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SYNC/570 and SYNC/570i

Synchronous Communications Controller EIA-232/V.35

Hardware Installation and Configuration Guide

Introduction

The Digi SYNC/570 and SYNC/570i are high-performance expansion boards for computers. The SYNC/570 adds two synchronous/asynchronous serial ports while the SYNC/570i adds two or four synchronous/asynchronous ports.

A complete list of SYNC/570 features and specifications is provided on the Access Resource CD for the DataFire Family of Products shipped with the adapter.

Check the Package Contents

Verify that these items are included in your package:

SYNC/570 Contents:

- SYNC/570 adapter
- Two 8-foot DB-15 to DB-25 cables.
- One loopback connector
- DataFire Access Resource CD
- Diagnostic diskette

SYNC/570i Contents:

- SYNC/570i adapter
- One duo or quad cable
- One loopback connector
- DataFire Access Resource CD
- Diagnostic diskette

Install the Adapter

Step 1. Configure the Motherboard I/O Address

Before installing the SYNC/570 or SYNC/570i in a system, you must set the Input/Output (I/O) address.

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Set the multi-segment switch on the main board. This switch sets the starting I/O address for the block of I/O addresses the adapter uses. The adapter is shipped with a default setting of 300H.

Note: All I/O addresses are in hexadecimal format.

SYNC/570(i) I/O Addresses and Switch Settings

100H						
ON	X	X	X	X		X
OFF					X	
	1	2	3	4	5	6

110H						
ON		X	X	X		X
OFF	X				X	
	1	2	3	4	5	6

120H						
ON	X		X	X		X
OFF		X			X	
	1	2	3	4	5	6

130H						
ON			X	X		X
OFF	X	X			X	
	1	2	3	4	5	6

140H						
ON	X	X		X		X
OFF			X		X	
	1	2	3	4	5	6

150H						
ON		X		X		X
OFF	X		X		X	
	1	2	3	4	5	6

160H						
ON	X			X		X
OFF		X	X		X	
	1	2	3	4	5	6

170H						
ON				X		X
OFF	X	X	X		X	
	1	2	3	4	5	6

180H						
ON	X	X	X			X
OFF				X	X	
	1	2	3	4	5	6

190H						
ON		X	X			X
OFF	X			X	X	
	1	2	3	4	5	6

1A0H						
ON	X		X			X
OFF		X		X	X	
	1	2	3	4	5	6

1B0H						
ON			X			X
OFF	X	X		X	X	
	1	2	3	4	5	6

1C0H						
ON	X	X				X
OFF			X	X	X	
	1	2	3	4	5	6

1D0H						
ON		X				X
OFF	X		X	X	X	
	1	2	3	4	5	6

1E0H						
ON	X					X
OFF		X	X	X	X	
	1	2	3	4	5	6

1F0H						
ON						X
OFF	X	X	X	X	X	
	1	2	3	4	5	6

200H						
ON	X	X	X	X	X	
OFF						X
	1	2	3	4	5	6

210H						
ON		X	X	X	X	
OFF	X					X
	1	2	3	4	5	6

220H						
ON	X		X	X	X	
OFF		X				X
	1	2	3	4	5	6

230H						
ON			X	X	X	
OFF	X	X				X
	1	2	3	4	5	6

240H						
ON	X	X		X	X	
OFF			X			X
	1	2	3	4	5	6

250H						
ON		X		X	X	
OFF	X		X			X
	1	2	3	4	5	6

260H						
ON	X			X	X	
OFF		X	X			X
	1	2	3	4	5	6

270H						
ON				X	X	
OFF	X	X	X			X
	1	2	3	4	5	6

280H						
ON	X	X	X		X	
OFF				X		X
	1	2	3	4	5	6

290H						
ON		X	X		X	
OFF	X			X		X
	1	2	3	4	5	6

2A0H						
ON	X		X		X	
OFF		X		X		X
	1	2	3	4	5	6

2B0H						
ON			X		X	
OFF	X	X		X		X
	1	2	3	4	5	6

2C0H						
ON	X	X			X	
OFF			X	X		X
	1	2	3	4	5	6

2D0H						
ON		X			X	
OFF	X		X	X		X
	1	2	3	4	5	6

2E0H						
ON	X				X	
OFF		X	X	X		X
	1	2	3	4	5	6

2F0H						
ON					X	
OFF	X	X	X	X		X
	1	2	3	4	5	6

300H						
ON	X	X	X	X		
OFF					X	X
	1	2	3	4	5	6

310H						
ON		X	X	X		
OFF	X				X	X
	1	2	3	4	5	6

320H						
ON	X		X	X		
OFF		X			X	X
	1	2	3	4	5	6

330H						
ON				X	X	
OFF	X	X			X	X
	1	2	3	4	5	6

340H						
ON	X	X		X		
OFF			X		X	X
	1	2	3	4	5	6

350H						
ON		X		X		
OFF	X		X		X	X
	1	2	3	4	5	6

360H						
ON	X			X		
OFF		X	X		X	X
	1	2	3	4	5	6

370H						
ON				X		
OFF	X	X	X		X	X
	1	2	3	4	5	6

380H						
ON	X	X	X			
OFF				X	X	X
	1	2	3	4	5	6

390H						
ON		X	X			
OFF	X			X	X	X
	1	2	3	4	5	6

3A0H						
ON	X		X			
OFF		X		X	X	X
	1	2	3	4	5	6

3B0H						
ON			X			
OFF	X	X		X	X	X
	1	2	3	4	5	6

3C0H						
ON	X	X				
OFF			X	X	X	X
	1	2	3	4	5	6

3D0H						
ON		X				
OFF	X		X	X	X	X
	1	2	3	4	5	6

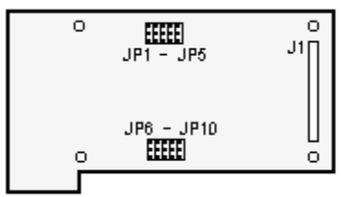
3E0H						
ON	X					
OFF		X	X	X	X	X
	1	2	3	4	5	6

3F0H						
ON						
OFF	X	X	X	X	X	X
	1	2	3	4	5	6

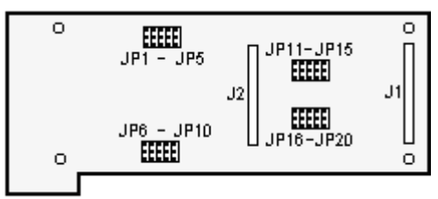
Step 2: Configuring the Interface Port

If you are installing a SYNC/570i adapter with a jumper-configurable interface, set the jumpers on the board for the correct interface.

SYNC/570i 2-Port daughterboard



SYNC/570i 4 Port daughterboard



The interface port is hardware-configurable using two jumper sets on the daughterboard.

Note: When disconnecting the daughterboard use adequate precautions (such as a grounding wrist strap that is connected to earth ground) to prevent electrostatic damage.

a. From the host side, remove the metal screws which secure the daughterboard to the motherboard.

b. Separate the daughterboard from the motherboard.

Note: There is one connector holding the daughterboard. **Do not** pull with a twisting motion.

c. Install the jumpers for the correct interface. When the jumpers are on the top two rows, the interface port is set to V.35. When the jumpers are on the bottom two rows, the interface port is set to EIA-232.

Jumper Positions for V.35

JP1	JP2	JP3	JP4	JP5
o	o	o	o	o
o	o	o	o	o
o	o	o	o	o

JP6	JP7	JP8	JP9	JP10
o	o	o	o	o
o	o	o	o	o
o	o	o	o	o

Jumper Positions for EIA-232

JP1	JP2	JP3	JP4	JP5
o	o	o	o	o
o	o	o	o	o

JP6	JP7	JP8	JP9	JP10
o	o	o	o	o
o	o	o	o	o

d. Reconnect the daughterboard to the motherboard by matching the connectors and screw wells. Push the daughterboard onto the motherboard and replace the screws.

Step 3. Install the adapter in the Computer

Before you Begin

- Record the serial number of the adapter (located under the part number label). This will enable Digi to provide you with better service, should the need arise.
- Shutdown and unplug power from the computer.
- Put a ground strap on to ground yourself. If one is not available, ground yourself by touching an unpainted metal surface, such as the computer's chassis.

Installation Procedure

1. Remove the computer cover.

2. Locate an available 16-bit slot in your computer and remove the slot plate.

3. Remove the hold-down screw at the top of the slot (ISA). Remove the slot bracket.

4. Insert the adapter into the slot and screw the endplate to the computer chassis. The endplate must be screwed into the computer chassis to remain in compliance with Part 15 of FCC rules.

5. Replace the computer cover.

6. Reboot the computer. The LED indicator will display a steady red light indicating there are no lines connected.

7. Select the I/O address, memory address, and IRQ from the list of choices shown.

Step 5. Verifying the Installation

The *User Diagnostics* diskette and the loopback connector are designed to verify correct installation of the adapter. When running the diagnostic program, make sure no devices are connected to the adapter ports.

1. Boot the system from a DOS-bootable diskette or partition. The **A:** prompt should display on your screen.

2. Insert the *User Diagnostics* diskette.

3. Install the Telco (RJ-45) and EIA-232 loopback connectors on the adapter.

4. Type **A:\SYNC570** to start the diagnostic program.

5. Follow the instructions on the screen.

The diagnostic tests will fail if there is a memory address (base I/O address or 16KB memory window) or interrupt conflict. If the diagnostic program cannot determine your switch settings, there may be a conflict as well. Try changing the memory addresses and IRQ if the diagnostic program fails.

The diagnostic program displays the current the IRQ, base memory address, and the base I/O address. You may modify the address and IRQ selections from the diagnostic to test the adapter. The IRQ must be active and you must select a non-zero address.

Note: For ISA adapters, the following I/O addresses are not allowed when running the user diagnostic program; 0x000 through 0x100, 0x1F0, 0x230, 0x240, 0x250, 0x260, 0x270, 0x2e0, 0x2F0, 0x330, and 0x360 through 0x3FF.

Other Resource Settings

IRQ and Memory

The memory address and interrupt line (IRQ) are software-configurable via either your operating system or an installable driver. The memory address consists of a 16KB window.

Fast Select

Jumper JP1 on the ISA SYNC/570 adapter controls the Fast Select circuitry on board. The adapter is shipped with a jumper connecting pin 2 and pin3 of JP1. This option allows the adapter to function with any combination of 8, 16, or 32 bit video and/or network cards supporting Fast Select.When pins 1 and 2 are jumpered, the adapter must be installed in a 128KB paragraph which contains only 16 or 32 bit cards. The default setting (pins 2 and 3 jumpered) works in most computers and should not be changed without verification from Digi Technical Support.

What Next?

Install and configure the driver for your SYNC/570 or SYNC/570i adapter. Consult the DataFire Access Resource CD for driver installation and configuration procedures. The DataFire Access Resource CD also contains cabling information, diagnostic and troubleshooting information, and product features and specifications.

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