VadaTech MicroTCA MCH
Getting Started Guide

March 20, 2009
Version 1.0

Copyright

Notice

Trademarks

VADATECH FORM No. 3WI731-01 Rev. B

Revision History

Doc Rev	Description of Change	Revision Date
1.0	Document Created	03/20/2009

Table of Contents

Figures

Tables

1   Overview

This document is an overview of general MicroTCA Carrier Hub (MCH) setup information, such as instructions for changing default configurations and integration with a MicroTCA system.

1.1   References

- Intelligent Platform Management Interface Specification Second Generation v2.0
- PICMG® 3.0 Revision 3.0 AdvancedTCA® Base Specification
- PICMG® AMC.0 R2.0 Advanced Mezzanine Card Base Specification
- PICMG® Specification MTCA.0 R1.0 Base Specification
- VadaTech MicroTCA Carrier Manager Command Line Interface Reference Manual
- VadaTech MicroTCA Carrier Manager SNMP Interface Reference Manual
- VadaTech MicroTCA Carrier Manager Web Interface Reference Manual
- VadaTech MicroTCA Shelf Manager Command Line Interface Reference Manual
- VadaTech MicroTCA Shelf Manager SNMP Interface Reference Manual
- VadaTech MicroTCA Shelf Manager Web Interface Reference Manual
- VadaTech MicroTCA SNMP Trap User Manual
- VadaTech UTC001 and VT850 Telco / GPS Clock Configuration Guide
- VadaTech UTC001 Gigabit Ethernet Managed Switch Setup

1.2   Acronyms Used in this Document

Acronym	Description
MCH	MicroTCA Carrier Hub
PCIe	PCI Express
SAS	Serial Attached SCSI
SATA	Serial ATA
SRIO	Serial Rapid I/O
XAUI	10 Gigabit Attachment Unit Interface

Table 1: Acronyms

2   Front Panel

Refer to the MCH hardware reference manual for information about the front panel.

3   Getting Connected

Connecting to the MCH can be achieved via the RS-232 serial management port or either of the two Ethernet ports. Once connected to the system, users can manage and monitor the state of the MCH (see Section 4: Configuring the MCH).

Refer to the MCH hardware reference manual for locations of the serial management and the Ethernet ports.

3.1   Serial Port

The pin outs for the RS-232 serial management port is described in Table 2.

Pin	Signal
2	TX
3	RX
5	Ground

Table 2: RS-232 serial management pin out

This port uses a baud rate of 115200 baud, 8 data bits, no parity, and 1 stop bit. Once successfully connected and the MCH boots up, there will be a console prompt for access to the MCH file system and other system services.

3.2   Ethernet Ports

Users may remotely access the MCH using any of the addresses defined in the following sections. The default username and password for remote connections are 'root' and 'root', respectively.

3.2.1   10/100 Ethernet

By default, the 10/100 Ethernet port is configured to IP address 192.168.1.252. In addition to this IP address, the port is also listening at the address stored in the *Carrier Manager IP Address* field of the MicroTCA Carrier Manager IP Link record, located in the Multi-Records area of the Carrier FRU Information. By default, the IP address is 192.168.16.N, where N is the Carrier number.

If the MCH is configured as a Shelf Manager, the 10/100 Ethernet port is also listening at the following addresses:

- IP address defined in the *Shelf Manager IP Address 0* field of the **MicroTCA Shelf Manager IP Link** record in the Shelf FRU Information; by default, this address is 192.168.1.230
- IP address defined in the *Shelf Manager IP Address 1* field of the **MicroTCA Shelf Manager IP Link** record in the Shelf FRU information; by default, this address is 192.168.1.231
- 192.168.16.17, the default Shelf Manager IP address

Refer to **Section 4.3: Shelf Manager** for more information about configuring the MCH as a Shelf Manager.

For more details on the Shelf FRU Information, see the MicroTCA PICMG® Specification MTCA.0 R1.0 Base Specification, or review the `read_fru_storage` CLI command in the VadaTech MicroTCA Carrier Manager Command Line Interface Reference Manual or VadaTech MicroTCA Shelf Manager Command Line Interface Reference Manual.

3.2.2 Gigabit Ethernet

By default, the gigabit Ethernet port is configured to IP address 192.168.40.250.

4   Configuring the MCH

Once connected to the MCH (see **Section 3: Getting Connected**), users can configure the MCH as necessary. This section provides information regarding the Command Line Interface (CLI), details for configuring the Shelf-Carrier Manager Interface between Carrier Managers and a remote Shelf Manager, enabling and disabling the Shelf Manager, and configuring Ethernet access.

4.1   Command Line Interface (CLI)

Using the Command Line Interface (CLI), users can access information about the current state of the MCH. The interface can also be used to configure the MCH to correspond with the physical configurations of Chassis, Carrier Managers, and Shelf Manager.

The CLI is based on the IPMI v2.0, PICMG 3.0 (revision 3.0) of the ATCA base specification, and PICMG MTCA.0 (revision 1.0) base specification sets of commands. When the MCH is configured as a Carrier Manager, the list of CLI commands and, in some cases, the results of CLI commands, will be different than when the MCH is configured as a Shelf Manager, per the specifications. CLI commands in this document will be labeled to denote to which platform the command applies:

- (**C**): applicable only to MCHs configured as Carrier Managers
- (**S**): applicable only to MCHs configured as Shelf Managers
- (**B**): applicable to MCHs configured as either Carrier or Shelf Managers

The CLI commands mentioned in this document are only a subset of the available CLI commands. Refer to the <u>VadaTech MicroTCA Carrier Manager Command Line Interface Reference Manual</u> and the <u>VadaTech MicroTCA Shelf Manager Command Line Interface Reference Manual</u> for information about the CLI and other CLI commands available.

In dual MCH-configured systems, CLI commands can be executed on either MCH. The CLI will always attempt to connect to the active MCH to execute the CLI command.

4.2   Shelf-Carrier Manager Interface

A Carrier Manager communicates with a remote Shelf Manager over the Shelf-Carrier Manager Interface. This is an IP-based communication interface using Remote Management Control Protocol (RMCP) sessions between the Carrier Manager and a remote Shelf Manager.

4.2.1   Shelf Manager IP Address

By default, the Carrier Manager will try to establish an RMCP session with the Shelf Manager at IP address 192.168.16.17.

When the MCH is configured to operate as a Shelf Manager and a Carrier Manager, both the Shelf and Carrier Manager use default IP addresses in order for the Shelf-Carrier Manager Interface to be enabled successfully.

When the MCH is configured to operate as a Carrier Manager, the *Shelf Manager IP Address* field in the **MicroTCA Carrier Manager IP Link** record, located in the Carrier FRU Information, must be updated from its default value to the remote Shelf Manager's IP address in order for the Shelf-Carrier Manager Interface to be successfully enabled.

To update the *Shelf Manager IP Address* field, use the following command:

```
(C)set_ip_connection –s 192.168.40.94
```

In the example above, 192.168.40.94 is the remote Shelf Manager's IP address. Once the IP address is changed, power cycle the MCH for the changes to take effect.

4.2.2   Carrier Number

If there are multiple Carrier Managers connecting to a single Shelf Manager, each Carrier must have a unique Carrier number. The number assigned to a Carrier is stored in the **MicroTCA Carrier Information** record in the Shelf FRU Information. To view this record, use the following command:

```
(C)read_fru_storage –f 253 –M –T 0x22
```

The Shelf or Carrier may provide a hardware-based Carrier locator device. If the *Carrier Number* field in the **MicroTCA Carrier Information** record is FFh, then the value from the locator device will be used to determine the Carrier number. Refer to the Chassis Manufacturer's Chassis manual for instructions on configuring the hardware locator device. If there are redundant locator devices on the chassis, make sure both are set to the same Carrier number.

4.2.3   RMCP Authentication

Information used by the Carrier Manager to establish a session with a remote Shelf Manager is located in the **MicroTCA Carrier Manager IP Link** record, located in the Carrier FRU Information. The default username and password will vary by Chassis and Chassis manufacturers. Refer to the Chassis Manufacturer's Chassis manual for the username and password used.

4.2.3.1 RMCP Configuration for Carrier Manager Configured MCH

The Carrier Manager will attempt to connect to a Shelf Manager repeatedly. For the Shelf-Carrier Manager Interface to be enabled successfully, the Carrier Manager must use a valid RMCP username and password. To change the username and password used by the Carrier Manager, use the following command:

(C)`set_ip_connection –U name –P pwd`

In the example above, `name` and `pwd` are the username and password, respectively, as expected by the Shelf Manager. Refer to Section 4.2.3.2: RMCP Configuration for Shelf Manager Configured MCH, if the Shelf Manager is another VadaTech MCH. If the Shelf Manager is a third-party MCH, refer to its documentation for setting up RMCP users.

4.2.3.2 RMCP Configuration for Shelf Manager Configured MCH

By default, the MCH Shelf Manager uses username and password 'shelf' and 'shelf', respectively, to authenticate RMCP sessions with Carrier Managers. When the MCH is installed on a non-VadaTech Chassis, the username and password in the **MicroTCA Carrier Manager IP Link** record may be invalid, such that the Carrier Manager will be unable to connect to the Shelf Manager. The username and password in the **MicroTCA Carrier Manager IP Link** record can be updated to match the values expected by the Shelf Manager. To update the *Username* and *Password* fields, use the following command:

(C)`set_carrier_ip_connection –U name –P pwd`

In the example above, `name` and `pwd` are the username and password, respectively, as expected by the Shelf Manager.

Alternatively, if the user does not want to change the username and password used by the Carrier Manager, an RMCP user can be created with the current username and password. Refer to Section 4.2.3.3: Add RMCP User for more information.

4.2.3.3 Add RMCP User

A new user ID can be added to the list of valid RMCP logins using the CLI. Once a username and a password are added and enabled, RMCP sessions using the new authentication information will be successfully authenticated.

These are the steps required to add a new user ID:

1. Retrieve a list of user IDs currently being used to determine an unused user ID:

(B)`list_users`

2. Add username. For example, to add a new user with username root and (unused) user ID 4:

   (B)`set_user_info –i 4 –n root`

3. Set password. For example, to set the password for the newly created user root:

   (B)`set_user_info –i 4 –p new_password`

4. Set privilege level, session limit, and other access information. For example, to set the privilege level to user, session limit to 5, enable IPMI messaging and link authentication, and restrict callback for the newly created user root:

   (B)`set_user_access –i 4 –c 0xe –l 2 –s 5 –m 1 –A 1 –r 1`

5. Enable user. By default, the user is disabled.

   (B)`set_user_info –i 4 –e`

For security purposes, passwords are not displayed. However, users can test and verify passwords by using the following command:

(B)`set_user_info –i 4 –t test-password`

In the example above, the password for the newly added user **root** is being tested against "test-password." If the passwords match, users will see "User information updated successfully." Otherwise, users will see "Password test failed."

4.3   Shelf Manager

If the MCH is configured as a Shelf Manager, the Shelf Manager can be enabled or disabled by updating the file `/opt/vadatech/startup/vtipmi.conf`. When the Shelf Manager is disabled, the MCH can be run as if it were configured to be a Carrier Manager.

```
#!/bin/bash

RUN_AS_BUS_ANALYZER=0
ENABLE_SHELF_MANAGER=0
ENABLE_WEB_SERVER=1
ENABLE_SNMP=1
ENABLE_SNMP_TRAP_HANDLER=1


IPMI_BASE_DIR=/opt/vadatech/IPMI
SNMP_BASE_DIR=/opt/vadatech/SNMP

UTCC_SYSTEM_FILE=${IPMI_BASE_DIR}/UTCC/etc/system.ini
MCMC_SYSTEM_FILE=${IPMI_BASE_DIR}/MCMC/etc/system.ini
UTCSH_SYSTEM_FILE=${IPMI_BASE_DIR}/UTCShelf/etc/system.ini
FO_SYSTEM_FILE=${UTCC_SYSTEM_FILE}
...
```

Figure 1: Enabling/Disabling shelf manager

Set the `ENABLE_SHELF_MANAGER` to `0` or `1` to disable or enable, respectively, the Shelf Manager. Save the changes and power cycle the MCH for the changes to take effect.

4.4   Ethernet Addresses

By default, the 10/100 Ethernet port is configured to IP address 192.168.1.252 and the gigabit Ethernet port is configured to IP address 192.168.40.250. To change these default values, users will need to modify the file `/etc/rc.d/rc.conf`.

In `/etc/rc.d/rc.conf`, *net interface 0* is the 10/100 Ethernet port and *net interface 1* is the Gigabit Ethernet port. IPADDRX, NETMASKX, and BROADCASTX may be changed, where X is the interface number. However, only one GATEWAY should be set. MCH will use the device with the set GATEWAY value to send traffic to other subnets and networks. For example, in the following configuration, the 10/100 Ethernet will be used to route traffic to other subnets and networks.

```
...
export BOA_ARGS=""
export SMBD_ARGS=""
export NMBD_ARGS=""
export DHCP_ARG=""
export DEPLOYMENT_STYLE="JFFS2"
export SYSCFG_DHCPC_CMD="udhcpc -b -i "
# net interface 0
export SYSCFG_IFACE0=y
export INTERFACE0="eth0"
export IPADDR0="192.168.1.114"
export NETMASK0="255.255.255.0"
export BROADCAST0="192.168.1.255"
export GATEWAY0="192.168.1.1"
export NAMESERVER0="0.0.0.0"
# net interface 1
export SYSCFG_IFACE1=y
export INTERFACE1="eth1"
export IPADDR1="192.168.40.250"
export NETMASK1="255.255.255.0"
export BROADCAST1="192.168.0.255"
export GATEWAY1="0.0.0.0"
export NAMESERVER1="0.0.0.0"
```

Figure 2: Updating Ethernet addresses

Once the configuration is changed, power cycle the MCH for the changes to take effect.

4.4.1   Gigabit Ethernet

There is a Gigabit Ethernet Managed Switch Interface on the MCH. This interface is used to control the managed switch features present on the gigabit Ethernet managed switch.

Refer to the VadaTech UTC001 Gigabit Ethernet Switch Setup document for information on setting up the Gigabit Ethernet Managed Switch Interface.

4.4.2   Carrier Manager IP Addresses

By default, the Carrier Manager's IP address is configured to 192.168.16.N, where N is the Carrier number. To change this default value when the MCH is configured as a Carrier Manager, use the following command:

> (C)set_ip_connection –s 192.168.45.3

If the MCH is configured as a Shelf Manager, use the following command:

> (S)set_carrier_ip_connection –s 192.168.45.3

In both examples, 192.168.45.3 is the Carrier Manager's new IP address. Once the IP address is changed, power cycle the MCH for the changes to take effect.

When the Carrier Manager's IP address is set to 192.168.16.0, the Carrier Manager will use 192.168.16.N as its IP address, where N is the Carrier number.

Refer to the VadaTech MicroTCA Carrier Manager Command Line Interface Reference Manual for more information about `set_ip_connection`. Refer to the VadaTech MicroTCA Shelf Manager Command Line Interface Reference Manual for more information about `set_carrier_ip_connection`.

4.4.3   Shelf Manager IP Addresses

By default, the Shelf Manager is configured with three IP addresses.

- IP address defined in the *Shelf Manager IP Address 0* field of the **MicroTCA Shelf Manager IP Link** record in the Shelf FRU Information; by default, this address is 192.168.1.230
- IP address defined in the *Shelf Manager IP Address 1* field of the **MicroTCA Shelf Manager IP Link** record in the Shelf FRU information; by default, this address is 192.168.1.231
- 192.168.16.17, the default Shelf Manager IP address

To change the default *Shelf Manager IP Address 0* and *Shelf Manager IP Address 1* fields when the MCH is configured as a Shelf Manager, use the following command:

(S)`set_ip_connection –a 192.168.45.100 –A 192.168.45.101`

In the example above, 192.168.45.100 is *Shelf Manager IP Address 0* and 192.168.45.101 is *Shelf Manager IP Address 1*.

To change the default Shelf Manager IP Address, use the following command:

(S)`set_shelf_ip_address –a 192.168.45.200`

In the example above, 192.168.45.200 is the default Shelf Manager IP Address.

Refer to the VadaTech MicroTCA Shelf Manager Command Line Interface Reference Manual for more information about `set_ip_connection` and `set_shelf_ip_address`.

4.4.4   MCH 1

By default, the MCH 1 IP address is configured to 192.168.16.N, where N is the Carrier number + 32.   To change this default value when the MCH is configured as a Carrier Manager, use the following command:

(C)`set_ip_connection –m 192.168.123.200`

When the MCH is configured as a Shelf Manager, use the following command:

(S)`set_carrier_ip_connection –m 192.168.123.200`

In both examples, 192.168.123.200 is MCH 1 new IP address.   Once the IP address is changed, power cycle the MCH for the changes to take effect.

When the MCH 1 IP address is set to 192.168.16.0, MCH 1 will use 192.168.16.N as its IP address, where N is the Carrier number + 32.

4.4.5   MCH 2

By default, the MCH 2 IP address is configured to 192.168.16.N, where N is the Carrier number + 48.   To change this default value when the MCH is configured as a Carrier Manager, use the following command:

(C)`set_ip_connection –M 192.168.123.201`

When the MCH is configured as a Shelf Manager, use the following command:

(S)`set_carrier_ip_connection –M 192.168.123.201`

In both examples, 192.168.123.201 is MCH 1 new IP address.   Once the IP address is changed, power cycle the MCH for the changes to take effect.

When MCH 1 IP address is set to 192.168.16.0, MCH 1 will use 192.168.16.N as its IP address, where N is the Carrier number + 48.

4.5   Carrier and Shelf FRU Information

The Carrier and Shelf FRU Information are stored on the Carrier FRU Information Device. This device is an I^2C serial EEPROM, located on the MicroTCA Backplane. Each MCH slot has access to its own Carrier FRU Information Device.

The MCH provides a tool to update the Carrier FRU Information Device. The following shows how the tool can be used:

```
update_backplane_repository newBackplane.img
```

In the example above, `newBackplane.img` is a binary file containing the Carrier and Shelf FRU Information. The following sections provide a checklist for the records that are required to be in the Carrier and Shelf FRU Information, respectively.

4.5.1 Checklist for Carrier and Shelf FRU Information

Data required by the Carrier and Shelf Managers during startup are stored in the Carrier and Shelf FRU Information. The following checklists are provided to ease the integration process with using FRU Information generated by third-party vendors.

If there is a redundant MCH, the Carrier and Shelf FRU Information on both must be exactly the same.

Refer to the PICMG® Specification MTCA.0 R1.0 Base Specification for more information about the Carrier and Shelf FRU Information.

4.5.2 Carrier FRU Information Checklist

- A *Slot Entry* must be defined for each Module (AdvancedMC (AMC), MCH, Power Module (PM), Cooling Unit (CU), and OEM Enhanced Module Management Controller (EMMC)) in the **MicroTCA Carrier Information** record
- A *MicroTCA Carrier Activation and Current Descriptor* must be defined for each Module (AMC, MCH, PM, CU, and OEM EMMC) in the **MicroTCA Carrier Activation and Power Management** record
- If the **MicroTCA Carrier Power Policy** record is present, each Module must be present in one or more *Power Channel Array* entries

4.5.2.1   Shelf FRU Information Checklist

- A **MicroTCA Fan Geography** record must be present when there exists one or more Cooling Units on the Shelf
- The *Shelf Manager IP Address* in the **MicroTCA Carrier Manager IP Link** record of each Carrier Manager wishing to connect with the Shelf Manager must match one of the Shelf Manager's IP addresses (see **Section 3.2.1: 10/100 Ethernet**)
- The *Username* and *Password* in the **MicroTCA Carrier Manager IP Link** record of each Carrier Manager wishing to connect with the Shelf Manager must match a valid username and password on the Shelf Manager (see **Section 4.2.3.3: Add RMCP User**)

5 Monitoring the MCH

There are several interfaces with which users can access information about the current state of the MCH. These interface are described in the following subsections.

Note that an MCH configured as a Shelf Manager will provide different information than when configured as a Carrier Manager, since each manager's logical functions are different. Refer to the PICMG® 3.0 Revision 3.0 AdvancedTCA® Base Specification for information about a Shelf and Carrier Manager's respective responsibilities.

All interfaces are based on the IPMI v2.0, PICMG 3.0 (revision 3.0) of the ATCA base specification, and PICMG MTCA.0 (revision 1.0) base specification sets of commands.

5.1 Command Line Interface (CLI)

The Command Line Interface (CLI) is used when logged directly into the MCH, for example, through SSH or Telnet. The CLI creates an RMCP+ session with the Shelf or Carrier Manager and can be started in two modes: interactive or command mode.

To start the CLI in interactive mode, use "cli" at the prompt. The user will be prompted for a username and password. By default, the username and password for a Carrier Manager and Shelf Manager are '**carrier**'/'**carrier**' and '**shelf**'/'**shelf**', respectively. Instead of using these defaults, a new user can be added. Follow the steps in Section 4.2.3.2: RMCP Configuration for Shelf Manager Configured MCH. Once the login has been authenticated, a CLI session will begin.

```
[root@vtipmi root]# cli

Username: shelf
Password: shelf
```
Figure 3: Login prompt for CLI

```
Starting VadaTech CLI Services

CLI Session inactivity timeout is set to 60 secs.

cli_server >
```
Figure 4: CLI's interactive mode

In command mode, the user can execute CLI commands directly from the prompt.

Refer to the VadaTech MicroTCA Carrier Manager Command Line Interface Reference Manual and the VadaTech MicroTCA Shelf Manager Command Line Interface Reference Manual for information about the CLI and CLI commands available.

5.2   File System

By default, the file system is read-only. To modify the web server, SNMP server, and SNMP trap handler settings in the file `/opt/vadatech/startup/vtipim.conf`, the file-system has to be changed to read-write. To change the file-system to read-write, use the following command:

```
mount -o remount,rw /
```

The above command will change the file-system to read-write only until the next power cycle.

5.3   Web Interface

The Web Interface provides access to the CLI to monitor and configure the MCH through the internet. The Web Interface can be accessed at any of the available Ethernet addresses (see Section 3: Getting Connected and Section 4.4: Ethernet Addresses) at port 8080.

The available commands are grouped by categories, listed on the left side of the screen, as shown in Figure 5 and Figure 6.
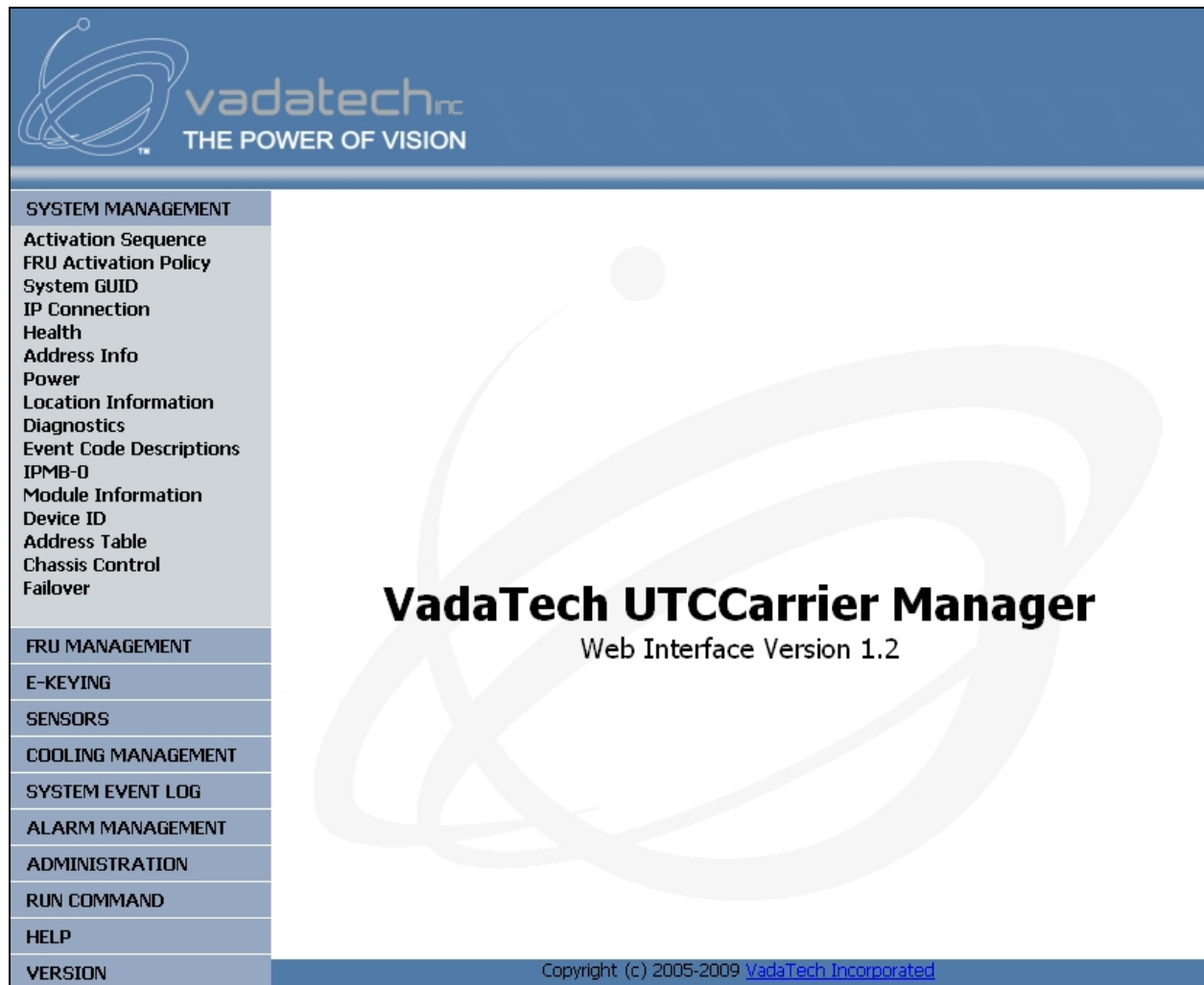
Figure 5: Carrier Manager's Web Interface main screen

Figure 6: Shelf Manager's Web Interface main screen

Refer to the VadaTech MicroTCA Carrier Manager Web Interface Reference Manual and VadaTech MicroTCA Shelf Manager Web Interface Reference Manual for information about the Web Interface.

5.3.1 Enabling/Disabling

For the Web Interface to be accessible, the web server must be enabled.

To enable the web server, use the following command:

```
vtipmi start webserver
```

To disable the web server, and any access to the Web Interface, use the following command:

```
vtipmi stop webserver
```

The two commands above enables or disables, respectively, the web server only until the next power cycle. After a power cycle, the value of `ENABLE_WEB_SERVER` in the file `/opt/vadatech/startup/vtipmi.conf` determines whether or not the web server is started during the MCH's initialization. A value of `1` indicates the web server is enabled and will be started. A value of `0` indicates the web server is disabled and will not be started.

```
#!/bin/bash

# software configuration
#    0:  mch
#    1:  mch and bus analyzer monitoring IPMB-L
#    2:  bus analyzer monitoring IPMB-L and IPMB-0
RUN_AS=0

# management configuration
ENABLE_SHELF_MANAGER=0
ENABLE_WEB_SERVER=1
ENABLE_SNMP=1
ENABLE_SNMP_TRAP_HANDLER=1


IPMI_BASE_DIR=/opt/vadatech/IPMI
SNMP_BASE_DIR=/opt/vadatech/SNMP
```

Figure 7: Enabling/Disabling web server

When modifying the configuration, save the changes and power cycle the MCH for the changes to take effect.

5.4   SNMP Interface

The SNMP Interface provides users with access to monitor the MCH through the internet. While the Web Interface provides for extended configuration abilities, the SNMP provides only a limited ability to change the configuration.

The SNMP Interface can be accessed at any of the available Ethernet addresses (see Section 3: Getting Connected and Section 4.4: Ethernet Addresses).

The MCH comes with Management Information Base (MIB) files. These MIB files (`VT-ATC.mib`, `VT-UTCC.mib` and `VT-UTCSH.mib`, located at `/opt/vadatech/SNMP/mibs`), describe the objects managed by the Carrier and Shelf Manager. A remote application, such as an SNMP/MIB manager, can compile the files (using a MIBs compiler) and utilize this information to monitor and manage devices in the Carrier and Shelf.

Refer to the VadaTech MicroTCA Carrier Manager SNMP Interface Reference Manual and the VadaTech MicroTCA Shelf Manager SNMP Interface Reference Manual for more information about SNMP.

The VadaTech SNMP agent is based on **net-snmp 5.3.1**; complete configuration instructions for **net-snmp** can be found at http://net-snmp.sourceforge.net/docs/readmefiles.html.

5.4.1   Enabling/Disabling

For the SNMP Interface to be accessible, the SNMP server must be enabled.

To enable the SNMP server, use the following command:

```
vtipmi start snmpd
```

To disable the SNMP server, and any access to the SNMP Interface, use the following command:

```
vtipmi stop snmpd
```

The two commands above enables or disables, respectively, the SNMP server only until the next power cycle. After a power cycle, the value of `ENABLE_SNMP` in the file `/opt/vadatech/startup/vtipmi.conf` determines whether or not the SNMP server is started during the MCH's initialization. A value of `1` indicates the SNMP server is enabled and will be started. A value of `0` indicates the SNMP server is disabled and will not be started.

```
#!/bin/bash

# software configuration
#    0:   mch
#    1:   mch and bus analyzer monitoring IPMB-L
#    2:   bus analyzer monitoring IPMB-L and IPMB-0
RUN_AS=0

# management configuration
ENABLE_SHELF_MANAGER=1
ENABLE_WEB_SERVER=1
ENABLE_SNMP=1
ENABLE_SNMP_TRAP_HANDLER=1

IPMI_BASE_DIR=/opt/vadatech/IPMI
SNMP_BASE_DIR=/opt/vadatech/SNMP
```

Figure 8: Enabling/Disabling SNMP server

When modifying the configuration, save the changes and power cycle the MCH for the changes to take effect.

5.5   SNMP Traps

SNMP provides the ability to send traps, or notifications, to advise an administrator when one or more conditions have been met. Traps are network packets that contain data relating to a component of the system sending the trap. Traps are sent out when a system condition has been met, as defined by the Platform Event Filtering for the MicroTCA system.

Refer to the VadaTech MicroTCA SNMP Trap User Manual for more information about SNMP traps.

For the SNMP traps to be sent out, the SNMP trap handler must be enabled.

To enable the SNMP trap handler, use the following command:

```
vtipmi start snmpTrapHandler
```

To disable the SNMP trap handler, use the following command:

```
vtipmi stop snmpTrapHandler
```

The two commands above enables or disables, respectively, the SNMP trap handler only until the next power cycle. After a power cycle, the value of `ENABLE_SNMP_TRAP_HANDLER` in the file `/opt/vadatech/startup/vtipmi.conf` determines whether or not the SNMP trap handler is started during the MCH's initialization. A value of `1` indicates the SNMP trap handler is enabled and will be started. A value of `0` indicates the SNMP trap handler is disabled and will not be started.

```
#!/bin/bash

# software configuration
#    0:  mch
#    1:  mch and bus analyzer monitoring IPMB-L
#    2:  bus analyzer monitoring IPMB-L and IPMB-0
RUN_AS=0

# management configuration
ENABLE_SHELF_MANAGER=1
ENABLE_WEB_SERVER=1
ENABLE_SNMP=1
ENABLE_SNMP_TRAP_HANDLER=1


IPMI_BASE_DIR=/opt/vadatech/IPMI
SNMP_BASE_DIR=/opt/vadatech/SNMP
```

Figure 9: Enabling/Disabling SNMP traps

When modifying the configuration, save the changes and power cycle the MCH for the changes to take effect.

Index

VADATECH FORM No. 3WI731-01 Rev. B