54820A-01B

S E R V I C E N O T E

Supersedes:
54820A-01A

54820A Infiniium Oscilloscopes – 2Gsa/s, 2 Ch, 500MHZ

Serial Numbers: US00000000 / US38389999

Replacing Older A4 AMI PC Motherboard Requires Extra Parts

Duplicate Service Notes:
54810A-01B Serial Numbers: US00000000 / US38389999
54815A-01B Serial Numbers: US00000000 / US38389999
54820A-01B Serial Numbers: US00000000 / US38389999
54825A-01B Serial Numbers: US00000000 / US38389999
54845A-01B Serial Numbers: US00000000 / US38389999

Parts Required:

Part No.	Qty	Description
54810-66524	1	PC motherboard (AMI series 757 Rev. D)
54810-68501	1	CPU heatsink w/fan
1821-4976	1	Microprocessor - AMD-K6-2/300
0950-3399	1	Voltage regulator module (VRM) 2.2V
1818-7682	2	DRAM-SIMM 8Mx32 (32Meg RAM) if not already installed on old motherboard
54810-83512	1	Hard disk drive with rev 3.50

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR: MR PRODUCT LINE: 1A

ADDITIONAL INFORMATION: Customer Satisfaction issue.

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Agilent Technologies

Situation:
The previous A4 PC Mothers, p/n 54810-66510 (AMI series 727) and p/n 54810-66512 (AMI series 757 Rev C), are no longer available. Replacing older motherboards requires the new AMI series 757 Rev D motherboard, plus additional parts.

Solution/Action
1. Set the 54810-66524 new AMI Series 757 Rev D motherboard jumpers as follows for the 300 MHz processor:
a. J5 - open
b. J6 - jumper
c. J7 - jumper
d. J8 - jumper
e J16 - jumper
f. J14 - open on all pins (enables VRM for 2.2V cpu core voltage)
g. J15 - jumper pins 1-2 for 66 (33) MHz

2.Install the 2.2V Voltage Regulator Module (VRM) in the VRM socket. Use part number 0950-3399 VRM (VXI p/n 073-20723-22).

3. Install the K6/300 processor in the socket and clean the top of the processor with alcohol and dry thoroughly.

4. Install the new heatsink/fan onto the new processor allowing room to access the socket locking handle. Press and hold the heatsink/fan onto the processor to ensure proper bonding.

5. Install the new 32 Meg RAM SIMMS in the new motherboard.

6. Install the motherboard in the chassis and connect the cables. Observe the labeling on the board to help determine where the cables are connected. Always remember the ribbon cable stripe goes to pin 1.

Software Set –up

Once the hardware has been installed the software can be installed via the following methods.

1. Replace the hard drive using part number 54810-83512. It comes pre-configured with 3.50 version firmware.
2. Using external CR-ROM Back-Pack model # 16750, and recovery CD_ROM media 54810-68814. This method also could be used to upgrade firmware to version 4.30 part number 54810-68811.
3. Upgrade the unit using E2633-68703, and then use standard recovery/upgrade media in LS120 format. This hardware upgrade consist of LS120 floptical drive with IDE adapters and cables. It also includes 3.50 LS120 recovery media.

BIOS Setup
To configure the AMI Series 757 Rev D motherboard WINBIOS parameters use the following procedure.
1. Connect the power cable to the oscilloscope.

2 Connect an external VGA monitor to the rear panel connector of the oscilloscope. (This step is not required on newer vintage units that are equipped with display board p/n's 54810-66513 and above.)

3. Connect an external keyboard and a mouse to the oscilloscope.

4. While holding the Insert key down, press the power switch on the oscilloscope. Con-tinue to hold the Insert key until information begins to appear on the VGA monitor.
a. The hard drive should make a short series of soft clicks as it goes through its own internal self-test.

b. After 10 seconds or so, the text near the center of the monitor should read something like this:
AMI Atlas-III PCI/ISA
AMD-K6-2(tm)-/300
Checking NVRAM
65536 KB OK
WAIT...
<INS> Pressed
Press F1 to Run SETUP
Press F2 to load default values and continue
(DO NOT press F2 to load default values.)

NOTE:
IF the word "ERROR" appears in those last few lines or the unit ap-pears to be dead, check the unit for proper assembly, motherboard jumper settings, and ribbon connectors that may be offset by a pin on the motherboard.

5. During the setup program you can control the cursor with the mouse. If mouse does not appear to work, press the ESCAPE key on the external keyboard to exit the setup program. Turn off the oscilloscope and ensure the mouse is properly connected to the rear panel connector. You may also need to remove the cabinet sleeve and ensure that the mouse connector is correctly connected to the motherboard via PS/2 mouse cable W22.

6. Do the following within the setup program:
a. Double-click on Optimal Defaults. Click Yes in response to "Load Optimal values?"
b. Double-click on Standard Setup, then select Date/Time. Use the mouse to set the current Month, Day, Year and Time. When finished Exit the Date/Time block.
c. Under Standard Setup, select Floppy A. Select 1.44 MB 3-1/3. Exit Floppy A.
d. Under Standard Setup, select Floppy B. Select Not Installed. Exit Floppy B, then exit Standard Setup.
e. Select Advanced Setup, then select System Keyboard. Select Absent.
f. Exit the Advanced Setup. NOTE: This only tells the computer not to check the key-board during power-up self-test. The keyboard will still function after this.
g. Double-click on PPCI/PnP Setup, then select IRQ9. Select ISA, then exit PCI/PnP Setup.
h. Double-click on Peripheral Setup and then select OnBoard Primary/ Secondary IDE. Select Primary, then exit Peripheral Setup.
i. Double-click on Power Management.
j. Click Power Management/APM and select Enabled.
k. Click Hard Disk Power Down Mode and select Suspend.
l. Click Hard Disk Time Out (Minute) and select 15 min.
m. Exit Power Management Setup.
n. Hold down the Insert key while exiting the Setup program and save the changes you have made. Continue to hold the Insert key until the monitor displays the

same information as was seen in step 4.
7. Re-enter the WINBIOS to change one parameter that could not be set in step 6.
a. Press F1 to re-enter the BIOS setup.
b. Double-click on Detect IDE Utility. The line labeled Pri. Master should contain numeric information indicating that it has found the hard drive. Exit this utility.
c. Exit the WINBIOS Setup and save the changes you made.
The oscilloscope should now reboot, load Windows 98, and come up with a scope display. If it does not, recheck your steps in the above procedure. If all the settings are correct, go to the Primary Troubleshooting Procedure in the service manual.
8. Once the WINBIOS has been configured and the power cycled, the Windows 98 operating system will begin the plug-and-play driver installation. Note the following:

9. Warm up the oscilloscope and perform the software self calibration. A BNC cable is needed to perform this self cal.

10. Run the selftests to verify the unit is operating properly.