

# iTerm

## 1U RACK MOUNTED TERMINAL



The 1U Rack Mounted Terminal is a character general purpose terminal with a 15" colour LCD display and keyboard mounted in a 1U high rack mountable tray. It prevents the need for an external table top terminal and allows efficient use of space within the rack.

The terminal connects to servers using either a serial RS232 console connection or an Ethernet telnet console connection (to the RSC Ethernet port where available).

The terminal offers multiple personalities, and can connect to multiple servers when used with a Console Server (for RS232 connections) or with an Ethernet Switch (for Ethernet connections).

The unit was designed around military standards and because of the high quality metal construction, this unit can be used in almost all industrial and commercial settings.

### Features

- ?Entire unit only 1U (1.75") high
- ?15.1" TFT colour LCD
- ?101 key keyboard
- ?LCD power-up when raised (manual power switch also available)
- ?Several LCD locking positions
- ?LCD display controls (using on-screen menu)
- ?2mm protective glass for LCD
- ?RJ45 10Base-T network port for Ethernet telnet console connection
- ?RS232 port for serial console connection
- ?Serial and parallel slave-printer ports
- ?Includes 3m RS232 cable
- ?Includes rack mount kit suitable for Sun & most EIA 19" racks
- ?Emulations: VT52, VT100, VT220, Console ANSI, PC TERM, TVI910+/925WY-50+, WY-60, WY-100, WY-120, WY-325, PCG Alpha
- ?Screen size 80 x 24 characters plus status line
- ?Up to 16 foreground and 16 background colours
- ?Communications modes: Single RS232 or Ethernet connection, the latter supporting up to 12 telnet sessions to different servers

## Compatibility

The 1U Terminal is compatible with all Sun servers and may be configured to communicate using either a RS232 serial console connection or an Ethernet RSC console connection.

The Ethernet connection may be used with any 10Mb compatible Ethernet host adapter. However the Ethernet connection is most suited for use with RSC (Remote System Control) Ethernet ports since these provide the same functionality as serial (ttya) console ports.

The terminal includes a 3m RS232 cable that can be used to connect to servers with a female 25 pin D console connection or male 9 pin D console connection (through the use of an included adapter). When connecting to RJ45 RS232 console ports, the terminal cable delivered with the server should be used. See Questions and Answers below for further details.

The rack mounted monitor has been qualified for mounting in the StorEdge 72", Sun Fire and most EIA 19" racks.

This unit cannot be connected to a graphics frame buffer and system keyboard port (see the 1U Rack Mounted Monitor and Keyboard, order codes UKT-R1U-LCD17-SKB and UKT-R1U-LCD17-UKB for this functionality).

## Configuration

The Terminal is largely pre-configured for most applications, and a User Guide is included to aid in installation and configuration. A Reference Manual is available by internet download.

## Connections

The terminal is equipped with the following ports:

?RS232 port for server connection (DB9M). A 3m RS232 cable is included for connection to servers with a female DB25 (or male DB9 via included adapter) console ports. For connection to Sun RJ45 console ports, the console cable delivered with the server should be used in conjunction with the included adapter.

?RJ45 port for 10Base-T network connection. This can be connected to an Ethernet Switch or hub, or with the use of a crossed (cascade) RJ45 cable, directly to a server RSC Ethernet port.

?Local printer ports (serial DB9M and parallel DB25F). These can be used to connect a local printer to the terminal. Specific printer models have not been qualified for this connection.

?Video port (HD15F). This port may be accessed by removing a cover plate and may be used to re-route the video signal for display on an external monitor or projector.

## Questions and Answers

Q. What servers can the monitor be used with?

A. All Sun and headless servers to date include at least one serial RS232 port that is used as a console port when no directly connected keyboard is present.

The Ethernet console connection should only be used with servers that include an Ethernet RSC (Remote System Control) port.

Both RS232 serial and Ethernet telnet connections cannot be active at the same time.

Q. What cables are included with the unit?

A. The unit is delivered with a power cable terminating in a male IEC320 power connector which is suitable for connection to a standard power cord. A 3m DB9F to DB25M RS232 serial cable is included, as is a DB25F to DB9F adapter.

Q. How do I connect the terminal to a single server using a RS232 serial connection?

A. A 3m RS232 cable is included for connection to servers with a female 25 pin D connector console port. A DB25F to DB9F adapter is also included which can be used with the cable to connect to servers with a male 9 pin D connector console port.

This adapter can be used directly with the terminal to make it present a female DB25 RS232 serial interface.

When connecting to a Sun server with a RJ45 console port, use the RJ45 cable and RJ45 to DB25 adapter (part number 530-2889) which are included with the server.

If the RJ45 to DB25M adapter and RJ45 cable are not available, order X6973A and X3837A (five pack of RJ45 to DB25 adapters and one 5m cat 5 cable).

Q. How do I connect the terminal to multiple servers using a RS232 serial connection?

A. A Console Server must be used to connect the terminal to multiple servers. Ensure that the appropriate cables are ordered for connection to the Sun servers in addition to a terminal cable terminating in a female DB9 (or male DB25 when used in conjunction with the included adapter) connection.

To connect to a server, the operator will first connect to the Console Server, and then use Console Server functionality to connect to the server.

Q. What is the format of the server serial connection on the terminal?

A. The pin out adheres to a standard female 9 pin [PC] connector.

Q. How do I connect the terminal to a single server using an Ethernet telnet connection?

A. When connecting to a Sun server with an Ethernet RSC console port, a crossover or cascade Ethernet cable may be used. Alternatively, an Ethernet switch and standard RJ45 cat 5 Ethernet cables may be used.

When using an Ethernet switch, it is advisable that this network remains private for security reasons.

Q. How do I connect the terminal to multiple servers using an Ethernet telnet connection?

A. An Ethernet switch must be used to connect the terminal to multiple servers. Standard RJ45 cat 5 Ethernet cables should be used to connect the switch to the terminal and servers.

In use, the operator can switch the terminal connection between [up to] 12 servers by using the hot key sequence ALT-F1 through to ALT-F12. The state of each server session is preserved by the terminal.

It is advisable that the network used to connect the server consoles remains private for security reasons.

Q. How many servers are supported by the Ethernet telnet connection?

A. The terminal allows up to 12 Ethernet connected servers to be configured.

Q. Does the terminal require an IP address when using an Ethernet connection?

A. Yes. This is defined during terminal set up.

Q. Is any server configuration required?

A. When the terminal loses power or is powered off, a 'break' may be generated on the RS232 host communications port (as is common with most general purpose terminals). To prevent this halting a Sun server, ensure that the "alternate break" sequence is configured. See SunSolve Info Doc 21258 for details.

If connecting the terminal using the RS232 connection to a Console Server, an alternate break sequence may not be required since some Console Servers are "Break Safe" (as is the case with all Sun UK marketed Console Servers). Refer to the Console Server documentation for details.

When using an Ethernet console connection, the alternate break sequence need not be defined. However, the RSC Ethernet port must be configured using the "rsc-config" command.

Q. Does the keyboard support any Sun specific keys?

A. No. Character terminals are non Sun specific, and do not require any special keys. The Break key can be used to enter the Open Boot PROM "OK" prompt.

Q. What character resolutions does the terminal support?

A. The standard resolution is 80x24 plus a status line displayed using 800x600 pixels.

Q. What rack can I mount the unit in?

A. The rack mounted monitor has been qualified in the Sun StorEdge 72" and Sun Fire racks. Although it is not possible to guarantee, the rack mounted monitor should be compatible with other EIA 19" racks.

Q. What is the warranty?

A. 12 months return to depot.

Order Code

?RFT-15-232

## Specifications

<b>Physical</b>	
Dimensions	44mm x 483mm x 615mm HxWxD
Weight	13Kg
Temperature	0° ~ 40°C operating, -20° ~ -60°C storage
Humidity	5% to 95% non condensing
Power Supply	Auto-ranging 90-262 VAC, 47-63Hz
Power Consumption	60W (max), <25W (standby)
Cables Included	Power (IEC320), 3m RS232 terminating in DB25M, DB25F-DB9F adapter
Rack mount kit	Included for Sun & most EIA 19" racks
Standards	CE, FCC
Installation	User Installable
Warranty	12 months RTD (return to depot)
Maintenance	Contact Sun Support for options
<b>LCD Panel Specifications</b>	
Screen size	15.1" visible diagonal
Resolution	800x600
Controls	contrast, brightness, auto-adjust, colour temperature
Power switch	Automatic when panel raised, manual override
Brightness	250cd/m <sup>2</sup> (typical)
Contrast	300:1 (typical)
Viewing Angle	L/R=75°/75°, U/D=55°/65°
Screen protection	2mm glass
LCD Approvals	FCC-B, CE, VCCI-II, BSMI, CCIB, UL, CUL, TUV, CB, TCO'99
<b>Keyboard Specifications</b>	
Type	101 key
Layout	US
<b>Terminal Emulation</b>	
Emulations	VT52, VT100, VT220, Console ANSI, PC TERM, TVI910+/925, WY-50+, WY-60, WY-100, WY-120, WY-325, PCG Alpha
Character matrix	7x12 dot matrix in 10x16 cell with 3 dot descenders
Screen size	80x25
Page length	1, 2, or 4 screens (multiple screen page length reduces maximum number of possible telnet sessions)
Cursor	Blink or steady, block or underline
Modes	Full duplex, half duplex, block mode, half block mode
Colour modes	16 foreground and 16 background colours
<b>Communication Ports</b>	
Serial port for host connection	One DB9M RS232 port
Network port	One RJ45 10Base-T Ethernet port
Local printer ports	One DB25F Parallel and one DB9M RS232 port
Serial baud rates	50 to 115,200 bps
Data format	7 or 8 data bits with or without parity, 1 or 2 stop bits
Serial handshake	XON/XOFF, XPC, and hardware DTR
Communications options	Single RS232 server connection, or up to 12 Ethernet telnet sessions to predefined IP addresses. Both serial and Ethernet connections can not be used concurrently.