphones. Line in is used for external CD player, Tape player, or other audio devices. Mic is a connector for the microphones.

1.7.2 ATX Power Connector: ATX

This connector supports the power button on-board. Using the ATX power supply, functions such as Modem Ring Wake-Up and Soft Power Off are supported on this motherboard .

This power connector supports instant power-on functionality, which means that the system will boot up instantly when the power connector is inserted on the board.



Pin ATX	Signal	Pin ATX	Signal
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	5V	14	PS-ON
5	GND	15	GND
6	5V	16	GND
7	GND	17	GND
8	PW-OK	18	-5V
9	5V_SB	19	5V
10	12V	20	5V

Note:

Turn off your power when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.

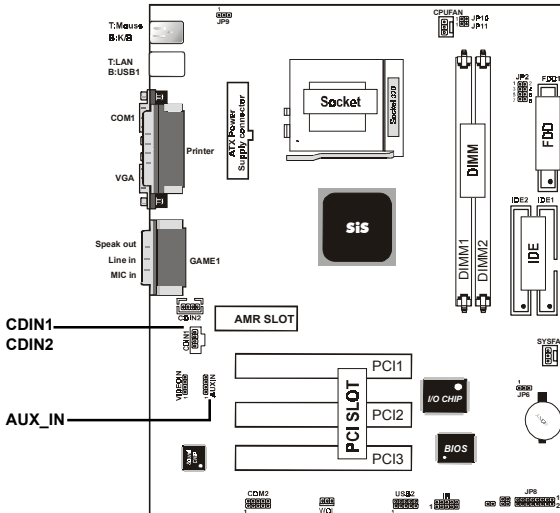
1.7.3 Floppy Disk Connector (34-pin): FDC

This connector supports the provided floppy drive ribbon cable. After connecting the single end to the board, connect the two plugs on the other end to the floppy drives.

These connectors support cooling fans of 1Amp or less. Orientate the fans so that the heatsink fins allow airflow to go across the onboard heat sink(s) instead of the expansion slots. Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of the this connector.

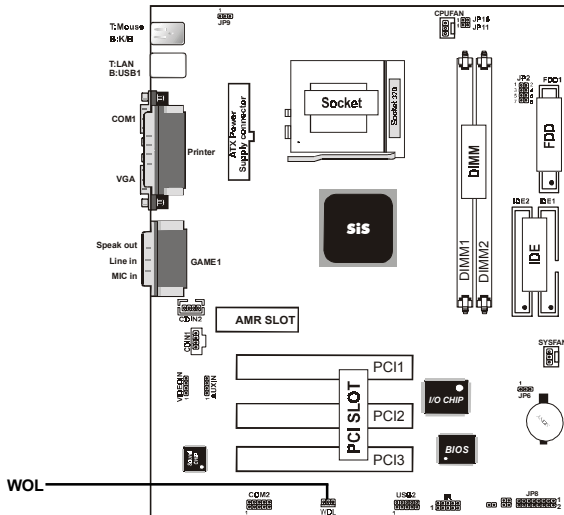
1.7.6 CD Audio-In Connectors: CD-IN1/CDIN2




CDIN1 and CDIN2 are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



1.7.7 AUX-In Connector: AUX_IN

1.7.8 Wake-On-LAN Connector: WOL

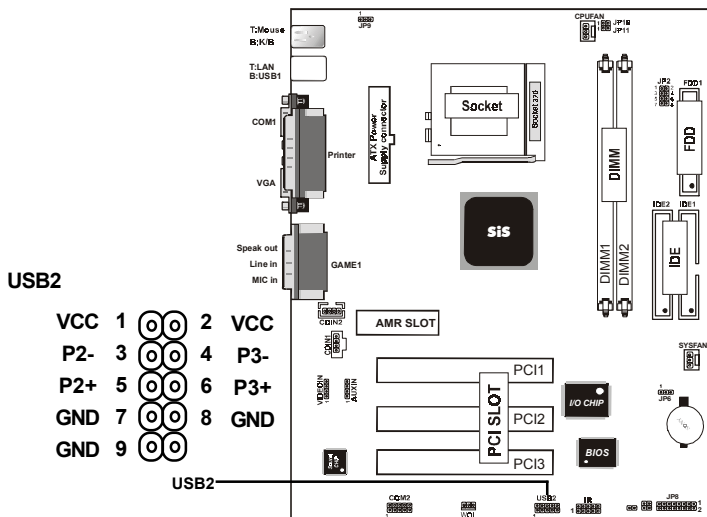


Pin	Definition
 1	5V_SB
 2	Ground
 3	Signal

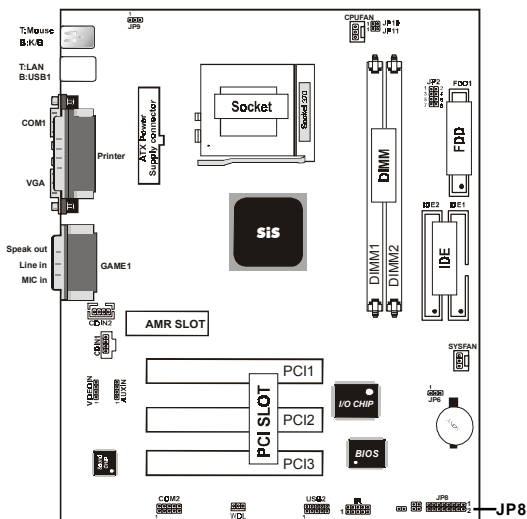
NOTE:

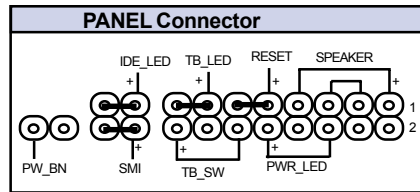
(This feature requires that Wake up LAN or Ring in Wake up is enabled .)

1.7.9 Front USB2 Connector: USB2



1.7.10 Front Panel Connector: JP8





ATX Power Switch (PW_BN)

The system power is controlled by a momentary switch connected to this lead. Pushing the button once will switch the system ON. The system power LED lights when the system's power is on .

Power LED Lead (PWR_LED)

The system power LED lights when the system power is on.

Speaker Connector (SPEAKER)

An offboard speaker can be installed onto the motherboard as a manufacturing option. An offboard speaker can be connected to the motherboard at the front pannel connector. The speaker (onboard or offboard) provides error beep code information during the Power Self-Test when the computer cannot use the video interface. The speaker is not connected to the audio subsystem and does not receive output from the audio subsystem.

Hard Drive LED Connector (IDE_LED)

This connector supplies power to the cabinet IDE activity LED. Read and write activity by devices connected to the Primary or Secondary IDE connectors will cause the LED to light up.

Turbo LED switch (TB_LED)

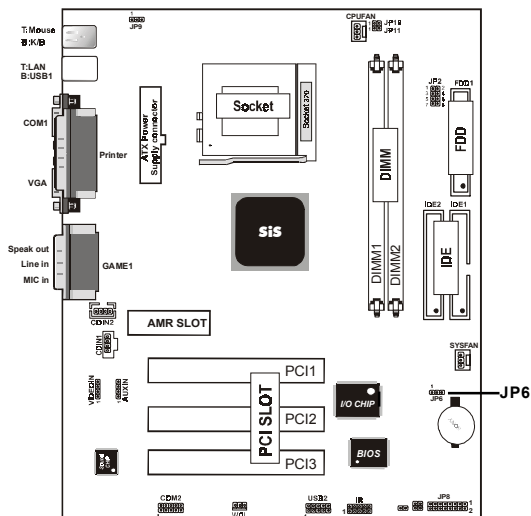
Since the motherboard turbo function is always on. The turbo LED will remain constantly on while the system power is on. You may wish to connect the Power LED from the system case to this lead.

Reset Switch Lead (RESET)

The connector can be connected to a momentary SPST type switch that is normally open. When the switch is closed, the motherboard resets and runs the POST.

1.7.11 CMOS Function Selection: JP6

A battery be used to retain the mainboard configuration in CMOS RAM.



Pin	Definition
1-2	Clear CMOS
2-3	Normal (Default)

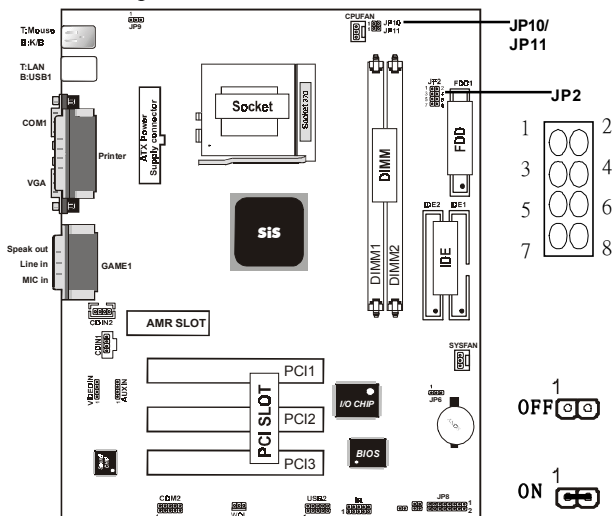
NOTE:

(Please follow the procedure below to clear CMOS data.)

- (1) Remove the AC power line.
- (2) JP6(1-2) Closed.
- (3) Wait five seconds.
- (4) JP6(2-3) Closed.
- (5) AC Power on.
- (6) Reset your desired password or clear CMOS data.

1.7.12 CPU Clock Freq. Setting: JP2/JP10/JP11

Overclocking is operating a CPU/Processor beyond its specified frequency. JP2 jumper is used for the CPU Front Side Bus Frequencies from 66MHz to 133MHz.

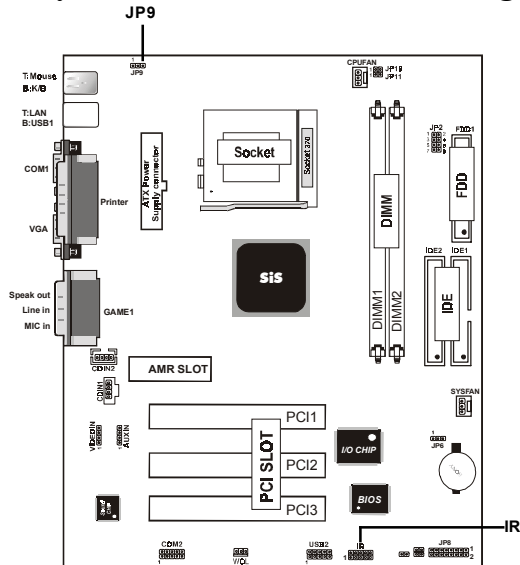


CPU (MHz) /SDRAM	JP2				JP10	JP11
	1-2	3-4	5-6	7-8	1-2	1-2
Auto	OFF	OFF	OFF	OFF	ON	ON
66/66	OFF	OFF	OFF	ON	OFF	OFF
66/100	OFF	OFF	OFF	OFF	OFF	OFF
100/100	ON	OFF	OFF	OFF	OFF	OFF
100/133	ON	OFF	ON	OFF	OFF	OFF
133/100	ON	ON	OFF	OFF	OFF	OFF
133/133	ON	ON	ON	OFF	OFF	OFF

Note:

We don't recommend you overclocking, since it will make the CPU life short and get the risk of CPU damage.

1.7.13 Keyboard Power on Function Setting: JP9



Pin JP9	Definition
1-2	Disabled (Default)
2-3	Enabled

Pin IR	Definition	Pin IR	Definition
1	+5V	2	
3		4	CIRRX
5	IRRX1	6	5VSB
7	GND	8	
9	IRTX	10	

1.7.14 IrDA Connector: IR