

# SVMi-20E INSTALLATION

## 1. Installing the SVMi-20E in an OfficeServ 7200/7400 Series System

When installing an SVMi-20E card, it is important to remember that it is a computer, much the same as any desktop PC and it is therefore very important not to exceed the environmental limits of an ordinary PC.

### ■ POWER REQUIREMENTS

Because the SVMi-20E card does NOT draw from the -48DC supply it has a Zero (0) SEPU rating under all possible configurations.

### ■ OfficeServ 7200/7400 Series HARDWARE COMPATIBILITY

When configured for 16 ports or less this card can be installed in any universal slot. When configured for 20 ports the SVMi-20E card must be installed in 32 channel slots.

### ■ OfficeServ 7200/7400 Series SOFTWARE COMPATIBILITY

All versions of the OfficeServ 7200/7400 support the SVMi-20E operation. We have introduced a new 8-Port VPM daughterboard to reach the 20 ports that requires SVMi-20E software version 5.3.3.5 or higher and MP software version 4.30h or higher.

## 2. Inspection

Unpack and inspect the unit for any obvious damage. This card should be labeled SVMi-20E. If it is not, you have the wrong card. Before inserting the SVMi-20E card in the OfficeServ system install required optional boards to meet customer's configuration and requirements.

## 3. Installing Individual Components on SVMi-20E SBC

### 3.1 Installing Voice Processing Modules

VPMs are only necessary when more than 4 ports are required on the SVMi-20E. VPMs are NOT required to access the first four embedded ports. Adding new VPMs is as simple as plugging them with the correct location for each module. Here is a chart showing the correct location and VPM for this installation.

Configuration	Included on SBC	VPM in SL2	VPM in SL3	Total Ports
1	4	none	none	4 Voice
2	4	VPM-E	none	8 Voice
3	4	VPMF-E	none	8 Voice Supporting 1 Fax
4	4	VPM-E	VPM-E	12 Voice
5	4	VPM-E	VPMF-E	12 Voice Supporting 1 Fax
6	4	8VPMF-E	none	12 Voice Supporting 1 Fax
7	4	VPMF-E	VPMF-E	12 Voice Supporting 2 Fax
8	4	8VPMF-E	VPM-E	16 Voice Supporting 1 Fax
9	4	8VPMF-E	VPMF-E	16 Voice Supporting 2 Fax
10	4	8VPMF-E	8VPMF-E	20 Voice Supporting 2 Fax

There is no special switch settings on the SVMi-20E, the additional VPM card will be recognized when the system powers up. The 8-Port VPM requires MP software version 4.30h or higher and SVMi-20E software version 5.3.3.5 or higher to be recognized by the system. However, you may need to use MMC 724 to verify that all ports have been assigned station group numbers and you will need to use MMC 601 to assign station numbers to the BI-VMS group. In addition MMC 855 will show the configuration of VPMs on the SVMi-20E.

Follow the VPM configuration table on the previous page. Installing two-4 Port VPM modules or two 8-Port VPM modules does not require specific locations for the install, but installing one 4-Port VPM and one 8-Port VPM on a single card does. Here are the details:

- The 4-Port VPM MUST BE INSTALLED ON CONNECTOR S3 and the 8-Port VPM MUST BE ON CONNECTOR S2. If they are reversed, no audio will be heard from these voice ports.
- If installing a VPM to an existing SVMi-20E installation, the SVMi-20E MUST be shutdown properly (MMC 746) and once down the OfficeServ 7200 or 7400 must be powered off before removing the card for the VPM installation.
- Discharge any static electricity you may have gathered by touching a ground point such as the cover of the KSU Power Supply. When you have done this then lay the SVMi-20E card face up on a non-conductive surface.
- Position the correct VPM over the card connector on the SVMi-20E PCB board and gently apply pressure until the card seats. The SVMi-20E card can now be installed in the KSU. Once the SVMi-20E is securely seated in the OfficeServ 7200/7400 Series System the KSU can be powered up.

## **3.2 Installing the Modem Daughter Board**

### **3.2.1 PREPARATION**

If installing a Modem Daughter Board into an existing SVMi-20E installation, the SVMi-20E MUST be shutdown properly (MMC 746) and once down the OfficeServ 7000 Series System must be turned off before the SVMi-20E can be removed from the OfficeServ 7000 Series System.

Discharge any static electricity you may have gathered by touching a ground point such as the cover of the KSU Power Supply. When you have done this then lay the SVMi-20E card face up on a non-conductive surface.

### **3.2.2 INSTALLATION**

After you have either followed the above steps for an existing installation or if you have a brand new SVMi-20E ready to add the Modem Daughter Card, position the Modem Daughter Board component side down over the card connector on the SVMi-20E PCB board locate it in the central area of the PCB and gently apply pressure until the card seats. These connectors are keyed. When the Modem and the connectors are aligned properly the Modem should easily snap into place. The SVMi-20E card can now be installed in the KSU. Once the SVMi-20E is securely seated in the OfficeServ 7200/7400 Series System the KSU can be powered up.

### **3.2.3 UNINSTALLING**

After following the preparation steps mentioned above, gently separate the Daughter Board from the main PCB connectors. The Modem Daughter Board should lift out with little effort. If you are replacing the Board follow the Installation steps above for installing the replacement.

If you are simply removing the Modem Daughter Board, the SVMi-20E card can now be installed in the KSU. Once the SVMi-20E is securely seated in the OfficeServ 7200/7400 Series System the KSU can be powered up.

### **3.3 Installing the 64MB DRAM Module**

#### **3.3.1 PREPARATION**

If installing the 64MB DRAM Module in to an existing SVMi-20E installation, the SVMi-20E **MUST** be shut down properly (MMC 746) and once down the OfficeServ 7200/7400 Series System must be turned off before the SVMi-20E can be removed from the OfficeServ 7200/7400 Series System.

Discharge any static electricity you may have gathered by touching a ground point such as the cover of the KSU Power Supply. When you have done this then lay the SVMi-20E card face up on a non-conductive surface.

After you have either followed the above steps for an existing installation or if you have a brand new SVMi-20E ready to add the 64MB DRAM Module, follow the steps outlined in this document in either the "Removing a Hard Disk Drive" or "Removing the Compact Flash (CF) Adaptor" sections and remove the Drive that is installed on the unit requiring the 64MB DRAM.

#### **3.3.2 INSTALLATION**

Once the Drive or Controller is removed, position the DRAM Module component side up with the copper edge connections going into the DRAM connector on the SVMi-20E PCB. The DRAM connector is notched and the DRAM Module should be held a 45 to 25 degree angle when inserting into the connector. Once inserted, gently push down on the module until the notches on either side edge snap into place. Properly installed the DRAM module will lay virtually parallel to the main SVMi-20E PCB. Follow the instruction in either the "Installing a Hard Disk Drive" or "Installing the Compact Flash (CF) Adaptor" sections of this guide. Once the Drive is reinstalled the SVMi-20E card can now be installed in the KSU. Once the SVMi-20E is securely seated in the OfficeServ 7200/7400 Series System the KSU can be powered up.

#### **3.3.3 UNINSTALLING**

To uninstall the DRAM Module, follow the same preparation outlined in the beginning of this section. Once the Drive or Controller is removed, gently pull the PLASTIC tabs on either side of the DRAM Module away from the module with your thumb nails. The DRAM Module will pop up at a 25 to 45 degree angle. Gently pull the DRAM from the DRAM socket. If replacing the existing DRAM follow the Installation section for installing the new DRAM. If simply removing the DRAM for some other reason and you have eight ports or less then follow the instruction in either the "Installing a Hard Disk Drive" or "Installing the Compact Flash (CF) Adaptor" sections of this guide. Once the Drive is reinstalled the SVMi-20E card can now be installed in the KSU. Once the SVMi-20E is securely seated in the OfficeServ 7200/7400 Series System the KSU can be powered up.

## 4. Installing the SVMi-20E in the KSU

**NOTE:** Before powering off the KSU, it is recommended that you use MMC 740 and set MBX Download to 'No'.

### **OfficeServ 7200**

The SVMi-20E card can be installed in any slot (1 ~ 5) of the main or expansion cabinet of the **OfficeServ 7200** system unless two 8-Port VPM modules are installed on the SVMi-20E. Slots 1 and 2 are 16 channel slots and slots 3 through 5 are 64 channel slots. If two 8-Port VPM modules are used, slots 3 through 5 of the main or expansion cabinet **must** be used to support all 20 voice channels.

### **OfficeServ 7400**

The SVMi-20E card can be installed in slots 1 or 2, or 4 through 11 of the main cabinet. The expansion cabinets can support the SVMi-20E in slots 1 through 11. Note: If you are using two 8-Port VPM modules, you can not use slot 10 because MP will limit SVMi-20E to only 16 ports.

Next, position the SVMi-20E card to the grooves of the card guide and gently slide the card in until it makes contact with the connector. Press gently, but firmly, on the left and right of the front edge of the card until the card seats in its connector. Press firmly on the back front panel lever until it snaps securely in place. The cabinet can now be turned on.

If the SVMi-20E card is being installed in an existing (not new) system, use MMC 806 to pre-install the card and MMC 724 to assign extension numbers to each SVMi-20E port. Use any available numbers.

After the SVMi-20E card is installed, either in a new or existing system, use MMC 601 and assign all the SVMi port numbers to the last available station group (Group Number 5039 by default on the OfficeServ 7200 system).

The final step is to do a proper shut down on the SVMi-20E and once at a C:> press the reset button on the front of the SVMi-20E. (Steps for performing a proper shut down are described in the section Correct System Shutdown.)

## 5. Inserting or Removing the Hard Disk Drive

### 5.1 Removing a Hard Disk Drive

1. Do a proper shut down of the SVMi-20E. ([Steps for performing a proper shut down are described in the section Correct System Shutdown.](#))
2. Power down the phone system and remove the SVMi-20E card.
3. AVOID TOUCHING OR APPLYING PRESSURE TO THE TOP COVER OF THIS HDD.
4. HANDLE THIS UNIT ONLY BY THE SIDES.
5. Hold the unit with the HDD supported in your hand, held by the edges. The solder side of the card should be facing up.
6. Remove the 4 retaining screws so that the HDD becomes detached.
7. Still holding the HDD by the edges invert the card (component side up) and gently unplug the ribbon cable.
8. Gently pack the HDD in the SEC provided packaging.

## 5.2 Installing a Hard Disk Drive (HDD)

1. Hold the HDD by the sides with the 4 screw studs facing up.
2. Attach the ribbon cable between the HDD and the Voice Mail card. The 4 spare pins on one end of the connector are not used.
3. Position the Voice Mail card with solder side up, so that the holes in the card line up with the studs on the HDD adapter.
4. Insert the 4 screws, and tighten until snug. DO NOT OVERTIGHTEN.
5. Replace the SVMi-20E in the phone system.

## 6. Inserting or Removing a Compact Flash Adapter

### 6.1 Removing the Compact Flash (CF) Adapter

1. Do a proper shut down of the SVMi-20E. (Steps for performing a proper shut down are described in the section Correct System Shutdown.)
2. Power down the phone system and remove the SVMi-20E card.
3. Hold the unit with the CF Adapter supported in your hand, held by the edges. The solder side of the card should be facing up.
4. Remove the 4 retaining screws so that the CF Adapter becomes detached.
5. Still holding the CF Adapter by the edges invert the card (component side up) and gently unplug the ribbon cable.
6. Gently pack the CF Adapter in the SEC provided packaging.

### 6.2 Installing the Compact Flash (CF) Adapter

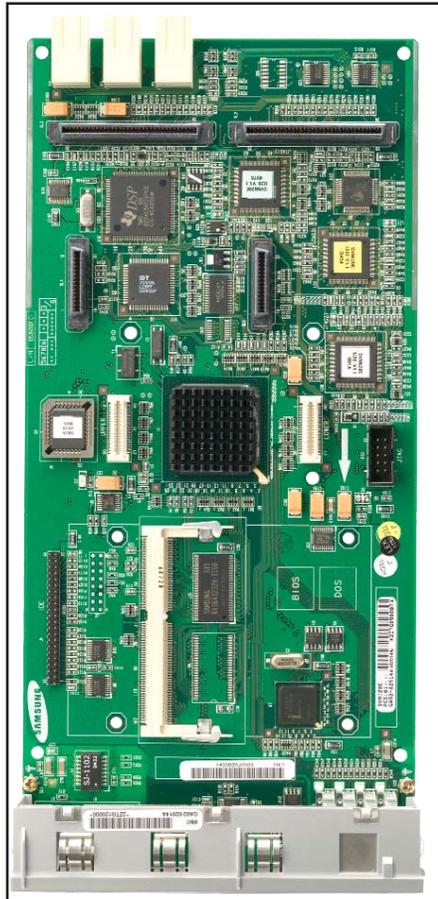
1. Hold the CF Adapter by the sides with the 4 screw studs facing up.
2. Attach the ribbon cable between the CF Adapter and the Voice Mail card. The 4 spare pins on one end of the connector are not used.
3. Position the Voice Mail card with solder side up, so that the holes in the card line up with the studs on the CF adapter.
4. Insert the 4 screws, and tighten until snug. DO NOT OVERTIGHTEN.
5. Replace the SVMi-20E in the phone system.

The SVMi-20E displayed on the left has all optional boards installed; (2) VPMF-Es, (1) Modem, (1) DRAM Module (this is located directly under the Compact Flash Controller). Also shown are the SVMi-20E Compact Flash Controller and 256MB Compact Flash Media.

The SVMi-20E on the right shows all the connectors unpopulated. You can see with the CF Controller removed where the DRAM connector is located.



*SVMi-20E/CF with all optional boards installed*



*SVMi-20E with no optional boards installed*

## 7. Setting Up the SVMi-20E with the OfficeServ 7200/7400 Systems

This section provides the additional steps required to set up the SVMi-20E card for operation in the OfficeServ 7200/7400 Series telephone system products. Included here is information regarding the software set up for the phone system.

After inserting the SVMi-20E card and turning the power on there are some key system options that should be set, in order for the SVMi-20E to function correctly. These steps are performed in the phone system. It is necessary to perform these at this time so that the SVMi-20E will initialize properly and synchronize its mailbox database with that of the key system.

### 7.1 Power Up Procedure

Follow the steps below to ensure that the SVMi-20E is properly setup.

#### 7.1.1 POWER UP

1. Complete insertion of the SVMi-20E and all other required interface cards and turn the system power switch ON.
2. There are 8 LEDs on the front of SVMi-20E. We will watch three during power up, the PGD, HDD, and the SDN LEDs:

The PGD LED will show steady green when the SVMi-20E is receiving Power from the OfficeServ 7200/7400 Series Back Plane connectors. The HDD LED will show hard drive access and will flicker whenever the HDD (hard drive) is being accessed. The SDN LED – will start off Green as the SVMi-20E is booting up (it will also turn Green when the SVMi-20E is shut down properly). It will turn Orange after the Voice Drivers are loaded into memory and then turn RED when the application Software is fully loaded. RED is warning letting you know the application is running and it is NOT safe to power down the OfficeServ 7200/7400 Series System.

#### 7.1.2 SYSTEM PROGRAMMING

Review and perform the following programming steps 1 through 7. It is necessary to perform these at this time so that the SVMi-20E will read these MMCs and initialize accordingly.

NOTE: Before moving forward if you want to change any of the SVMi-20E default Extension and Mailbox settings it is best to edit your Extension and Mailbox Templates now before initializing the SVMi-20E.

1. MMC 601: All SVMi-20E ports installed must be assigned to the BI-VMS station group, usually 5039 in the OfficeServ 7200 and 5049 in the OfficeServ 7400.
2. MMC 601: Select either SEQUENTIAL or DISTRIBUTED ring mode (Sequential is recommended).
3. MMC 207: Confirm that all SVMi-20E ports are set for VMAA use. This will be done automatically. You are just confirming at this point.
4. MMC 406: If you are using the SVMi-20E for Auto Attendant use MMC 406 to set the desired trunk(s) to ring the BI-VMS station group.
5. MMC 102: If you are using the SVMi-20E for Voice Mail make sure that all desired stations are forwarded to the BI-VMS station group for the appropriate call forward conditions: No-Answer, Busy, and/or ALL.

6. MMC 740: Download options to configure which ports to download.
7. MMC 741: Select if extension, mailbox, both or neither should be created for each port, and which subscriber group to create them in.
8. MMC 740: Set SVM AUTO SETUP to YES\*  
\*After configuring your system it is recommended that you return this option to "No" to reduce boot time for the SVMi-20E.

### 7.1.3 INITIALIZING THE SVMi-20E

Perform a proper SVMi-20E system shut down. ([Steps for performing a proper shut down are described in the section Correct System Shutdown.](#))

Once the SVMi-20E is down and at a C:> DOS prompt, Press the RESET button this will reboot the SVMi-20E. During the Reboot process the SVMi-20E will communicate through a series of IPC messages to the MCP to read the MMC data and initialize the SVMi-20E accordingly.

NOTE: After the SVMi-20E restarts you should change the value of MMC 740 so that it indicates "MBX Download = No." This will prevent the system from overwriting any future changes you make to the SVMi-20E database.

### 7.1.4 TESTING THE HARDWARE

1. Call each SVMi-20E port individually and confirm that SVMi-20E answers.
2. Call station group 5039 and confirm that SVMi-20E answers.

If steps 1 and 2 above proved to be successful you have completed the installation and setup of the SVMi-20E hardware.

You are now ready to begin programming the SVMi-20E Voice Mail/Auto Attendant system parameters. [See the SAMSUNG SVMi-20E Programming Section.](#)

NOTE: [See MMC references in the SVMi-20E Programming Overview documentation for other MMCs that interact with the SVMi-20E.](#)

## 8. Correct System Shutdown

Whenever possible one of the following procedures should be followed when shutting down the SVMi-20E system and/or prior to shutting down the Telephone equipment

### 8.1 Procedure One

From the Main Status Screen (showing activity and port status):

1. From any phone on the system Log into KMMC Programming
2. Using MMC 740 change RESTART SVM from "No" to "Yes"
3. The SDN LED on the front of the SVMi-20E will change from RED to Green. Green means it is safe to power down the switch.<sup>†</sup>

## 8.2 Procedure Two

From the Main Status Screen (showing activity and port status):

1. Press 'Escape' and enter System Administration password (Default = 0000)
2. Select 'Operating Utilities'
3. Select 'Exit the SVMi-20E'
4. Enter System Administrator's password (Default = 0000)
5. The SDN LED on the front of the SVMi-20E will change from RED to Green. Green means it is safe to power down the switch.<sup>†</sup>

## 8.3 Procedure Three

1. From any phone on the system call one of the SVMi-20E ports or call the station group 5039.
2. If the SVMi-20E answers with "please enter your password" press [\*] to escape to the main menu.
3. From the main menu press [#][0000]
4. You will be again prompted to enter a password, enter the System Administrator's password (Default = 0000)
5. You will be prompted with "System Administration Menu" and a list of functions you can perform. It will not be spoken, but you can enter a hidden option [4] to shut down the system.
6. Again you will be asked to enter a password, enter the System Administrator's password (Default = 0000)
7. The system will now shutdown to a C:> DOS Prompt. The SDN LED will turn from RED to GREEN. Green means it is safe to power down the switch.<sup>†</sup>

<sup>†</sup> Also if you are logged in via an SIO Terminal, when the SVMi-20E terminal emulation screen shows a DOS command line this also means the SVMi-20E is no longer processing and it is safe to power off the system and unplug the SVMi-20E card.

## 9. Connecting Optinal Equipment

There are two ports available on the front of each SVMi-20E, the LAN and the SIO. Both connections are 8 Pin RJ-45 type connectors.

All the possible peripheral connections will be to one of these ports. The possible connections are:

### 9.1 Serial Communication (PC Connection)

The serial communication feature allows the installer or the system administrator to connect any communication device that supports ANSI emulation to the SVMi-20E system for the purpose of system setup and administration.

The serial port can also be used to transfer files to and from the SVMi-20E and an attached PC using the XMODEN protocols.

### 9.1.1 LOCAL PROGRAMMING VIA SIO

Connect the serial port of the SVMi-20E unit to the serial port of the laptop or terminal using a direct RJ-45 Male to 9 pin female DB9 connector cable.

The Pin out for making your own cable is as follows:

<b>RJ-45 8 Pin Male</b>		<b>RS232 9 Pin Female DB9 Connector</b>
Pin 3	To	Pin 2
Pin 4	To	Pin 5
Pin 6	To	Pin 3

Pre-made Cables with the above pin out are available at many data connection supply houses. Cisco and others also use this standard for their RJ-45 to DB9 cables.

### 9.1.2 SETTING UP THE COMMUNICATIONS SOFTWARE (HYPERTERMINAL)

To connect from a laptop you may use any communications software that supports ANSI emulation. SVMi-20E has been tested using Windows HyperTerminal and PROCOMM PLUS for DOS/WINDOWS.

Launch HyperTerminal from your Windows PC and create a new connection.

1. Name the connection
2. Connect using the COM Port to which the SVMi-20E is connected
3. Set 'Bits per second' to 38,400
4. Set 'Data Bits' to 8
5. Set 'Parity' to None
6. Set 'Stop Bits' to 1
7. Set 'Flow Control' to None
8. Click 'Properties'
9. Click the 'Settings' tab
10. Select 'Terminal' keys
11. Set 'Emulation type' to ANSI or ANSIW
12. Set 'Line Wrap' to No

When this is complete press 'Ctrl + L' two or three times to refresh the screen and you should see the SVMi-20E Status Screen. You are now ready to program the system.

### 9.1.3 FILE TRANSFER VIA SIO

The Serial Port is primarily designed as a programming interface but may be used to transfer files using the commands XX (transmit file) and RX (receive file).

With an administration terminal connected to the SVMi-20E, go to the Port Activity screen and at the '=>' prompt type one of the following commands.

XX - Move a file from the SVMi-20E to the PC attached to the SVMi-20E Serial Port.

Syntax: XX [path] filename. Where [path] filename represents where the source file can be found on the SVMi-20E.

Terminal operation: Open an Xmodem file receive window. (Transfer/Receive Xmodem).

RX - Move a file from the PC attached to the SVMi-20E Serial Port to the SVMi-20E.

Syntax: RX [path] filename. Where [path] filename represents where the destination file will be sent on the SVMi-20E.

Terminal operation: Open an Xmodem file send window (Transfer/Send /Xmodem/filename).

## 9.2 LAN Port

The LAN port on the SVMi-20E is used for Programming, Back Up and Restore, and UPLOADING (sending) and DOWNLOADING (receiving) files to and from the SVMi-20E. This connector is designed to connect to the customer's internal Local Area Network (LAN) using a straight through RJ45 10/100baseT cat5 cable or directly to a PC via a RJ45 10/100baseT cat5 Crossover Cable.

The LAN port MUST use a static IP address. The default address is: 10.10.108.6

[For more information on this see additional Documentation on, 'Back Up and Restore' and 'FTP'.](#)

### 9.2.1 LOCAL PROGRAMMING VIA LAN

Connect the LAN port of the SVMi-20E unit directly to a PC via a RJ45 10/100baseT cat5 Crossover Cable.

#### Setting Up the Network Device on your PC or Laptop

You need to consult your Operating Systems user's manual for how to set up a network connection. Below is a suggestion on how to set up a connection using Windows 2000. It is still recommended that you refer to your own user manual for details.

1. From your desktop right click on "My Network Places" then select Properties
2. Right Click LAN connection device you will use to connected to the SVMi-20E then select Properties
3. Select Internet Protocol (TCP/IP) then select Properties
4. Select radio button for "Use the following Address"
5. Set IP Address: to 10.10.108.5
6. Set Subnet Mask: to 255.255.255.0
7. Set Default Gateway: to 10.10.108.1
8. Click on OK
9. Click on OK again
10. Close Network Places Window

## 9.2.2 SETTING UP THE COMMUNICATIONS SOFTWARE (HYPERTERMINAL)

To connect from a laptop you may use any communications software that supports ANSI emulation. The SVMi-20E has been tested using Windows HyperTerminal.

Launch HyperTerminal from your Windows PC and create a new connection.

1. Name the connection (example: "SVMi LAN")
2. Set 'Connect using' to TCP/IP (Winsock)
3. Set 'Host Address' to 10.10.108.6
4. Set 'Port Number' to 23
5. Click 'Properties'. Click the 'Settings' tab
6. Select 'Terminal' keys
7. Set 'Emulation type' to ANSI or ANSIW. Click ASCII Set up
8. Set 'Line Wrap' to No

When this is complete press 'Ctrl + L' two or three times to refresh the screen and you should see the SVMi-20E Status Screen. You are now ready to program the system.

## 9.2.3 REMOTE PROGRAMMING VIA LAN PORT

Connecting to the SVMi-20E via the LAN allows a remote administrator to monitor and provide routine administration without having to be on site. NOTE: The customer's Local Area Network must have Remote Access to Services enabled (or something similar on their LAN's Operating System) and be connected to the internet via one of the many available High Speed connections. If they have a "Dial Up" internet connection this will not work.

Connect to the customer's internal Local Area Network (LAN) using a straight through RJ45 10/100baseT cat5 cable. Use the same information above for Setting up your Network Device and Communications Software.

## 9.2.4 CHANGING THE DEFAULT SVMi-20E IP ADDRESS

When connecting to a customer's local area network, you may be required to change the Static IP address of the SVMi-20E. This can only be done using the SIO connection described previously in this document.

Using the SIO interface you will do a proper shut down of the SVMi-20E. Once at a C:> DOS prompt press the Reset button the front of the SVMi-20E face plate. Watch the boot up sequence and you will be asked to select a boot up option (the Default is: 1 – Launch Samsung Voice Mail). Select option 3 to "Boot to System Shell". You will again be at a C:> DOS prompt.

There are two ways to enter the Static IP address for the SVMi-20E. One is to use the ROM-DOS NED Text editor and the other is to use the SCONFIG utility provided by the TCP/IP software.

### Using NED

1. Change directory to 'Sockets'  
Type: cd \sockets

2. Edit the socket.cfg file  
Type: ned socket.cfg
3. The NED editor screen will display the following information:
 

```
# Set the IP address and number of subnet mask bits
# To use DHCP, replace this line with:
# ip address 0.0.0.1
ip address 10.10.108.6/24

# Set the IP time to live value
ip ttl 64

# Define an interface type 'packet driver' called 'if0'
# Class is 'dix', MTU = 1500, interrupt 60h, IRQ=10
interface pdr if0 dix 1500 05 0x60 10

# Define the default gateway used by interface 'if0'
route add default if0 10.10.108.5

# Define a host to use as a DNS server
domain server 10.10.108.5

# Set the Maximum Segment Size and Window size
tcp mss 1460
tcp window 2920

# Set the initial round trip time and retry counts
tcp irtt 500ms
tcp retry 6
```
4. Navigate so your cursor is to the right of the 6 in the ip address and back space through all the numbers in the ip address. Now type in the new address required by your specific network. (an example might be 192.168.25.33)
 

In the above example the SVMi-20E IP address would be 192.168.25.33. That is the address other devices on the network would use to reference or communicate with the SVMi-20E. The /24 is the subnet mask reference. 24 represents the number of consecutive 'ones' in the subnet mask. A typical subnet mask is 255.255.255.0 in binary it looks like:

```
11111111.11111111.11111111.00000000
```

If you count the number of consecutive 'ones' they equal 24 in this example.
5. Next navigate so your cursor is to the right of the 5 in the route add default ip address and back space through all the numbers in that ip address. Now type in the default gateway address required by your specific network. (an example might be 192.168.25.1)
6. Next navigate so your cursor is to the right of the 5 in the domain server ip address and back space through all the numbers in that ip address. Now type in the same address used in step 5 (an example might be 192.168.25.1)
7. This step has options. The Domain Server IP Address is not usually required. You can remove the line asking for the domain server, or Insert a # in front of the line so that it is ignored<sup>†</sup>, or also give it the same address as the example shows in steps 5 & 6.
8. Using the examples listed in steps 4 - 7 your new socket.cfg file should look like this:
 

```
# Set the IP address and number of subnet mask bits
# To use DHCP, replace this line with:
# ip address 0.0.0.1
```

```

ip address 192.168.25.33/24

# Set the IP time to live value
ip ttl 64

# Define an interface type 'packet driver' called 'if0'
# Class is 'dix', MTU = 1500, interrupt 60h, IRQ=10
interface pdr if0 dix 1500 05 0x60 10

# Define the default gateway used by interface 'if0'
route add default if0 192.168.25.1

# Define a host to use as a DNS server
# domain server 192.168.25.1

# Set the Maximum Segment Size and Window size
tcp mss 1460
tcp window 2920

# Set the initial round trip time and retry counts
tcp irtt 500ms
tcp retry 6

```

9. Now you must save your changes. Press [ESC] then press [F] to open the File Menu
10. Press [X] to exit and then [Y] to save your changes and exit.
11. You will now be at the C:\Sockets> DOS prompt.
12. Now press the RED reset button on the SVMi-20E and let the unit come up normally.

† A # in front of a line in the Socket.CFG file tells the application to ignore, skip over, and NOT execute the line.

## Using SCONFIG

SCONFIG.EXE is a utility provided by the TCP/IP software used for creating a SOCKET.CFG file. It will ask you a few questions that help you create the connections setting for the SVMi-20E to communicate on your network. To use SCONFIG you must also be at a DOS c:\> prompt as described previously before using the NED text editor.

From a DOS C:\> prompt:

1. Change directory to 'Sockets'  
Type: sconfig
2. Press [1] to continue configuration
3. Press [1] to select Network Card (Packet Driver)
4. Press [1] to select Static Addressing (Manual)
5. Enter the IP address and Subnet mask you want to use. (10.10.108.6/24 is the default IP Address)

Example: 192.168.1.32/24

In the above example the SVMi-20E IP address would be 192.168.1.32. That is the address other devices on the network would use to reference or communicate with the SVMi-20E.

/24 is the subnet mask reference. 24 represents the number of consecutive 'ones' in the subnet mask. A typical subnet mask is 255.255.255.0 in binary it looks like:

```
11111111.11111111.11111111.00000000
```

If you count the number of consecutive 'ones' they equal 24 in this example.

6. Enter the IP address of the Default Gateway used on the network the SVMi-20E will be attached. (10.10.108.5 is the default default Gateway)  
Example: 192.168.1.1
7. Enter the Primary DNS address or press [0] to skip. (10.10.108.5 is the default Primary DNS). [0] to skip should work just fine.
8. Enter the Secondary DNS address or press [0] to skip. [0] to skip should work just fine.
9. Enter [60] for the Interrupt Vector. This is not optional. You must enter a value of 60 for the Interrupt Vector.
10. Enter [10] for the network card's IRQ. This value is not optional. The LAN controller on the SVMi-20E is set at IRQ 10.
11. At this point the utility will inform you it is complete and that socket.cfg has been created. You can now restart the SVMi-20E normally.

After you change your Communications software to use the IP address you just programmed into the socket.cfg file You should be able to login to the SVMi-20E from anywhere on the customer's local area network or through the internet if they allow you remote access.

**NOTE:** All IP addresses used must be on the same network. If you change the SVMi-20E Static IP address then you **MUST** change the Default Gateway address. The DNS addresses can be skipped.

**IMPORTANT NOTE:** When using the LAN connection into the SVMi-20E you can not exit to DOS or use the DOS shell from Port Activity. The LAN drivers are embedded in the SVMi software and will **NOT** function if you bring the system down to DOS or suspend it's operation.