Agilent 35687B Installation Note

Software Installation for version B.03.09

This note describes the installation and configuration of the software for the Agilent 3587S Realtime Signal Analyzer. Most of the Agilent 3587S systems are integrated at the factory by Agilent Technologies.

Software version B.03.09 is compatible with HP-UX version 10.20. Previous versions of HP-UX are not supported.

Note **If your system was integrated at the factory, these procedures do not need to be performed before using your system.** The only installation required is to connect the cables to the peripherals (display, disk drive, keyboard, mouse) and the downconverter, if your system includes one. Review the entire note and retain it for future reference.

Hardware Requirements

Refer to the *Agilent 35687B Operator's Reference* and *Agilent 3587S Hardware Installation Note* for information about installing, configuring, and turning on the system hardware. Refer to each VXI module's documentation for its configuration information to configure it as follows (from left to right in the chassis):

The Agilent E1498A V743 VXI controller module must be installed in slot 0 of the VXI mainframe.

The E1430A, E1437A, or E1438A ADC module should have a logical address of 129 and must be installed in the VXI slot next to the E1485 DSP module on its left.

The E1485 VXI DSP module should be configured as follows:

- It should contain 2 to 5 Motorola 96000 DSP daughter boards.
- The servant area should be set to a number > 1 (≥ 16 for option ATR).
- The logical address should be set to 128.

If option ATR is installed, the Agilent N2216A should be configured as follows:

- The logical address should be set to 144.
- The module must be installed between the ADC and DSP modules.

See the Hardware Installation Note for more information.

Part Number 35687-90045

Agilent Technologies

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Procedure

The entire procedure consists of 7 steps, any of which may be omitted, depending on your goals.

1. Backup data files to tape
2. Install HP-UX operating system
3. Install C development system (optional)
4. Install SICL
5. Install Agilent 3587S software (Agilent 35687B)
6. Restore data files from tape
7. Restart the system

If this installation is on a new (blank) system disk, all steps should be performed. If an operating system upgrade is not required, perform all steps except 2.

Step 1. Backup data files to tape

1. Connect a DAT (Digital Audio Tape) drive to the workstation's SCSI bus.
2. Insert a DAT tape into the drive.
3. As root, use SAM (System Administration Manager) to backup files of interest to the DAT tape. You can invoke SAM from the command line via:

```
% su
# sam
```

Note

If your system has never had a SCSI DAT drive configured, you should use SAM to add the `stape` driver to the HP-UX kernel. You can also use SAM to create and configure the appropriate device files for the drive.

If you are unfamiliar with SAM, refer to the online man (manual) page or the HP-UX system administration manual for more detail.

Step 2. Install HP-UX operating system

1. If the analyzer software is running, shutdown the Agilent 3587S by pressing [**HOME**], [**SYSTEM**], [**SHUTDOWN**], [**CONTINUE SHUTDOWN**].
2. At an operating system command prompt, type:

```
su <Enter>
/etc/reboot -hq <Enter>
```

   and wait for the message that says it is OK to cycle power. Then turn the power off on the VXI mainframe.
3. Connect a CD-ROM drive to the workstation's SCSI bus.
4. Put the HP-UX INSTALL and CORE OS CD-ROM into the CD-ROM drive.
5. Turn the VXI mainframe power on. As the boot process begins, this message appears on the display:

```
System Search Started
Press [Esc] to discontinue the Auto Boot process.
```

   Press [**Esc**] key on the keyboard in response to the prompt. You should be prompted with the **"MAIN MENU"** and a list of choices. Select the following choice from the **"MAIN MENU":**

```
Select 1 - Boot From a Device
```

   After selecting this choice, you should see the following message:

```
Scanning for boot devices.  Please wait...
```

   You should then be prompted with the **"BOOT FROM DEVICE"** menu that lists the available boot devices. Select the entry that specifies the CD-ROM drive in which the HP-UX install media is inserted. For example, the entry should appear something like:

```
 Key   Boot Device
   1    SCSI.2.0 TOSHIBA CD-ROM XM-5401TA
```

   The workstation should now begin to boot from the CD-ROM drive.
6. If your workstation has a DIN keyboard, you will first be prompted to confirm the localization language for your keyboard. As of this writing, the choice for US English was:

```
45) PS2_DIN_US_English
```

   Enter the number at the prompt and press <**Enter**>. You may be asked to reconfirm the choice.

7. You should then be greeted with a "Welcome to the HP-UX installation process!" message. This menu driven utility will lead you through the installation of the HP-UX operating system. Select the [**Install HP-UX**] option and press <**Enter**>.

Respond to the prompts as appropriate for your desired system configuration. Refer to the HP-UX installation documentation or system administration manuals for details on system configuration options.

As of this writing (with HP-UX 10.20), these value yield an acceptable default system configuration:

```
Would you like to enable networking now? [ n ]
Whole-System Configuration               [ Standard LVM Configuration ]
Primary Swap Size                        [ 400 MB ]
[1]Secondary Swap Size                   [ None]
Software Selection                       [ CDE Runtime Environment ]
Software Language                        [ English ]
Locale Setting                           [ default (C) ]
File system file name length             [ Long ]
/home Configuration                      [ Minimal ]
Make volatile dirs separate              [ True ]
Create /export volume                    [ False ]
```

When prompted for the Disk Parameters/FS Parameters entry, select the disk that will serve as the system disk. **Caution: all information on this disk will be erased.** Modify the <FS Parameters> to allocate more space to the /home volume. At least 200 MB is recommended. Note that this can be changed later after the system is booted via the Logical Volume Manager (LVM) within SAM. Refer to the HP-UX system administration manuals for more details.

When prompted whether to interact with SD-UX, reply no.

```
Do you want to interact with SD-UX swinstall? [ No ]
```

The installation process will now build the HP-UX file system on the target disk drive and install the appropriate filesets off of CD-ROM. This process may take 40 to 50 minutes. When loading is finished, the system reboots and asks more configuration questions. See next step.

8. Respond to the "Welcome to HP-UX!" prompts as appropriate for your desired system configuration. Refer to the HP-UX installation documentation or system administration manuals for further details on system configuration options.

As of this writing (with HP-UX 10.20), the following responses result in a desirable default system configuration:

```
- Link system to a network?   [ no ]
- System name                 [ Enter desired name, recommend max length = 8 chars ]
- Timezone?                   [ As appropriate ]
- Timezone area?              [ As appropriate ]
- Time correct?               [ As appropriate ]
- Root password?              [ respond "yes" to set root password, remember for later usage ]
- Font server?                [ no ]
```

If you need to need to change these settings in the future, run "/sbin/set_parms" as root. Once you have completed the dialog above, the workstation will reboot and you should be greeted with a CDE (Common Desktop Environment) login prompt.

9. Congratulations, you are finished installing the HP-UX operating system.

1. This value assumes a system disk capacity of 4 GB. Select a value commensurate with your system disk size.

Step 3. Install Agilent I/O Libraries (SICL)

1. Login through CDE as root.
2. Open up a terminal window.
3. Load the CD-ROM containing the "Agilent I/O Libraries (SICL/VISA)" into the CD-ROM drive.
4. Mount the CD-ROM for access via:

   ```
   # /etc/mount /dev/dsk/c0t2d0 /SD_CDROM
   ```

   This assumes that the CD-ROM drive is at SCSI address 2.
5. Run /usr/sbin/swinstall to install the I/O libraries. You will have to specify the <Local CD-ROM> as the source of the installation media. For more information on swinstall, refer to the detailed documentation for SD-UX (Software Distributor for UNIX).
6. Unmount the CD-ROM drive via:

   ```
   # /etc/umount /SD_CDROM
   ```
7. The `iosetup` utility provides a graphical user interface to configure the SICL (Standard Instrument Control Library) subsystem, used to perform workstation hardware I/O. To run the `iosetup` utility:

   ```
   # /opt/sicl/bin/iosetup
   ```

   a. Select the "V743 VXI Interfaces" and "Model v743 Built-in GPIB" interfaces to configure.

   b. Accept the default parameters for each of these choices.

   c. When finished selecting the interfaces to configure, press <Done...>.

   d. Confirm the acceptance of the configuration. Press <OK> at the next dialog prompt (with the default entries) that describes some of the HP-UX kernel build details.

   e. When the kernel rebuild is complete, you are prompted in the terminal window whether the system should be rebooted:

   ```
   Kernel build was successful!
   Would you like to reboot now using 'shutdown -r'? y/n: y
   ```

   Respond "y" for yes and allow the system to reboot.

Step 4. Install C development system (optional)

If you intend to develop "C" programs to interface with the Agilent 3587S via option AGG, you must have the "Agilent C/ANSI C Development Bundle". The following procedure describes how to install the development bundle.

1. Login through CDE as root.
2. Open up a terminal window.
3. Load the CD-ROM containing the "Agilent C/ANSI C Development Bundle" into the CD-ROM drive.
4. Mount the CD-ROM for access via:

   ```
   # /etc/mount /dev/dsk/c0t2d0 /SD_CDROM
   ```

   This assumes that the CD-ROM drive is at SCSI address 2.
5. Run /usr/sbin/swinstall to install the Agilent C/ANSI C Development Bundle. You must specify the <Local CD-ROM> as the source of the installation media. For more information on swinstall, refer to the detailed documentation for SD-UX (Software Distributor for UNIX).
6. Unmount the CD-ROM drive via:

   ```
   # /etc/umount /SD_CDROM
   ```

Step 5. Install Agilent 3587S software (Agilent 35687B)

1. Login through CDE as root.
2. Open up a terminal window.
3. If you have not set up a user account for running the 3587S software use `sam` to create an account. We recommend creating the user `vxi` and the group `users`.
4. Load install media (DAT or CD-ROM) into drive.
5. Run `swinstall` to install the Agilent 3587S software.
6. The next step depends on whether you are installing from a DAT (tape) or CD-ROM

   DAT Installation:

   From the command line prompt you can issue the following (as root user):

   ```
   /usr/sbin/swinstall -x reinstall=true -s /dev/rmt/0mn "*"
   ```

   CD-ROM installation:

   Perform the following commands from a prompt:

   ```
   /etc/mount /dev/dsk/c0t2d0 /SD_CDROM
   /usr/sbin/swinstall -x reinstall=true -s /SD_CDROM/ "*"
   /etc/umount /SD_CDROM
   ```

   This assumes the SCSI address of the CD-ROM is 2 (in first line).
7. Edit /opt/hp3587s/CONFIGURATION and add the following line at the end of the file:

   ```
   License Number: xxxxxxxxxxxxxxx
   ```

   where `xxxxxxxxxxxxxxxx` is the 16-character license number from your 3587S software license.
8. Edit /opt/hp3587s/CONFIGURATION and add the following line at the end of the file:

   ```
   codeword: xxxxxxxxxxxxxxx
   ```

   where `xxxxxxxxxxxxxxxx` is the 16-character codeword from your 3587S software license.
9. If you are installing option ATR, edit /opt/hp3587s/CONFIGURATION.
   a. Change the line:

   ```
   #ATR Option  :  0000000000000000
        to
   ATR Option  : xxxxxxxxxxxxxxx
   ```

   where xxxxxxxxxxxxxxx is the 16-character codeword from your 3587S software license.

   b. Change the line:

   ```
   #e1562b Logical Address:  144
        to
   e1562b Logical Address:  144
   ```

   where 144 is the logical address of your E1562B, E1562E, or N2216A data disk module.
10. Use `SAM` to add the user login "hp3587s" to the system.

Step 6. Restore data files from tape

1. Insert the DAT tape used in the backup in step #1 into the DAT drive.
2. As superuser, use SAM (System Administration Manager) to restore files of interest from the DAT tape.

Step 7. Restart the system

1. Exit CDE (from root user).
2. At the CDE login screen, login as user "hp3587s" (added in Step 5).
3. To start the Agilent 3587S, at a terminal prompt, execute "hp3587s":

```
% hp3587s <Enter>
```