VadaTech Gigabit Ethernet Managed Switch Setup

User Guide

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Version 3.0

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Revision History

Doc Rev	Description of Change	Revision Date
1.0	Document Created	November 2008
1.1	Updated for version 1.9	February 2009
1.2	Format changes	March 2009
2.0	Update to include VT850, UTC003 and AMC216, AMC217, AMC218, and AMC219	May 2009
2.1	Update to include UTC002 and ATC114	August 2009
2.2	Correct document id	September 2009
2.3	Update to include CP218 and AMC228	November 2009
2.4	Update to include VT851, VT852, VT853 and ATC809	February 2010
2.5	Updated to include ATC808	October 2010
2.6	Update to include VT857, and VT847	September 2011
2.7	Update to include VT854 and VT842	March 2012
2.8	Update to include VT219	July 2012
2.9	Added IPConfig command	February 2013
2.10	Added Telnetd command	April2013
2.11	Added reset_factory_defaults CLI command.	April 2013
2.12	Added reset_boardid CLI command.	September 2013
3.0	Updated template and port information for AMC216 and AMC217	April 2016

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1   Overview

The Gigabit Ethernet Managed switch interface is used to control managed switch features available in the Gigabit Ethernet managed switch.

1.1   Applicable Products

- AMC216
- AMC217
- AMC218
- AMC219
- AMC228
- ATC114
- ATC808
- ATC809
- CP218
- UTC001
- UTC002
- UTC003
- VT219
- VT842
- VT847
- VT850
- VT851
- VT852
- VT853
- VT854
- VT857

1.2   Document References

- *VadaTech MCH Getting Started Guide*

2 Initial Setup

2.1 Logging in the First Time

To configure the switch for the first time, use the factory default IP address of `192.168.40.230`.

To access the web interface of the switch, use any switch port on the device.

- The UTC001, UTC002, UTC003, VT842, VT847, VT850, VT851, VT852, VT853, VT854 and VT857 have GbE ports as well as a connection to each of the AMC slot that can be connected to a switch network.
- The AMC216, AMC217, AMC218, AMC219 and AMC228 have backplane connections and front panel ports that connect to a switch network.
- The ATC114 has backplane connections, connections to the rear transition module and dual connections to each of the AMC slot.
- The ATC808 and ATC809 have backplane connections to both shelf managers and backplane fabric ports.
- The CP218 has front panel ports.
- The VT219 has ports mounted on the board.

Access the switch can be accessed from a standard web browser at http://192.168.40.230/ using the default credentials:

user name   admin

password   admin

Note that the VT854 has two switches and the default addresses are:

MCH 1 - http://192.168.40.230/

MCH 2 - http://192.168.40.231/

2.2 Initial Setup

Once logged in, the user can start the managed switch configuration and the current status. It is recommended that the default IP address be changed to allow multiple managed switches to be installed on a single network. For example, a redundant MCH operation would have two switches on the same network and require each of them to have unique IP addresses.

To change the IP address of the switch, navigate to the System menu on the left panel, then Status. The right pane will show the current system status of the switch. Next, click on the current IP address as shown in **Figure 1**.

Figure 1: Gigabit Ethernet Switch Status
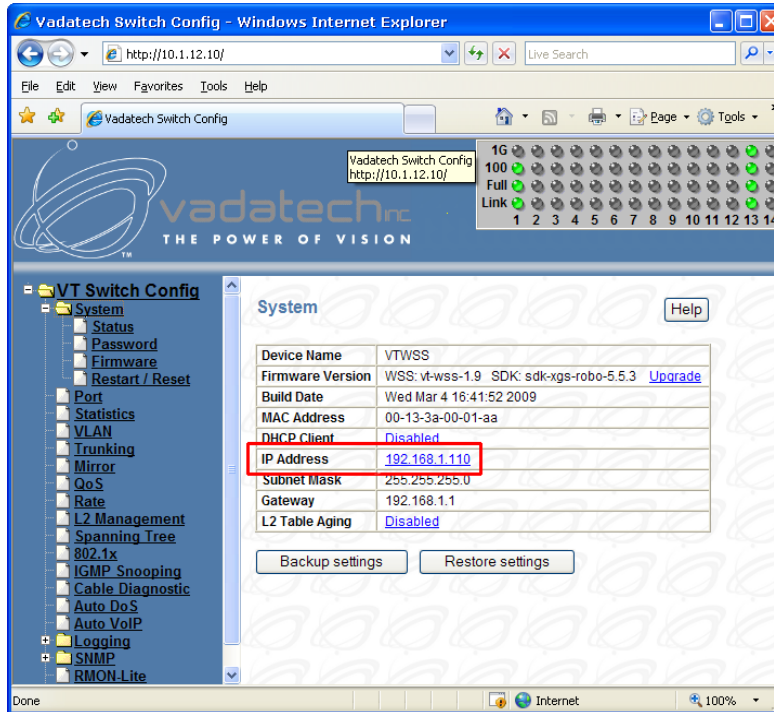
Enter the new `IP address`, `Network Submask` and `Gateway` address in the following screen and click `Apply`.

Figure 2: Gigabit Ethernet Switch IP Address Configuration
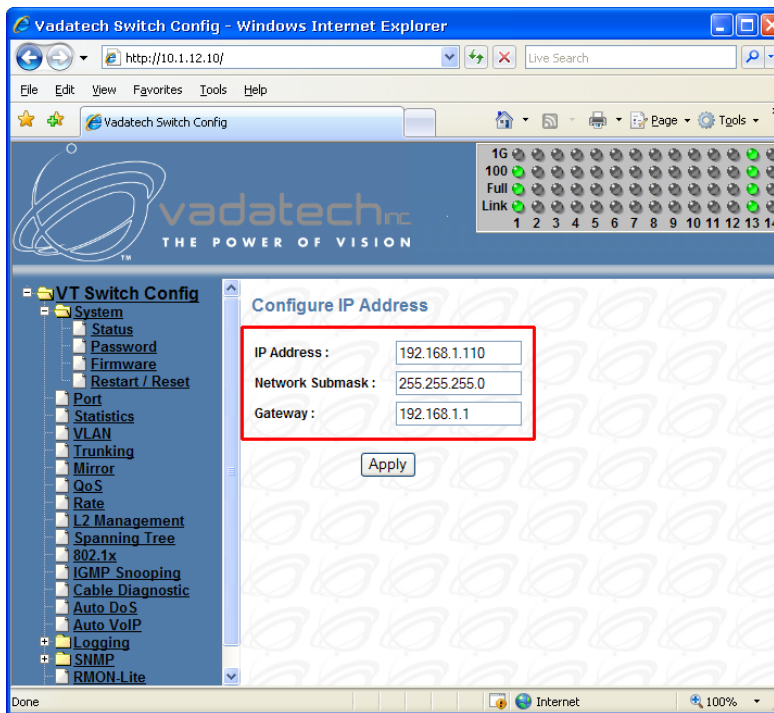
3   Troubleshooting

To access the switch, when there is a problem connecting to the web interface, a command line interface is available to help diagnose the problem.

3.1   Connecting

3.1.1   For UTC001, UTC002, UTC003, VT84x, and VT85x

First connect to the MCH console. Refer to Section 3 of the VadaTech MCH Getting Started Guide for more information.

To connect to the Gigabit Ethernet switch command interface:

```
# term –b115200 /dev/ttyS1
```

3.1.2   For AMC216 and AMC217, AMC218, AMC219 and AMC228

The serial port is a female micro-USB connector on the front panel. To connect this serial port to a standard DB9 connector use the adapter cable VadaTech Part Number CBL-DB9MUSB1. The serial protocol is RS-232, 115200 baud, N81.

3.1.3   For ATC114

The serial port is on a 6 pin header on the ATC114. The TX, RX and Ground pins are labeled on the ATC114. The switch block SW6, switch 3 should be in the OFF position to direct the switch output to the serial port. The serial protocol is RS-232, 115200 baud, N81.

3.1.4   For ATC808 and ATC809

The serial port is on an RJ-45 connector. Refer to the ATC808 or ATC809 User Manual for details on the serial pin out. The serial protocol is RS-232, 15200 baud, N81.

3.1.5   For CP218

The serial port is on an RJ-45 connector. Refer to the CP218 User Manual for details on the serial pin out. The serial protocol is RS-232, 15200 baud, N81.

3.1.6   For VT219

The serial port is on J3 of the board, Refer to the VT219 User Manual for details on the serial pin out. The serial protocol is RS-232, 15200 baud, N81.

3.2   PortStat

The `PortStat` command lists the state of all ports in a Gigabit Ethernet switch. It may be abbreviated as `ps`.

Table 1: Gigabit Ethernet Port Descriptions for MCHs

Port	UTC001	UTC002	UTC003
ge0	Switch management CPU	Switch management CPU	Switch management CPU
ge1	-	MCH GbE0 Front Panel	MCH GbE Front Panel
ge2	-	MCH Management Controller	-
ge3	MCH Daughtercard	MCH Daughtercard 1	MCH Daughtercard
ge4	MCH Management Controller	MCH Daughtercard 2	MCH Management Controller
ge5	MCH GbE Front Panel	MCH GbE1 Front Panel	MCH GbE Front Panel
ge6	MCH Update Channel	MCH Update Channel	MCH Update Channel
ge7	To AMC 12	To AMC 12	To AMC 12
ge8	To AMC 11	To AMC 11	To AMC 11
ge9	To AMC 10	To AMC 10	To AMC 10
ge10	To AMC 9	To AMC 9	To AMC 9
ge11	To AMC 8	To AMC 8	To AMC 8
ge12	To AMC 7	To AMC 7	To AMC 7
ge13	To AMC 6	To AMC 6	To AMC 6
ge14	To AMC 5	To AMC 5	To AMC 5
ge15	To AMC 4	To AMC 4	To AMC 4
ge16	To AMC 3	To AMC 3	To AMC 3
ge17	To AMC 2	To AMC 2	To AMC 2
ge18	To AMC 1	To AMC 1	To AMC 1

Table 2: Gigabit Ethernet Port Descriptions for AMCs

Port	AMC216/217	AMC218	AMC219	AMC228
ge0	Switch management CPU	Switch management CPU	Switch management CPU	Switch management CPU
ge1	-	-	-	-
ge2	-	-	-	-
ge3	Front Panel Port 1	Front Panel Port 1	Front Panel Port 1	SFP 1
ge4	Front Panel Port 2	Front Panel Port 2	Front Panel Port 2	SFP 0
ge5	Front Panel Port 3	Front Panel Port 3	Front Panel Port 3	Wireless
ge6	Front Panel Port 4	Front Panel Port 4	Front Panel Port 4	AMC Port 4
ge7	Front Panel Port 5	Front Panel Port 5	Front Panel Port 5	AMC Port 8
ge8	Front Panel Port 6	Front Panel Port 6	Front Panel Port 6	-
ge9	Front Panel Port 7	-	Front Panel Port 7	-

Port	AMC216/217	AMC218	AMC219	AMC228
ge10	Front Panel Port 8	-	Front Panel Port 8	-
ge11	-	-	Front Panel Port 9	-
ge12	-	-	Front Panel Port 10	-
ge13	-	-	Front Panel Port 11	-
ge14	-	-	Front Panel Port 12	-
ge15	-	-	-	-
ge16	-	-	-	-
ge17	AMC Port 0	AMC Port 0	AMC Port 0	AMC Port 0
ge18	AMC Port 1	AMC Port 1	AMC Port 1	AMC Port 1

Table 3: Gigabit Ethernet Port Descriptions for MicroTCA Carriers

Port	VT847	VT850	VT851, VT857	VT842, VT852, VT852, VT853	VT854
ge0	Switch management CPU	Switch management CPU	Switch management CPU	Switch management CPU	Switch management CPU
ge1	MCH Management	Chassis GbE Front Panel	MCH Management	-	Chassis GbE Front Panel
ge2	GbE0 Front Panel	MCH Management	Chassis GbE Front Panel	-	Chassis GbE Front Panel
ge3	AMC 1 Port 0	AMC 1 Port 0	AMC 1 Port 0	AMC 1 Port 0	AMC 1
ge4	AMC 1 Port 1	AMC 1 Port 1	AMC 1 Port 1	AMC 1 Port 1	AMC 2
ge5	AMC 2 Port 0	AMC 2 Port 0	AMC 2 Port 0	AMC 2 Port 0	AMC 3
ge6	AMC 2 Port 1	AMC 2 Port 1	AMC 2 Port 1	AMC 2 Port 1	AMC 4
ge7	AMC 3 Port 0	AMC 3 Port 0	AMC 3 Port 0	AMC 3 Port 0	AMC 5
ge8	AMC 3 Port 1	AMC 3 Port 1	AMC 3 Port 1	AMC 3 Port 1	AMC 6
ge9	AMC 4 Port 0	AMC 4 Port 0	AMC 4 Port 0	AMC 4 Port 0	AMC 7
ge10	AMC 4 Port 1	AMC 4 Port 1	AMC 4 Port 1	AMC 4 Port 1	AMC 8
ge11	AMC 5 Port 0	AMC 5 Port 0	AMC 5 Port 0	AMC 5 Port 0	AMC 9
ge12	AMC 5 Port 1	AMC 5 Port 1	AMC 5 Port 1	AMC 5 Port 1	AMC 10
ge13	AMC 6 Port 0	AMC 6 Port 0	AMC 6 Port 0	AMC 6 Port 0	AMC 11
ge14	AMC 6 Port 1	AMC 6 Port 1	AMC 6 Port 1	AMC 6 Port 1	AMC 12
ge15	AMC 11 Port 1	AMC 7 Port 0	AMC 7 Port 0	Front Panel 0	MCH Update
ge16	AMC 9 Port 1	AMC 7 Port 1	AMC 7 Port 1	Front Panel 1	MCH Management
ge17	GbE1 Front Panel	AMC 8 Port 0	AMC 8 Port 0	MCH Management	Daughter Card 0
ge18	GbE2 Front Panel	AMC 8 Port 1	AMC 8 Port 1	Daughter Card 0	Daughter Card 1
ge19	AMC 9 Port 0	AMC 9 Port 0	AMC 9 Port 0	Daughter Card 1	-
ge20	10G CPU	AMC 9 Port 1	Daughter Card 0	-	-
ge21	AMC 10 Port 0	AMC 10 Port 0	AMC 10 Port 0	-	-
ge22	AMC 10 Port 1	AMC 10 Port 1	AMC 10 Port 1	-	-

Port	VT847	VT850	VT851, VT857	VT842, VT852, VT852, VT853	VT854
ge23	AMC 11 Port 0	AMC 11 Port 0	AMC 11 Port 0	-	-
ge24	10G Switch	AMC 11 Port 1	Daughter Card 1	-	-
ge25	AMC 12 Port 0	AMC 12 Port 0	AMC 12 Port 0	-	-
ge26	AMC 12 Port 1	AMC 12 Port 1	AMC 12 Port 1	-	-

Table 4: Gigabit Ethernet Port Descriptions for ATCA Carriers

Port	ATC114	ATC808	ATC809
ge0	Switch management CPU	Switch management CPU	Switch management CPU
ge1	-	Base Port 15	Base Port 15
ge2	-	Base Port 16	Base Port 16
ge3	Base Channel 0	Front Panel Port 1	Front Panel Port 1
ge4	Base Channel 1	Front Panel Port 2	Front Panel Port 2
ge5	Fabric Channel 0	Front Panel Port 3	Front Panel Port 3
ge6	Fabric Channel 1	Front Panel Port 4	Front Panel Port 4
ge7	Fabric Channel 2	Front Panel Port 5	Front Panel Port 5
ge8	Fabric Channel 3	Front Panel Port 6	Front Panel Port 6
ge9	Zone 3-0	Front Panel Port 7	Front Panel Port 7
ge10	Zone 3-1	Front Panel Port 8	Front Panel Port 8
ge11	Zone 3-2	Shelf Port 0	Shelf Port 0
ge12	Slot A1 Port 0	Shelf Port 1	Shelf Port 1
ge13	Slot A1 Port 1	Update Channel	Update Channel
ge14	Slot B1 Port 0	Base Port 2	Base Port 2
ge15	Slot B1 Port 1	Base Port 3	Base Port 3
ge16	Slot A2 Port 0	Base Port 4	Base Port 4
ge17	Slot A2 Port 1	Base Port 5	Base Port 5
ge18	Slot B2 Port 0	Base Port 6	Base Port 6
ge19	Slot B2 Port 1	Base Port 7	Base Port 7
ge20	Slot A3 Port 0	Base Port 8	Base Port 8
ge21	Slot A3 Port 1	Base Port 9	Base Port 9
ge22	Slot B3 Port 0	Base Port 10	Base Port 10
ge23	Slot B3 Port 1	Base Port 11	Base Port 11
ge24	Slot B4 Port 0	Base Port 12	Base Port 12
ge25	Slot B4 Port 1	Base Port 13	Base Port 13
ge26	-	Base Port 14	Base Port 14

Table 5: Gigabit Ethernet Port Descriptions for cPCI

Port	CP218
ge0	Switch management CPU
ge1	-
ge2	-
ge3	Front Panel Port 1
ge4	Front Panel Port 2
ge5	Front Panel Port 3
ge6	Front Panel Port 4
ge7	Front Panel Port 5
ge8	Front Panel Port 6
ge9	Front Panel Port 7
ge10	Front Panel Port 8
ge11	Front Panel Port 9
ge12	Front Panel Port 10
ge13	Front Panel Port 11
ge14	Front Panel Port 12
ge15	-
ge16	-
ge17	-
ge18	-

Table 6: Gigabit Ethernet Port Descriptions for Custom Form Factor

Port	VT219
ge0	Switch management CPU
ge1	J1:B Port
ge2	J1:A Port
ge3	J2:A Port
ge4	J2:B Port

3.2.1   Port

The port column gives the name of the port. See (Table 1 to Table 6) of your device for description of each port names and their corresponding connections.

3.2.2   Ena/link

The ena/link column shows which ports are enabled and have Ethernet link.

3.2.3   Speed/duplex

The speed/duplex column lists the speed of the link and the duplex setting. The possible values are 1G, 100 and 10, for a link running at 1 gigabit, 100 megabit or 10 megabit, respectively. The duplex can be either FD or HD for full duplex or half duplex, respectively.

3.2.4   Link Scan

The link scan column shows if the link state is scanned periodically by software or automatically by the hardware.

3.2.5   Auto Neg?

The 'auto neg?' column shows if the speed of the link is determined by auto negotiation or set statically.

3.2.6   STP State

The STP state column shows if the port is part of a spanning tree network. The possible values listed are `Disabled`, `Forward` or `Blocked`.

- `Disabled` state is for ports that are either not part of a spanning tree negotiation or are not currently linked to another device.
- `Forward` state is for ports that are part of a spanning tree and are actively turned on to forward packets to other devices.
- `Blocked` state is when the port is part of a spanning tree and packets are being discarded from this port to prevent cycles in the network graph.

3.2.7   Pause

The pause column shows if the port supports pause frames to allow flow control through the network.

3.3   IPConfig

The `ipconfig` command in the BCM shell configures and displays the IP settings for 1G Switch WEB interface access. The settings configured by this command are persistent against reboot. Following is an example usage:

```
BCM.0> ipconfig help

Usage (IPConfig): ipconfig ( dhcp | <ipaddress> [netmask <mask>] [gw
<gateway>] )



BCM.0> ipconfig

ipaddress    192.168.40.230       netmask    255.255.255.0    broadcast
192.168.40.255  gateway 0.0.0.0



BCM.0> ipconfig 192.168.1.100 netmask 255.255.255.0 gw 192.168.1.1



BCM.0> ipconfig
```

```
        ipaddress  192.168.1.100  netmask  255.255.255.0  broadcast  192.168.1.255
        gateway 192.168.1.1
```

3.4   Telnetd

The `Telnetd` command in the BCM shell enables/disables the telnet server. The settings configured by this command are persistent against reboot. Following is an example usage:

```
BCM.0> help telnetd

Usage (Telnetd): telnetd [ enable | disable ]

BCM.0> telnetd

telnetd: enabled



BCM.0> telnetd disable

telnetd exited
```

3.5   Exit

From the command interface prompt, use the `exit` command reboot the Gigabit Ethernet switch software.

3.6   Reset Factory Defaults

From the command interface prompt, use the `reset_factory_defaults` command to restore factory default configuration of the Gigabit Ethernet switch.

3.7   Reset Board ID

From the command interface prompt, use the `reset_boardid` command to clear the Board ID information from NVRAM.

To use the `reset_boardid` command, type the command and power cycle the switch/chassis to reset the Board ID information. After a power cycle, the Board ID information is regenerated from GPIO and saved into NVRAM.

3.8   Shell

From the command interface prompt, use the `shell` command to enter the operating system shell and view the management IP address.

3.8.1 ShowIfs

From the operating system shell, use the `showIfs` command to display the configured IP address.

3.8.2 Exit

From the operating system shell, use the `exit` command to terminate the operating system shell and return to the command line interface.

Notes

Contact VadaTech

Technical Support

If you have purchased the VadaTech product through our distributor network, contact your distributor for any technical assistance. If you require further technical support, you can contact VadaTech technical support team by forwarding your support requests to **support@vadatech.com**.

VadaTech Corporate Office	**European Sales Office**	**Asia Pacific Sales Office**
198 N, Gibson Road Henderson, NV 89014 USA Email: info@vadatech.com Telephone: +1 702 896 3337 Fax: +1 702 896 0332	Ocean Village Innovation Centre, Ocean Way, Ocean Village, Southampton, SO14 3JZ, UK Email: info@vadatech.com Telephone: +44 2380 381982 Fax: +44 2380 381983	7th Floor, No 2, Wenhu Street, Neihu District, Taipei 114, Taiwan Email: info@vadatech.com Telephone: +886 2 2627 7655 Fax: +886 2 2627 7792

Locations