EQUINOX

Multiport Serial I/O Adapter
Hardware Reference Guide

includes:

SST-2I - PN 990286
SST-4I - PN 990283
SST-4P - PN 990299
SST-4E - PN 990285
SST-8I - PN 990265
SST-8P - PN 990301
SST-8E - PN 990266

SuperSerial Technology

PN 560160/B
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Contents

Overview

Equinox SuperSerial Technology (SST) Adapters are intelligent, high-speed (up to 920k bps on each port) *Multiport Adapters* providing high performance serial I/O solutions for PCI, ISA and EISA bus systems. All port interfaces are standard RS-232 with full modem control and voltage surge protection on every pin.

SST Adapters appear to the system host processor as memory. That is, they are memory mapped devices. Each adapter is automatically mapped into system memory at the time of device driver installation. The device driver soft-configures all adapters each time the system is initialized (booted). See the appropriate software documentation located on your SuperSerial CDROM for detailed device driver information.

The SST Adapter (see Figure 1 below) occupies a slot in the host computer and provides the intelligent functions to "off-load" the CPU serial communications processing tasks. Adapters are available for PCI, ISA and EISA bus systems.

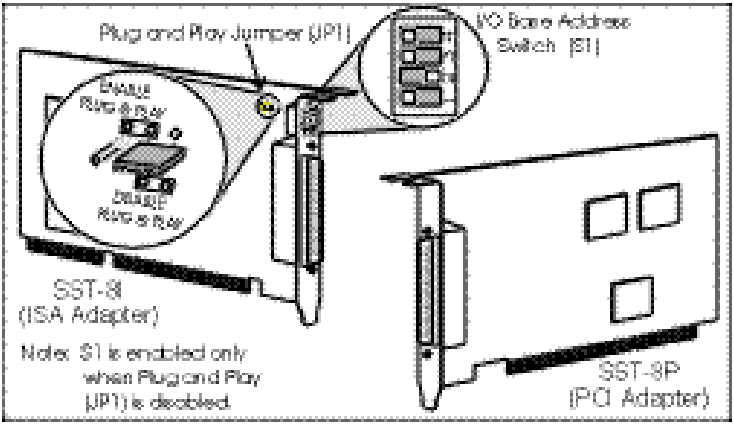

Figure 1. SST Multiport I/O Adapter (SST-81 and SST-8P Shown)

Installation

Use the following procedure to install your SST Adapter. Alternatively, you may follow the installation instructions presented in your host system documentation.

1. Set the host computer system power switch to OFF and disconnect the power cord.
2. Locate a free expansion slot.
3. Insert and secure the adapter firmly into the expansion slot.
4. Replace the power cord and turn the host computer system ON.
5. Install the device driver software (see CDROM for details).

PCI Setup

Peripheral Component Interconnect (PCI) system architecture has a design feature termed *Plug and Play*. This feature automatically detects, identifies and configures the ***currently*** installed devices each time the system is booted. Therefore, whenever an adapter is installed (or removed) in a PCI system, the adapter is recognized and configured immediately upon restart.

ISA Setup

All ISA Adapters must be assigned a unique I/O base address. This can be accomplished by the use of ISA Plug and Play (PnP) or the I/O Base Address Switch S1 (see Figure 1 and Table 1).

If PnP is not supported by your operating system, or if you are unsure, place the PnP Jumper (JP1) in the position closest to switch S1. This will disable PnP and enable the sixteen position I/O Base Address switch (see Table 1 below).

If multiple ISA Adapters are installed in the same system, a different I/O base address must be assigned to each adapter. (This is automatically accomplished if PnP is utilized.) This procedure should be performed before the adapter is physically installed.

1	2	3	4	Base Address
OFF	OFF	OFF	OFF	200
ON	OFF	OFF	OFF	220
OFF	ON	OFF	OFF	240
ON	ON	OFF	OFF	260
OFF	OFF	ON	OFF	280
ON	OFF	ON	OFF	2A0
OFF	ON	ON	OFF	2C0
ON	ON	ON	OFF	2E0
OFF	OFF	OFF	ON	300
ON	OFF	OFF	ON	320
OFF	ON	OFF	ON	340
ON	ON	OFF	ON	360
OFF	OFF	ON	ON	380
ON	OFF	ON	ON	3A0
OFF	ON	ON	ON	3C0
ON	ON	ON	ON	3E0

Table 1. Switch S1 Is Shown Set For I/O Base Address 240H

EISA Setup

All Equinox configuration files are located on the SuperSerial CDROM. All directories below assume that D: is the CDROM drive.

Novell, DOS, OS/2,	D:\Drivers\RAS\Disk1
Windows based	D:\Drivers\RAS\Disk3
UNIX based	D:\Drivers\UNIX\DIAG_DOS

Copy all .cfg files from CDROM directory to your system manufacturers EISA configuration diskette. Then run EISA configuration to correctly identify the Equinox adapters.

ISA Installation Tips

SST ISA adapters require a 16K window (below 1 megabyte) in the host system memory. Occasionally the driver may not be able to automatically find an available memory window (i.e. memory hole) due to system caching, memory shadowing, or devices that stay hidden in memory until loading.

If the driver fails to locate the adapter after installation you may need to manually configure its memory address. Check for available memory holes by using the SSDIAG.EXE /M software located on your SuperSerial CDROM. (Refer to SSDIAG.DOC about the command line switch "/M"). Then configure the driver to use one of the available memory holes between 0xA0000 and 0xEFFFF. (Refer to the software driver documentation located on the CDROM for information on how to manually configure this memory range.)

If SSDIAG /M reports that there are no available memory holes you may need to modify your system BIOS to disable memory shadowing or caching (in the 0xA0000 to 0xEFFFF range). Also, some system BIOS will allow you to open a memory hole for ISA memory mapped devices.

PCI Installation Tips

A PCI adapter may have trouble locating available memory addresses on some systems that have shared PCI slots. If this happens move the PCI adapter to a non-shared slot or change the slot type in the system BIOS to a master PCI slot.

Connecting and Cabling Information

SST-2I adapters have two DB-9s on the connector bezel as shown in Figure 2 below. See Figures 13-15 for detailed cabling information.

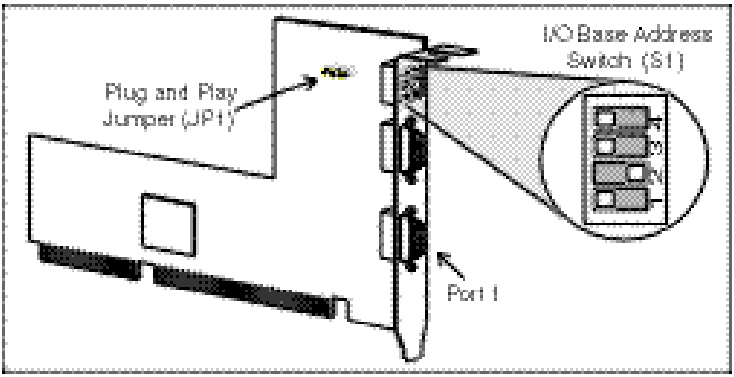

Figure 2. SST-2I Multiport I/O Adapter

Figure 3 below shows the pinouts for the SST-2I DB-9 Connectors.

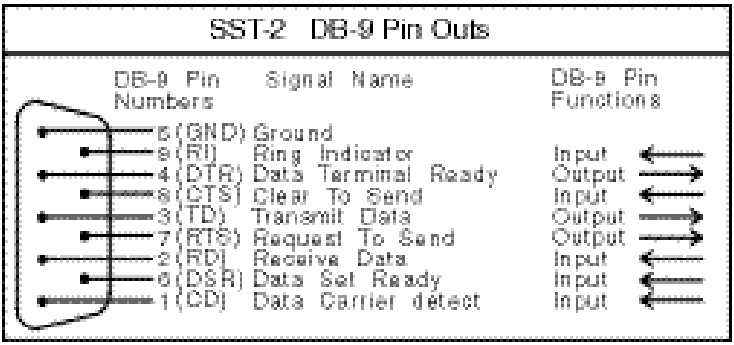

Figure 3. SST-2I DB-9 Pinouts

SST-4 and SST-8 adapters require a fan out cable or a connector panel (ordered separately). See pages 6 through 10 for detailed cabling and ordering information.

Connector Panel and Fan Out Cables

SST Connector Panels (CPs) and Fan Out Cables (FOCs) provide four or eight RS-232 interfaces. Table 2 below details products available from Equinox. Figures 4 through 6 show the connector panel and pinouts for CP-8, DB-25 and RJ-45 fan out cables.

P/N	Name	Description	Connector Type
690269	F04-DB	SST-4 Fan Out Cable	DB-25 Male
690268	F04-RJ	SST-4 Fan Out Cable	RJ-45 Female
690293	F04-DB9	SST-4 Fan Out Cable	DB-9 Male
690264	F08-DB	SST-8 Fan Out Cable	DB-25 Male
690265	F08-RJ	SST-8 Fan Out Cable	RJ-45 Female
690271	F08-DB9	SST-8 Fan Out Cable	DB-9 Male
990343	CP-8	SST-8 Connector Panel	DB-25 Female

Table 2. SST Connector Accessories

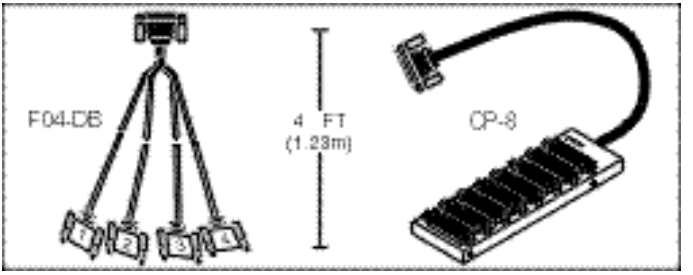

Figure 4. SST Fan Out Cable and Connector Panel

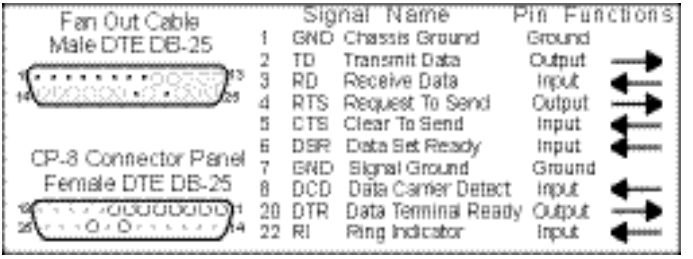

Figure 5. DB-25 Fan Out Cable and Connector Panel Pinouts

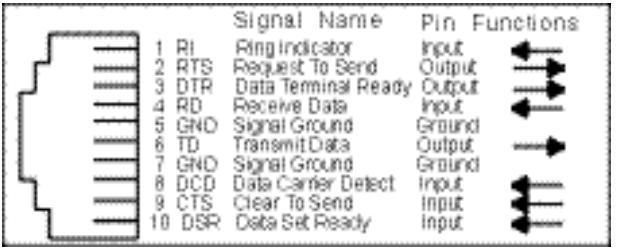

Figure 6. RJ-45 Fan Out Cable Pinouts

CP-8 and DB-25 Fan Out Cable to Device Cabling

Figures 7 through 9 show the pinouts required to make a cable to connect between SST CP-8 and DB-25 FOC ports and your terminals, printers, modems, etc. Note that CP-8s will require a cable with a male DB-25 connector not a female as shown in the figures.

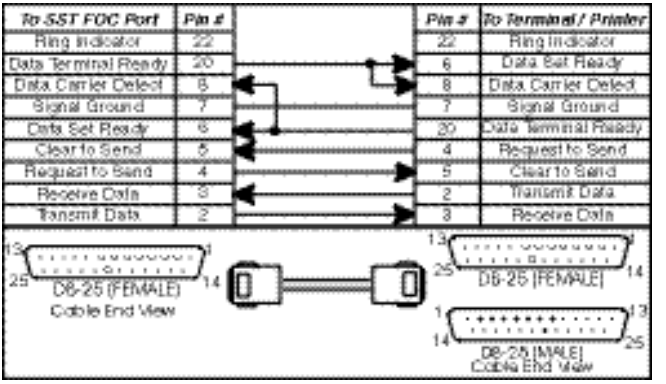

Figure 7. Cable Pinouts for FOC DB-25 to Terminal/Printer DB-25

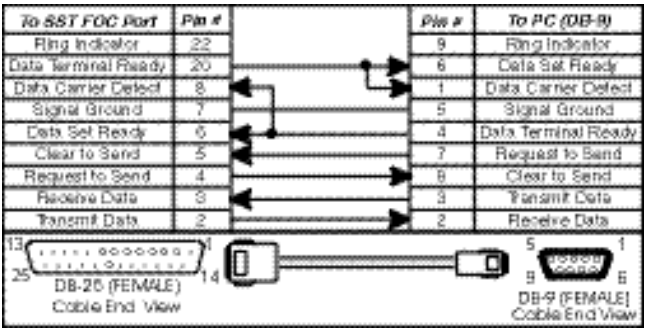

Figure 8. Cable Pinouts for FOC DB-25 to PC DB-9

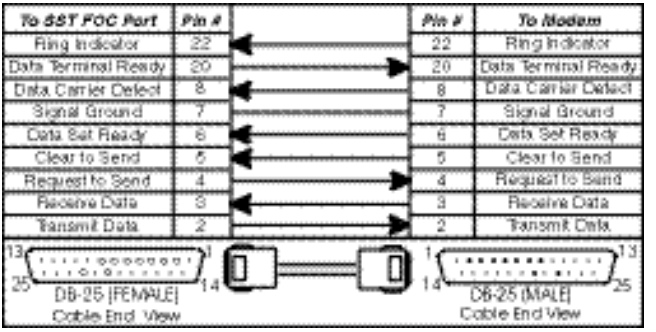

Figure 9 Cable Pinouts for FOC DB-25 to Modem DB-25

RJ-45 Fan Out Cable to Device Cabling

Figures 10 through 12 show the pinouts required to make a cable to connect between SST RJ-45 FOC ports and your devices.

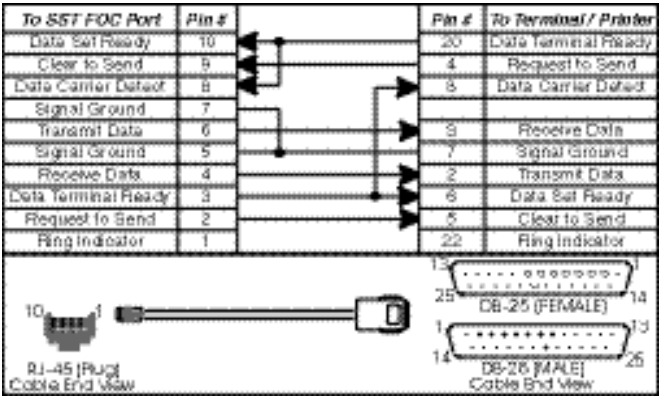

Figure 10. Cable Pinouts for FOC RJ-45 to Terminal/Printer DB-25

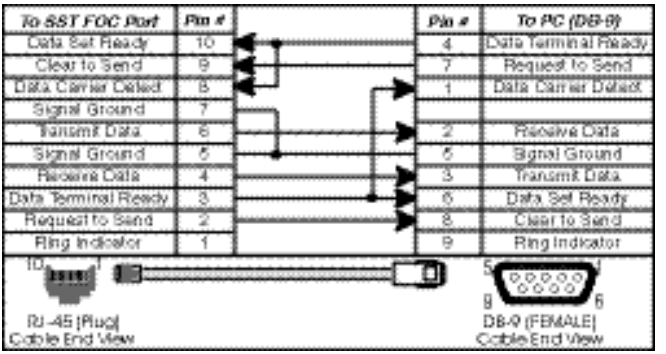

Figure 11. Cable Pinouts for FOC RJ-45 to PC DB-9

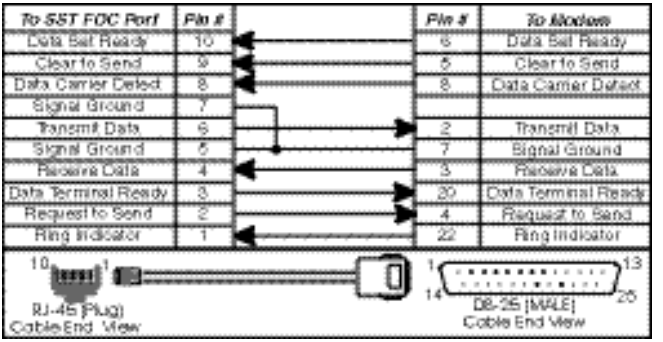

Figure 12. Cable Pinouts for FOC RJ-45 to Modem DB-25

DB-9 to Device Cabling

Figures 13 through 15 show the pinouts required to make a cable to connect between SST DB-9 ports and your devices.

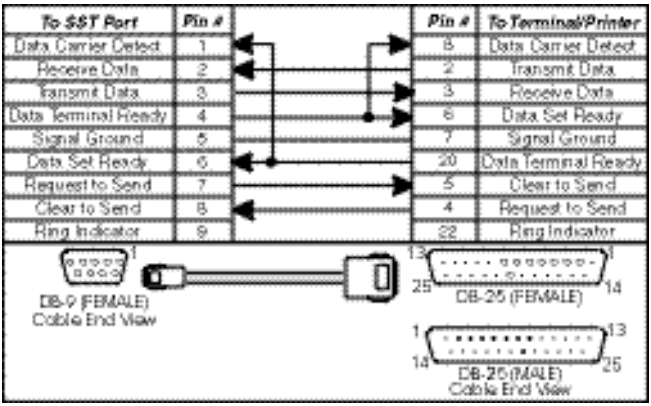

Figure 13. Cable Pinouts for SST DB-9 to Terminal/Printer DB-25

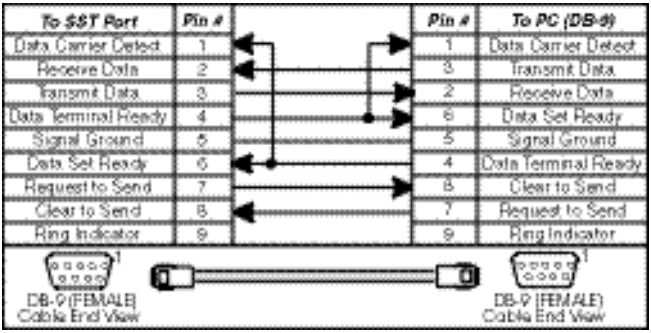

Figure 14. Cable Pinouts for SST DB-9 to PC DB-9

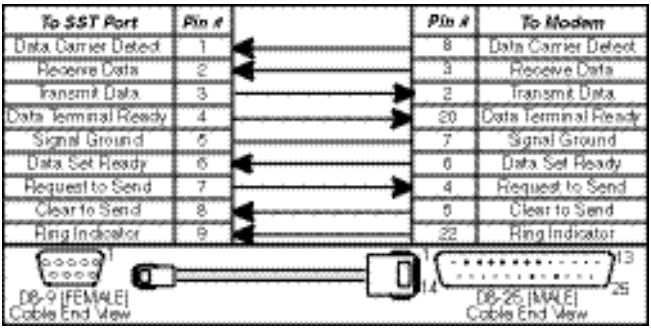

Figure 15. Cable Pinouts for SST DB-9 to modem DB-25

RJ-45 Modular Adapters

Modular Adapters are available from Equinox to convert RJ-45 modular jacks to DB-25 or DB-9 connectors. These modular adapters in conjunction with 10-wire modular cables perform the same functions as shown in Figures 10 through 12. Table 3 below describes the modular adapters available from Equinox.

P/N	Connector	Connects To
210070	DB-25 DCE Male	Terminal or Printer (Female)
210071	DB-25 DCE Female	Terminal or Printer (Male)
210068	DB-25 DTE Male	Modem or Multiplexer (Female)
210069	DB-25 DTE Female	DCE Devices (Male)
210072	DB-9 Female	DB-9 PC (Male)

Table 3. 10-wire Modular Adapters

The adapters listed above (with 10-wire modular cables as shown below) may be used to attach devices to SST RJ-45 FOC ports. If a customer supplied modular cable is used, *make sure the cable is reversing* (see Figure 16 below).

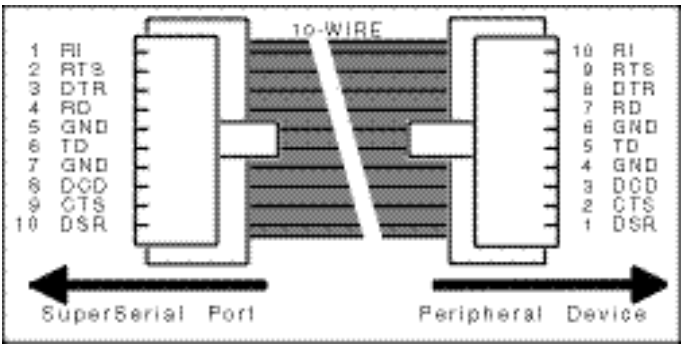

Figure 16. 10-wire RJ-45 Reversing Cable

The following modular cables are available from Equinox (use with modular adapters from Table 3 above):

P/N	Description
690252	10' 10-Wire Reversing Modular Cable
690253	25' 10-Wire Reversing Modular Cable
690254	75' 10-Wire Reversing Modular Cable

Table 4. 10-wire Modular Cables

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Equinox Systems Inc.
Manufacturer's Address:	One Equinox Way Sunrise, Florida 33351-6709 USA
declares, that the products	
Product Names:	SuperSerial Technology (SST) Serial I/O products Megaplex Serial I/O products ELS Ethernet Terminal Servers
Model Numbers:	SST-2, SST-4, SST-8, SST-64, SST-128, PM-8, PM-16, MIM-1, CMX-16, SSM-8, SSM-12, SSM-24 Megaplex, Megaplex CMX ELS-8, ELS-16
Product Options:	All

conform to the following Product Specifications:

Safety: EN 60950:1992, CSA C22.2 No:950, UL 1950

EMC: EN 55022 (CISPR22 A): 1987E,
FCC Part 15 Class A
EN 50082-1: 1992 - Generic Immunity
IEC 801-2: 1984, 8kV CD, 8kV AD
IEC 801-3: 1984, 3V/m, 27-500MHz
IEC 801-4: 1988, 1kV Power & 0.5kV I/O Lines

Supplementary Information:

The products herewith comply with the requirements of the Low Voltage Directive, 73/23/EEC and the EMC Directive 89/336/EEC, including amendments by the CE-marking Directive 93/68/EEC.

March, 1999

Equinox Systems, Inc.

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NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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