LANTRONIX®

MatchPort™
AR ARCHITECT

MatchPort AR
Command Reference

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1: Introduction

MatchPort AR contains all the components necessary to deliver full network connectivity to virtually any kind of serial device, a reliable TCP/IP protocol stack, and a variety of remote management capabilities. They boast an innovative design and run on Lantronix's leading-edge Evolution OS™, which supports three convenient configuration methods (Web, command line, and XML). The MatchPort AR User Guide describes how to configure the MatchPort AR using a web interface.

Command-Line Interface (CLI): Making the edge-to-enterprise vision a reality, the MatchPort AR with the Evolution OS™ uses industry-standard tools for configuration, communication, and control. For example, the Evolution OS™ uses a command line interface (CLI) whose syntax is very similar to that used by data center equipment such as routers and hubs

This Command Reference provides information about navigating the CLI interface and lists the CLI commands for configuring, monitoring, and controlling the MatchPort AR.

XML-based Architecture and Device Control: XML is a fundamental building block for the future growth of M2M network. The MatchPort AR supports XML-based configuration and setup records that makes device configuration transparent to users and administrators. The XML is easily editable with a standard text or XML editor.

This command reference provides a brief overview of the XML interface, shows typical XML commands, and provides best practices for using XML commands.

2: Configuration Using Telnet or Serial Port

As an alternative to using Web Manager, you can configure the MatchPort AR using a series of commands. You can access this command-line interface (CLI) with a Telnet session or through a serial port connection to the MatchPort AR.

This command reference describes how to use the CLI and provides a detailed list of all the CLI commands supported.

Using Telnet

To configure the MatchPort AR using a Telnet session over the network, establish a Telnet connection.

*Note: As an alternative, establish a Telnet connection by clicking the **Telnet Configuration** tab in DeviceInstaller. See the MatchPort AR User Guide for more information.*

1. From the Windows Start menu, click **Run**. The Run dialog box appears.

2. In the Run dialog box, type the following command, where x.x.x.x is the IP address:

```
telnet x.x.x.x
```

A prompt displays.

*Note: Depending on the level of security you have configured, the **User Name** and **Password** may be required. If you named the unit, the name displays as the prompt. If you assigned a host name to the unit, a host name prompt displays.*

Using a Serial Port

To configure the MatchPort AR locally using a serial port, connect a terminal or a PC running a terminal-emulation program to a MatchPort AR serial port. Configure the terminal (or emulation) for 9600 baud, 8-bit, no parity, 1 stop bit, and no flow control.

1. Cycle the unit's power (power off and back on). After power-up, the self-test begins.

2. Press and hold down the exclamation point (**!**) key. (Some keyboard require you to press the **Shift** key when typing an exclamation point.) Then, when an exclamation point appears on the terminal or PC screen, immediately type **xyz** to display a CLI prompt.

Navigating the Command Line Interface

Guidelines

Commands at the root level (top level) of the CLI do not affect current configuration settings. Commands within the Enable menu (and its sub-menus) modify the MatchPort AR's configuration.

Items within < > (e.g. <*string*>) are required parameters.

To view acceptable commands: Type enter "**?**".

To move to a sub level and traverse the tree of commands: Enter each sub-command only in its parent command prompt. For example, to access the Tunnel1 level within the Enable level (which is below the root level), enter:

```
>enable
(enable)#tunnel 1
```

To exit and return to the menu one level higher: Type **exit**.

The following key combinations are allowed when configuring the MatchPort AR from the CLI:

- ◆ **Ctrl + a:** place cursor at the beginning of line
- ◆ **Ctrl + b:** backspace one character
- ◆ **Ctrl + d:** delete one character
- ◆ **Ctrl + e:** place cursor at the end of the line
- ◆ **Ctrl + f:** move cursor forward one character
- ◆ **Ctrl + k:** delete everything to the end of the line
- ◆ **Ctrl + l:** redraw the command line
- ◆ **Ctrl + n:** display the next line in the history
- ◆ **Ctrl + p:** display the previous line in the history
- ◆ **Ctrl + u:** delete entire line and place cursor at start of prompt
- ◆ **Ctrl + w:** delete one word back in line
- ◆ **Ctrl + z:** exit and return to the menu one level higher
- ◆ **Esc + b:** move cursor back one word
- ◆ **Esc + f:** move cursor forward one word

Notes:

- ◆ *You need only type enough characters to uniquely identify each part of a command.*
- ◆ *The MatchPort AR CLI also supports tab completion.*

To view the current configuration at any level: Type `show`. The configuration for that menu level displays.

To view the list of commands available at the current menu level: At the command prompt, type `?`. The list of current commands displays.

To return to the next level up in the menu hierarchy: At the command prompt, type `exit`. The prompt for the parent menu displays.

To view the available commands and their explanation: At the command prompt, type `*`. The list of commands for that menu level and their description displays.

CLI Levels

The following diagram shows the CLI command levels.

```
                              root
                               |
                            enable
                               |
 _____
 |       |       |       |       |       |       |    |    |     |
chem <n> config cpm   device filesystem line <n> ppp <n> ssh  ssl  tunnel <n>
         |
        if 1
```
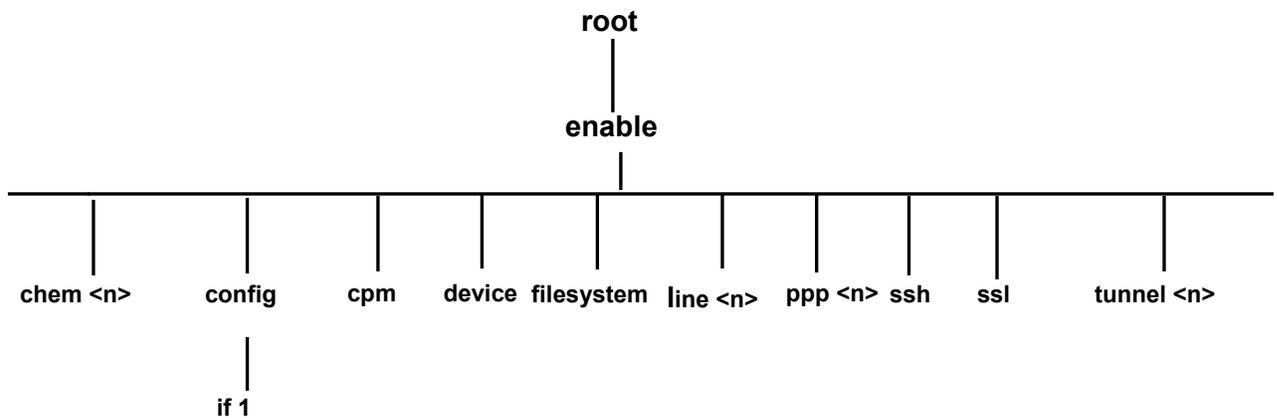
3: Summary of CLI Commands

The following sections describe the CLI commands. The commands are organized as follows:

Root Menu

The following parameters are top-level root commands. These commands do not alter the configuration of the MatchPort AR. You can issue these commands from any level.

Root Level Command	Description
clrscrn	Clears the screen.
enable	Enters the enable menu. If configured to do so, you may be prompted for a password.
exit	Exits the CLI.
ping *<host>*	Pings the host destination 5 times with a 5-second timeout. *<host>* = IP address or host name of destination host.
ping *<host>* *<count>*	Pings the host destination a specified number of times with a 5-second timeout. *<host>* = IP address or host name of destination host. *<count>* = number of times the ping is to occur.
ping *<host>* *<count>* *<timeout>*	Pings the host destination a specified number of times with a specified timeout. *<host>* = IP address or host name of destination host. *<count>* = number of times the ping is to occur. *<timeout>* = number of seconds that must elapse without a response before the ping times out.
show	Displays a select group of MatchPort AR settings. This includes product information, network settings, and line settings.
show history	Displays the last 20 commands entered during the current CLI session.
show matchport	Same as the show command. *Note: This command's syntax will change if the short name of the device changes. (e.g., show <short name>)*
trace route *<host>*	Displays the route taken from the MatchPort AR to a specified destination. *<host>* = IP address or host name of destination host.

Enable Menu

The following configurable parameters reside in the Enable configuration menu

Enable Menu Command	Description
`auto show interfaces`	Continuously displays interface statistics.
`auto show processes`	Continuously displays thread runtime information.
`auto show xsr`	Continuously displays XML status record counters.
`chem <number>`	Changes to the Configure Email menu.
`clear interfaces counters`	Sets the interface session counters to zero.
`clear query port counters`	Sets the query port counters to zero.
`clear xsr counters`	Sets the XML status record counters to 0.
`clrscrn`	Clears the screen.
`configure`	Displays the Configuration menu.
`connect`	Displays names and numbers of all lines, and allows you to choose a line to connect to.
`connect line <line>`	Starts a session on the serial line. *<line>* = line number.
`cpm`	Displays the CPM menu.
`device`	Displays the Device menu.
`disable`	Returns to the Root menu.
`exit`	Exits the CLI.
`filesystem`	Displays the Filesystem menu.
`kill line <line>`	Closes a specified command mode session. *<line>* =the number of the serial line to be cleared
`kill ssh <session>`	Closes an SSH session. *<session>* = session number in the index displayed by the `show sessions` command.
`kill telnet <session>`	Closes a Telnet SSH session. *<session>* = session number in the index displayed by the `show sessions` command.

Enable Menu Command	Description
line *<line>*	Displays the configuration menu for the specified serial port. *<line>* = number of the line (serial port)
no clear interfaces counters	Restores the interface counters to the aggregate values.
no clear query port counters	Restores the query port counters to the aggregate values.
no clear xsr counters	Restores the XML status record counters to the aggregate values.
nslookup	Executes the nslookup program, accepting nslookup commands. This program is used for forward and reverse DNS lookups.
nslookup *<host>*	Displays host information for a specified host name. *<host>* = IP address of the host whose information you want to view.
ping *<host>*	Pings the host destination five times with a 5-second timeout *<host>* = IP address of the host you want to ping.
ping *<host>* *<count>*	Pings the host destination a specified number of times with a 5-second timeout. *<host>* = IP address host you want to ping. *<count>* = number of times to ping the specified host is to be pinged.
ping *<host>* *<count>* *<timeout>*	Pings the host destination the specified number (count) of times with a specified timeout (in seconds).
ppp *<line>*	Changes to serial line PPP menu.
reload	Reboots the MatchPort AR.
reload factory defaults	Resets the MatchPort AR configuration to the default settings.
show	Displays system information.
show history	Displays the last 20 commands entered during the current CLI session.
show hosts	Displays the device's domain name and known DNS servers.
show interfaces	Displays network-interface statistics.

Enable Menu Command	Description
show ip sockets	Displays TCP and UDP state information and their associated ports.
show matchport	Displays system information.
show processes	Displays thread runtime information.
show sessions	Displays active line, Telnet and SSH sessions on the MatchPort AR.
show xsr	Displays XML status record counters.
ssh	Displays the SSH configuration menu.
ssl	Displays the SSL configuration menu.
trace route *\<host>*	Determines the path taken from the MatchPort AR to a specified destination. *\<host>* = IP address of the host you want to trace route.
tunnel *\<line>*	Displays the Tunnel menu for configuring tunneling the line number entered. *\<line>* = line number
write	Stores and applies current configuration into permanent memory.
xcr dump	Displays the current XML Configuration in the CLI.
xcr dump *\<group list>*	Displays portions of the current XML Configuration Record (XCR) that correspond to the specified XCR groups. *\<group list>* = a quoted, comma separated list of XCR groups that you want displayed.
xcr export *\<file>*	Saves the MatchPort AR's current configuration to a file. *\<file>* = name of the file in which the current MatchPort AR configuration will be saved.
xcr export *\<file>* *\<group list>*	Writes portions of the current XML Configuration Record (XCR) to a file. *\<file>* = the name of the local file to write the XCR to. *\<group list>* = a quoted, comma separated list of XCR groups that you want to write to the file.
xcr import *\<file>*	Imports an XML Configuration Record (XCR) to the MatchPort AR from a file. The MatchPort AR's configuration will change to have the settings indicated in the file. *\<file>* = name of the local file to be imported.

Enable Menu Command	Description
`xcr import <file> <group list>`	Imports only the specified XML Configuration Record (XCR) groups from a file. *<file>* = name of the local file to import. *<group list>* = a quoted, comma separated list of XCR groups that you want to import.
`xcr list`	Displays the list of valid XML Configuration Record (XCR) groups.
`xsr dump`	Displays the current XML status record in the CLI.
`xsr dump <group list>`	Displays portions of the current XML status record (XSR) corresponding to the list of XSR groups. *<group list>* = a quoted, comma separated list of XSR groups you want to display.
`xsr export <file>`	Writes the current XML status record (XSR) to a file. *<file>* = the name of the file to write the XSR to.
`xsr export <file> <group list>`	Writes portions of the current XML status record (XSR) to a file. *<file>* = name of the local file to write the XSR to. *<group list>* = a quoted, comma separated list of XSR groups you want to write to the file.
`xsr list`	Displays the list of valid XML status record (XSR) groups.

Chem Menu

The following configurable parameters reside in the Chem menu.

Chem Menu Command	Description
`auto show statistics`	Continuously displays email statistics.
`cc <email addresses>`	Sets the CC address information. *<email addresses>* = email addresses.
`chem <number>`	Switches to a different the Chem menu. *<number>* = number of the chem menu to enter.
`clear log`	Clears all entries from the mail log.
`clear mail counters`	Sets the mail counters to zero.
`clrscrn`	Clears the screen.
`exit`	Exits to the Enable menu.

Chem Menu Command	Description
`file <file>`	Specifies a text file, the contents of which will be the message body of an email alert. *<file>* = the name of a local file.
`from <email address>`	Sets the From address email field information. `<email address>` = email address.
`local port <number>`	Sets local port used to send email alerts. `<number>` local port to use for email alerts.
`local port random`	Sets local port (used to send email alerts) to random.
`no cc`	Clears the CC address information.
`no clear mail counters`	Restores the email counters to the aggregate values.
`no file`	Deletes the file for email to include within message body.
`no from`	Deletes the From address information.
`no overriding domain`	Removes the overriding domain name option.
`no replyto`	Deletes the ReplyTo address information.
`no subject`	Clears the email subject field.
`no to`	Clears the To address information field.
`no trigger`	Disables trigger to send email.
`overriding domain <domain>`	Explicitly provides the domain name in EHLO, overriding the MatchPort AR domain name.
`priority high`	Sets X-Priority for email alerts to 2.
`priority low`	Sets X-Priority for email alerts to 4.
`priority normal`	Sets X-Priority for email alerts to 3.
`priority urgent`	Sets X-Priority for email alerts to 1.
`priority very low`	Sets X-Priority for email alerts to 5.
`replyto <email address>`	Sets the ReplyTo address information. `<email address>` = ReplyTo email address.
`send`	Sends an email with current settings.
`server port <number>`	Sets the port used by the SMTP server. `<number>` = port used for SMTP on the server side.

Chem Menu Command	Description
show	Displays mail configuration.
show history	Displays the last 20 commands entered during the current CLI session.
show log	Displays the email log.
show statistics	Displays email statistics.
subject *\<string\>*	Sets the subject of the email. *\<string\>* = text to place as the subject.
to *\<email addresses\>*	Sets email address to which the email will be sent. *\<email addresses\>* = a quoted, semi-colon separated list of email addresses.
trigger \<cp group\> \<value\>	Specifies CP group and value to trigger sending an email.
write	Writes runtime configuration to permanent storage.

Configure Menu

The following configurable parameters reside in the Configure menu.

Configure Menu Command	Description
arp \<ip address\> \<mac address\>	Adds an entry to the ARP table, mapping an IP address to a MAC address. *\<ip address\>* = IP address to be mapped. *\<mac address\>* = MAC address in colon-separated form.
auto show icmp	Continuously displays ICMP state and statistics.
auto show ip	Continuously displays IP statistics.
auto show tcp	Continuously displays TCP statistics.
auto show udp	Continuously displays UDP statistics.
clear arp-cache	Removes all entries from the ARP table.
clear ftp counters	Sets the FTP counters to zero.
clear host *\<host\>*	Removes a specified entry from the DNS cache. *\<host\>* = IP address of the host with the DNS cache.
clear http counters	Sets the HTTP counters to zero.

Configure Menu Command	Description
clear icmp counters	Sets the Internet Control Message Protocol (ICMP) counters to zero.
clear ip counters	Sets the IP counters to zero.
clear ip http log	Clears the HTTP server log.
clear ip ssh counters	Sets the SSH counters to zero.
clear ip telnet counters	Sets the Telnet counters to zero.
clear rss	Clears the RSS feed data.
clear tcp counters	Sets the TCP counters to zero.
clear tftp counters	Sets the TFTP counters to zero.
clear udp counters	Sets the UDP counters to zero.
clrscrn	Clears the screen.
enable password	Enters dialog to set the password for the Enable menu in privileged mode.
enable password *<string>*	Sets the password for the Enable menu in unprivileged mode. *<string>* = new password.
exit	Exits the Configure menu and returns to the Enable menu.
hostname *<string>*	Sets the system hostname. *<string>* = hostname to be assigned to the system.
if 1	Enters the Interface 1 menu.
ip domain name *<string>*	Sets the default domain name on the MatchPort AR. *<string>* = default domain name.
ip ftp enable	Enables the FTP server.
ip ftp password *<string>*	Sets the administrative password for the FTP server. *<string>* = administrative password.
ip ftp username *<string>*	Sets the administrative username for the FTP server. *<string>* = administrative username.

Configure Menu Command	Description
`ip http auth <uri> <realm>`	Creates a new HTTP server authentication directive. *<uri>* = URI of the server. *<realm>* = domain of the server.
`ip http auth type <uri> basic`	Sets an HTTP server authentication directive to the Basic Access Authentication scheme. *<uri>* = URI of the server.
`ip http auth type <uri> digest`	Sets an HTTP server authentication directive to the Digest Access Authentication scheme. *<uri>* = URI of the server.
`ip http auth type <uri> none`	Sets the authentication type for an HTTP server authentication directive to none. *<uri>* = URI of the server.
`ip http auth type <uri> ssl`	Sets the authentication type for an HTTP server authentication directive to SSL. *<uri>* = URI of the server.
`ip http auth type <uri> ssl-basic`	Sets the authentication type for an HTTP server authentication directive to SSL-Basic. *<uri>* = URI of the server.
`ip http auth type <uri> ssl-digest`	Sets the authentication type for an HTTP server authentication directive to SSL-Digest. *<uri>* = URI of the server.
`ip http auth user <uri> <user> <password>`	Creates or modifies a user for an HTTP server authentication directive. *<uri>* = URI of the server. *<user>* = username. *<password>* = password associated with the username.
`ip http log`	Enables HTTP server logging.
`ip http log entries <number>`	Sets the maximum number of HTTP server log entries. *<number>* = maximum number of HTTP server log entries.
`ip http log format <string>`	Sets the log format for the HTTP server. *<string>* = log format.
`ip http max bytes <bytes>`	Sets the maximum number of bytes the HTTP server accepts when receiving a request. *<bytes>* = maximum number of bytes.

Configure Menu Command	Description
`ip http max timeout <seconds>`	Sets the maximum timeout the HTTP server waits when receiving a request. *<seconds>* = maximum timeout value.
`ip http port <number>`	Sets the port number. *<number>* = port number.
`ip http server`	Enables the HTTP server.
`ip http ssl port <number>`	Sets the port number the HTTP server will use over SSL. *<number>* = port number.
`ip icmp enable`	Allows the transmission and retrieval of ICMP packets.
`ip name-server <ip address>`	Sets the primary DNS server. *<ip address>* = IP address of the primary server.
`ip name-server <ip address1> <ip address2>`	Sets the primary and secondary DNS servers. *<ip address1>* = IP address of the primary server. *<ip address2>* = IP address of the secondary server.
`ip ssh enable`	Enables the SSH server.
`ip ssh port <number>`	Sets the local port for SSH that the server uses. *<number>* = local port number.
`ip tcp resets enable`	Sends TCP RSTs upon connection to unused ports.
`ip telnet enable`	Enables and starts the Telnet server.
`ip telnet port <number>`	Sets the local Telnet port that the server uses. *<number>* = Telnet port number.
`ip tftp allow file creation`	Enables the TFTP server to create files on the file system.
`ip tftp enable`	Enables the TFTP server.
`kill ssh <session>`	Closes an active SSH session. *<session> = the SSH session to be closed. (Can be found by executing the* `show sessions` *command)*
`kill telnet <session>`	Closes an active Telnet session. *<session>* = the Telnet session to be closed. (Can be found by executing the show sessions command).

Configure Menu Command	Description
`no arp <ip address>`	Removes an entry from the ARP table. *<ip address>* = entry value.
`no clear ftp counters`	Restores the FTP counters to the aggregate values.
`no clear http counters`	Restores the HTTP counters to the aggregate values.
`no clear icmp counters`	Restores the ICMP counters to the aggregate values.
`no clear ip counters`	Restores the IP counters to the aggregate values.
`no clear ip ssh counters`	Restores the IP SSH counters to the aggregate values.
`no clear ip telnet counters`	Restores the IP Telnet counters to the aggregate values.
`no clear tcp counters`	Restores the TCP counters to the aggregate values.
`no clear tftp counters`	Restores the TFTP counters to the aggregate values.
`no clear udp counters`	Restores the UDP counters to the aggregate values.
`no enable password`	Removes the Enable menu password in unprivileged mode.
`no hostname`	Removes the hostname.
`no ip domain name`	Removes the default domain name.
`no ip ftp enable`	Disables the FTP server.
`no ip ftp password`	Resets the FTP password to the default: **PASS**.
`no ip ftp username`	Resets the FTP username to the default: **admin**.
`no ip http auth <uri>`	Deletes an existing HTTP server authentication directive. *<uri>* = URI of the HTTP server.
`no ip http auth user <uri> <user>`	Deletes an existing user for the specified HTTP server's authentication directive. *<uri>* = URI of the HTTP server. *<user>* = user name.
`no ip http log`	Disables HTTP server logging.
`no ip http log format`	Resets the log format string to the default for the HTTP server.
`no ip http server`	Disables the HTTP server.

Configure Menu Command	Description
`no ip icmp enable`	Prevents the sending or receiving of ICMP packets.
`no ip name-server`	Removes the primary and secondary DNS server entries.
`no ip ssh enable`	Disables the SSH server.
`no ip tcp resets enable`	Prohibits TCP RSTs from being set on connects to unused ports.
`no ip telnet enable`	Disables the Telnet server.
`no ip tftp allow file creation`	Prohibits file creation via TFTP.
`no ip tftp enable`	Disables the TFTP server.
`no password`	Removes the Root menu unprivileged mode password.
`no query-port enable`	Disables the query port.
`no quit connect line`	Resets to default the string used to exit the `connect line <line>` command.
`no rss enable`	Disables the RSS feed.
`no rss persistent`	Disables RSS feed data persistence.
`no snmp-server community ro`	Removes the SNMP read-only server community string.
`no snmp-server community rw`	Removes the SNMP read/write server community string.
`no snmp-server contact`	Remove the SNMP server contact information.
`no snmp-server description`	Clears the SNMP server description.
`no snmp-server enable`	Disables the SNMP server.
`no snmp-server enable traps`	Disables SNMP server traps.
`no snmp-server host <ip address>`	Deletes the SNMP server host. *<ip address>* = IP address of the SNMP server.
`no snmp-server host <ip address1> <ip address2>`	Deletes the primary and secondary SNMP server hosts. *<ip address1>* = IP address of the primary SNMP server. *<ip address2>* = IP address of the secondary SNMP server.

Configure Menu Command	Description
no snmp-server location	Clears the SNMP server location.
no snmp-server name	Clears the SNMP server name.
no syslog enable	Disables syslog logging.
no syslog host	Removes the address of the syslog recipient.
no syslog level	Disables logging of all events.
no syslog local port	Resets to default syslog local port.
no syslog remote port	Resets to default syslog remote port.
password	Sets the new password. Prompts for a password, and then requests password verification.
password *<string>*	Sets the root menu password to <string>. *<string>* = password.
query-port enable	Enables the query port.
quit connect line *<string>*	Sets the string used to exit the connect line <line> command.
rss enable	Enables RSS feed
rss entries *<number>*	Sets the maximum number of RSS feed entries
rss persistent	Enables RSS Feed data persistence.
show	Displays system information.
show arp	Shows the arp table.
show ftp	Displays the FTP configuration and statistics.
show history	Displays previously entered commands.
show http	Displays the HTTP server settings.
show http auth	Displays the HTTP server authentication settings.
show http log	Displays the HTTP server log.
show http statistics	Displays the HTTP statistics.
show icmp	Displays ICMP state and statistics.
show ip	Displays the IP statistics.

Configure Menu Command	Description
`show query port`	Displays statistics and information about the Query Port.
`show rss`	Displays the RSS feed settings.
`show snmp-server`	Displays the SNMP server settings.
`show ssh`	Displays the IP SSH configuration.
`show syslog`	Displays syslog information.
`show tcp`	Displays TCP configuration information and statistics.
`show telnet`	Displays the Telnet configuration.
`show tftp`	Displays the TFTP settings and statistics.
`show udp`	Displays the UDP settings and statistics.
`snmp-server community <string> ro`	Sets the read-only community within the SNMP server. *<string>* = name of the read-only community to be set.
`snmp-server community <string> rw`	Sets the read-write community within the SNMP server. *<string>* = name of the read-write community to be set.
`snmp-server contact <string>`	Sets the SNMP system contact information. *<string>* = system contact information.
`snmp-server description <string>`	Enters a description for SNMP server. *<string>* = description of server.
`snmp-server enable`	Enables the SNMP server.
`snmp-server enable traps`	Enables traps on the SNMP server.
`snmp-server host <ip address>`	Sets the primary SNMP trap host. *<ip address>* = IP address of host running the SNMP trap.
`snmp-server host <ip address1> <ip address2>`	Sets the primary and secondary SNMP trap hosts. *<ip address1>* = IP address of primary host running the SNMP trap. *<ip address2>* = IP address of secondary host running the SNMP trap.
`snmp-server location <string>`	Sets the SNMP system location. *<string>* = SNMP system location.

Configure Menu Command	Description
snmp-server name *<string>*	Sets the SNMP system name. *<string>* = SNMP system name.
syslog enable	Enables syslog logging.
syslog host *<ip address>*	Sets the address of the syslog recipient.
syslog level *<severity>*	Sets the minimum severity of events that will be logged.
syslog local port <number>	Sets syslog local port.
syslog remote port <number>	Sets syslog remote port.
write	Stores and applies the current configuration in permanent memory.

Interface 1 menu

The following configurable parameters reside in the Interface (IF 1) configuration menu

Interface 1 Menu Command	Description
arp timeout <seconds>	Sets the ARP cache timeout. *<seconds>* = ARP cache timeout in seconds.
bootp	Enables BOOTP.
clear host *<string>*	Removes an entry from DNS cache. *<string>* = entry to be removed.
clrscrn	Clears the screen.
dhcp	Enables DHCP.
dhcp renew	Forces DHCP to renew.
duplex auto	Sets Ethernet link duplex to auto-negotiate.
duplex full	Sets Ethernet link duplex to full-duplex.
duplex half	Sets Ethernet link duplex to half-duplex.

Interface 1 Menu Command	Description
exit	Exits the Interface menu and returns to the Enable menu.
ip address <*ip address/bits*>	Sets the IP address and netmask. <*ip address/bits*> = IP address / netmask in Classless Inter-Domain Routing (CIDR) notation.
ip address <*ip address*>	Sets the IP address. <*ip address*> = IP address.
ip address <*ip address*> <*subnet mask*>	Sets the IP address and netmask. <*ip address*> = IP address. <*subnet mask*> = netmask in dotted notation.
ip address filter <*ip address*> <*subnet mask*>	Adds a filter to the IP filter table. <*ip address*> = IP address. <*subnet mask*> = netmask in dotted notation.
ip default-gateway <*ip address*>	Sets the IP address for the default gateway.
ip dhcp client client-id ascii <*string*>	Sets the DHCP client ID.
no bootp	Disables BOOTP.
no dhcp	Disables DHCP.
no duplex	Restores the default Ethernet link duplex.
no ip address	Removes the IP address.
no ip address filter <*ip address*> <*subnet mask*>	Removes a specified filter from the IP filter table. <*ip address*> = IP address. <*subnet mask*> = netmask in dotted notation.
no ip default-gateway	Removes the default gateway.
no ip dhcp client client-id	Deletes the DHCP client ID.
no speed	Restores the default Ethernet link speed.
show	Displays the interface settings.
show history	Displays the last 20 commands entered during the current CLI session.
show ip address filter	Displays the IP filter table.

Interface 1 Menu Command	Description
`speed 10`	Sets the Ethernet link speed to 10 Mbps. Duplex is unchanged.
`speed 100`	Sets the Ethernet link speed to 100 Mbps. Duplex is unchanged.
`speed auto`	Sets the Ethernet link speed to auto-negotiation.
`write`	Stores and applies the current configuration into permanent memory.

CPM Menu

The following configurable parameters reside in the Configurable Pin menu.

Device Configuration Command	Description
`add <cp> to <group>`	Adds the specified CP to the specified group. *<cp> = configurable pin.* *<group>* = the name of the group to which you want to add the CP.
`add <cp> to <group> <bit>`	Adds a specified CP to a specified group at a specified bit position. *<cp>* = configurable pin. *<group>* = the name of the group to which you want to add the CP. *<bit>* = bit position.
`clrscrn`	Clears the screen.
`create <group>`	Creates a configurable pin (CP) group. *<group>* = the name for the new group.
`delete <cp> from <group>`	Removes a CP from a specified group and sets the CP to its default configuration of input. *<cp>* = configurable pin. *<group>* = the name of the group.
`delete <group>`	Removes a group and resets all CPs in that group to the default configuration of input. *<group>* = the name of the group.
`disable <group>`	Disables the specified group. *<group>* = a string which uniquely identifies a grouping of CPs.

Device Configuration Command	Description
enable *<group>*	Enables a disabled group. *<group>* = the name of the group.
exit	Exits to the Enable menu.
get *<group>*	Displays the value of the specified group. *<group>* = the name of the group.
set *<cp>* as input	Configures a CP as an asserted high input. *<cp>* = configurable pin.
set *<cp>* as input assert low	Configures a CP as an asserted low input. *<cp>* = configurable pin.
set *<cp>* as output	Configures a CP as an asserted high output. *<cp>* = configurable pin.
set *<cp>* as output assert low	Configures a CP as an asserted low output. *<cp>* = configurable pin.
set *<group>* *<value>*	Assigns a value to the specified group. *<group>* = the name of the group. *<value>* = numeric value to assign to the CP group. Can be specified as hex if prepended with "0x".
show *<group>*	Shows group information for specified group. *<group>* = the name of the group.
show cp	Shows configuration and group information for all CPs.
show groups	Shows all groups defined and their state.
show history	Shows previously entered commands.
write	Writes runtime configuration to permanent storage.

Device Menu

The following configurable parameters reside in the Device configuration menu.

Device Configuration Command	Description
auto show tlog	Continuously displays the internal trouble log.
auto show upload	Continuously displays the current upload status.

Device Configuration Command	Description
clrscrn	Clears the screen.
dhrystone	Runs the Dhrystone benchmark program.
exit	Exits the Device menu and returns to the Enable menu.
long name <*name*>	Renames the MatchPort AR's long name as displayed in command mode and the Web Manager. *<name>* = maximum of 64 characters.
no long name	Resets the MatchPort AR's long name to the default value.
no short name	Resets the MatchPort AR's short name to the default value.
short name <*name*>	Sets the MatchPort AR's short name, displayed in command mode and the Web Manager. *<name>* = maximum of 32 characters.
show	Displays system information.
show buffer pool	Displays information on buffer pool.
show hardware information	Displays the hardware information for the MatchPort AR. Shows the CPU type, CPU speed, Hardware ID, flash size, RAM size, and hard drive size.
show history	Displays previously entered commands.
show matchport	Displays system information.
show memory	Displays memory heap information.
show task memory	Displays task memory usage.
show task state	Displays current task states.
show tlog	Shows the internal trouble log.
show upload	Shows the current upload state.
write	Stores and applies the current configuration into permanent memory.

Filesystem Menu

The following commands are configurable parameters within the Filesystem menu. This level allows for the management of files in the MatchPort AR.

Filesystem Menu Command	Description
cat *<file>*	Displays the contents of a specified file.
	<file> = name of the file.
cd *<directory>*	Displays all filesystem files in the current directory.
	<directory> = name of current directory.
clrscrn	Clears the screen.
compact	Frees "dirty" space on the files system by copying current files to a fresh region of Flash memory.
cp *<source file>* *<destination file>*	Creates a copy of an existing file.
	<source file> = name of the original file.
	<destination file> = name for the new file.
dump *<file>*	Displays the contents of the specified file in hexadecimal format.
	<file> = name of the file whose contents are to be displayed.
exit	Exits the Filesystem menu and returns to the Enable menu.
format	Deletes all files and directories from the filesystem, including the configuration for the device.
ls	Displays the contents of the current working directory.
ls *<directory>*	Displays the contents of the specified directory.
	<directory> = name of the directory whose contents are to be displayed.
mkdir *<directory>*	Creates a directory. This directory is placed in the current working directory.
	<directory> = name of the directory to be created.
mv *<source file>* *<destination file>*	Moves contents of a source file to a destination file. The source file is removed from the filesystem.
	<source file> = current file path.
	<destination file> = new file location.
pwd	Displays the current working directory.

Filesystem Menu Command	Description
`rm <file>`	Removes a specified file from the filesystem.
	<file> = name of the file to be removed from the filesystem.
`rmdir <directory>`	Removes a specified directory from the filesystem.
	<file> = name of the directory to be removed from the filesystem.
`show`	Displays filesystem settings and statistics.
`show history`	Displays the last 20 commands entered during the current CLI session.
`show tree`	Displays the complete filesystem hierarchy.
`tftp get ascii <source file> <destination file> <host>`	Obtains an ASCII file using TFTP.
	<source file> = name of the file to be read from the host.
	<destination file> = name of the file to be created on the MatchPort AR.
	<host> = name of the host where the file will be found.
`tftp get ascii <source file> <destination file> <host> <port>`	Obtains an ASCII file using TFTP.
	<source file> = name of the file to be read from the host.
	<destination file> = name of the file to be created on the MatchPort AR.
	<host> = name of the host where the file will be found.
	<port> = port on the host for the TFTP server (when not using the default).
`tftp get binary <source file> <destination file> <host>`	Obtains a binary file using TFTP.
	<source file> = name of the file to be read from the host.
	<destination file> = name of the file to be created on the MatchPort AR.
	<host> = name of the host where the file will be found.
`tftp get binary <source file> <destination file> <host> <port>`	Obtains a binary file using TFTP.
	<source file> = name of the file to be read from the host.
	<destination file> = name of the file to be created on the MatchPort AR.
	<host> = name of the host where the file will be found. <port> = port on the host for TFTP server (when not using the default).

Filesystem Menu Command	Description
`tftp put ascii` `<source file>` `<destination file>` `<host>`	Sends an ASCII file using TFTP. *<source file>* = name of the file to be read from the MatchPort AR. *<destination file>* = name of the file to be created on the host. *<host>* = name of the host where the file will be created.
`tftp put ascii` `<source file>` `<destination file>` `<host>` `<port>`	Sends an ASCII file using TFTP. *<source file>* = name of the file to be read from the MatchPort AR. *<destination file>* = name of the file to be created on the host. *<host>* = name of the host where the file will be created. *<port>* = port on the host for the TFTP server (when not using the default).
`tftp put binary` `<source file>` `<destination file>` `<host>`	Sends a binary file using TFTP. *<source file>* = name of the file to read from the MatchPort AR. *<destination file>* = name of the file to be created on the host. *<host>* = name of the host where the file will be created.
`tftp put binary` `<source file>` `<destination file>` `<host>` `<port>`	Sends a binary file using TFTP. *<source file>* = name of the file to be read from the MatchPort AR. *<destination file>* = name of the file to be created on the host. *<host>* = name of the host where the file will be created. *<port>* = port on the host for the TFTP server (when not using the default).
`touch <file>`	Creates a file on the filesystem. *<file>* = name of the file to be created.

Line Menu

The following configurable parameters reside in the Line 1, Line 2, Line 3, Line 4 (and so forth) configuration menus. These commands configure the corresponding serial ports.

Line Menu Command	Description
`auto show statistics`	Continuously displays line statistics.
`clear line counters`	Sets the serial counters to zero.
`clrscrn`	Clears the screen.
`command mode always`	Sets command mode to always enabled.
`command mode cp`	Sets command mode to use CP settings.
`command mode cp <cp group> <value>`	Specifies a CP group and trigger value to be used when Command Mode is CP. *<cp group>* = name of CP group. *<value>* = trigger value.
`command mode echo serial string`	Enables user-defined serial boot string to be echoed in the CLI.
`command mode serial string`	Enables user to enter a custom string at boot time to enter command mode.
`command mode serial string <string>`	Sets an ASCII string that can be entered at boot time to enter Command Mode.
`command mode serial string binary <string>`	Sets a binary string that can be entered at boot time to enter command mode.
`command mode signon message <string>`	Sets an ASCII sign-on message that is sent from the serial port when the device boots and when the line is in command mode.
`command mode signon message binary <string>`	Sets a binary sign-on message that is sent from the serial port when the device boots and when the line is in command mode.
`command mode wait time <milliseconds>`	Sets boot-up wait time for Command Mode CP and Command Mode serial string. *<milliseconds>* = number of milliseconds for boot-up wait time and serial settings.
`databits 7`	Sets the current serial port to use 7 databits.
`databits 8`	Sets the current serial port to use 8 databits.
`enable rs485 full-duplex`	Switches the serial port to RS485 interface in full-duplex mode.

Line Menu Command	Description
`enable rs485 half-duplex`	Switches the serial port to RS485 interface in half-duplex mode.
`exit`	Exits the Line menu and return to the Enable menu.
`flowcontrol hardware`	Sets the current serial port's flow control to hardware.
`flowcontrol software`	Sets the current serial port's flow control to software.
`line <line>`	Switches to a different serial line configuration menu.
`name <text>`	Sets the name of the line. *<text>* = new name.
`no clear line counters`	Restores serial counters to the aggregate values.
`no command mode`	Disables command mode for the current serial port.
`no command mode cp`	Disables the command mode use of CP settings.
`no command mode echo serial string`	Disables the echoing of serial data at boot time.
`no command mode serial string`	Disables the Command Mode use of serial strings.
`no command mode signon message`	Removes the sign-on message displayed when the device boots.
`no enable rs485`	Uses the default RS-232 interface for the serial port.
`no flowcontrol`	Sets the current serial port's flow control to none
`no name`	Removes the name of the line.
`no protocol`	Sets protocol selection to none.
`no shutdown`	Enables the interface so data can be sent/received.
`parity even`	Sets the current serial port's parity to even.
`parity none`	Sets the current serial port's parity to none.
`parity odd`	Sets the current serial port's parity to odd.
`ppp <line>`	Changes to the serial line ppp menu.
`protocol ppp`	Sets the MatchPort AR to use Point to Point Protocol on the serial port.
`protocol tunnel`	Sets the MatchPort AR to use Tunnel on the serial port.
`show`	Displays the MatchPort AR's settings.

Line Menu Command	Description
show command mode	Displays the command mode settings.
show history	Shows previously entered commands.
show line	Shows the line settings.
show statistics	Shows the line statistics.
shutdown	Disables the line.
speed *<baud>*	Sets the line speed. *<baud>* = a value between 300 and 230400.
speed custom *<baud>*	Sets the MatchPort AR speed to values between 300 and 230400.
stopbits 1	Sets the MatchPort AR's stop bit to 1.
stopbits 2	Sets the MatchPort AR's stop bit to 2.
tunnel *<line>*	Enters the Tunnel menu for a specified serial port. *<line>* = number of the line (serial port) to be configured.
write	Stores and applies the current configuration into permanent memory.
xoff *<character definition>*	Sets the XOFF character for the current serial port (for use with software flow control). *<character definition>* = a single character, a hex value \0x##, or a decimal value \###.
xon *<character definition>*	Sets the XON character for the current serial port (for use with software flow control). *<character definition>* = a single character, a hex value \0x##, or a decimal value \###.

PPP Menu

The following configurable parameters reside in the PPP configuration menus.

PPP Menu Command	Description
clrscrn	Clears the screen.
exit	Exits to the Configure menu.
ip address *<ip address> <netmask>*	Sets the local IP address and subnet mask. <ip address> = local IP address. <netmask> = subnet mask.

PPP Menu Command	Description
line *<line>*	Displays the selected serial line configuration menu.
no ip address	Removes the local IP address.
no peer default ip address	Removes the peer default IP address.
no ppp authentication	Removes the PPP authentication.
no username	Removes the PPP authentication username and password.
peer default ip address *<ip address>*	Sets the peer IP address.
ppp *<line>*	Changes to serial line ppp menu.
ppp authentication chap	Sets the CHAP PPP authentication method.
ppp authentication pap	Sets the PAP PPP authentication method.
show	Displays the PPP configuration.
show history	Displays previously entered commands.
username *<username>* password *<password>*	Sets the PPP authentication username and password.
write	Writes runtime configuration to permanent storage.

SSH Menu

The following configurable parameters reside in the SSH configuration menus.

SSH Menu Command	Description
client server *<server>*	Sets a known server's public RSA or DSA key. The CLI prompts for the key on the next line. *<server>* = IP address or host name of the server.
client server *<server>* *<key>*	Sets client server RSA or DSA key.
client user *<user>* *<command>*	Sets client user, command, and RSA or DSA keys.
client user *<user>* *<password>* *<command>*	Sets the client user, password, command, and RSA or DSA keys (optional). *<user>* = client username. *<password>* = password associated with the username. *<command>* = command to execute on the remote machine.

SSH Menu Command	Description
`client user <`*`user`*`>` `<`*`password`*`> <`*`command`*`>` `<`*`public`*`> <`*`private`*`>`	Sets the client user, password, command, and RSA or DSA keys. *<user>* = username to be set. *<password>* = password associated with username. *<command>* = command to be set. *<public>* = RSA key. *<private>* = DSA key.
`client user <`*`user`*`>` `generate dsa 1024`	Generates DSA public and private keys. *<user>* = username.
`client user <`*`user`*`>` `generate dsa 512`	Generates DSA public and private keys. *<user>* = username.
`client user <`*`user`*`>` `generate dsa 768`	Generates DSA public and private keys. *<user>* = username.
`client user <`*`user`*`>` `generate rsa 1024`	Generates RSA public and private keys. *<user>* = username.
`client user <`*`user`*`>` `generate rsa 512`	Generates RSA public and private keys. *<user>* = username.
`client user <`*`user`*`>` `generate rsa 768`	Generates RSA public and private keys. *<user>* = username.
`clrscrn`	Clears the screen.
`exit`	Exits the SSH menu and return to the Enable menu.
`host`	Sets the RSA or DSA public (or private) keys. The CLI prompts for the key on the next line.
`host <`*`key`*`>`	Sets the RSA or DSA public (or private) key. *<key>* = RSA or DSA key to be set.
`host <`*`public`*`> <`*`private`*`>`	Sets RSA or DSA public and private keys. *<public>* = public key to be set. *<private>* = private key to be set.
`host generate dsa 1024`	Generates DSA public and private keys.
`host generate dsa 512`	Generates DSA public and private keys.
`host generate dsa 768`	Generates DSA public and private keys.

SSH Menu Command	Description
`host generate rsa 1024`	Generates RSA public and private keys.
`host generate rsa 512`	Generates RSA public and private keys.
`host generate rsa 768`	Generates RSA public and private keys.
`host user <user> <password>`	Sets the host username and password. *<user>* = username to be set. *<password>* = password associated with username.
`host user <user> <password> <public>`	Sets the host username, password, and either an RSA or DSA public key. *<user>* = username to be set. *<password>* = password associated with username. *<public>* = key to be set.
`host user <user> <password> <public> <public>`	Sets the host username, password, and both RSA and DSA public keys. *<user>* = username to be set. *<password>* = password associated with username. *<public>* = public key to be set.
`no client server <server>`	Removes the client server. *<server>* = name of client server to be removed.
`no client server <server> dsa`	Removes the client server DSA key. *<server>* = name of client server whose DSA key is to be removed.
`no client server <server> rsa`	Removes the client server RSA key. *<server>* = name of client server whose RSA key is to be removed.
`no client user <user>`	Removes the client user. *<user>* = name of client user to be removed.
`no client user <user> dsa`	Removes the client user DSA key. *<user>* = name of client user whose DSA key is to be removed.
`no client user <user> rsa`	Removes the client user RSA key. *<user>* = name of client user whose RSA key is to be removed.
`no host dsa`	Removes DSA public and private keys.
`no host rsa`	Removes RSA public and private keys.

SSH Menu Command	Description
`no host user <user>`	Removes a host user. *<user>* name of host user to be removed.
`show`	Displays SSH settings.
`show client server <server>`	Displays client server RSA and DSA keys. *<server>* = IP address of server whose RSA and DSA keys are to be shown.
`show client user <user>`	Displays information about a client user. *<user>* = username.
`show history`	Displays previously entered commands.
`show host dsa`	Displays the full DSA public key.
`show host rsa`	Displays the full RSA public key.
`show host user <user>`	Displays information about a host user. *<user>* = username.
`write`	Stores and applies current configuration into permanent memory.

SSL Menu

The following configurable parameters reside in the SSL configuration menus.

SSL Menu Command	Description
`clrscrn`	Clears the screen.
`exit`	Exits the SSL menu and return to the Enable menu.
`no ssl`	Removes the SSL certificate.
`show history`	Displays previously-entered commands.
`show ssl`	Displays the SSL certificate information.
`show ssl authority`	Displays authority certificate information.
`ssl`	Adds a SSL certificate and private key.
`ssl authority`	Adds an authority certificate.
`ssl generate`	Generates a new self-signed SSL certificate.

SSL Menu Command	Description
`write`	Stores and applies current configuration into permanent memory.

Tunnel Menu

The following configurable parameters reside in the Tunnel configuration menus.

Tunnel Menu Command	Description
`accept aes decryption key <string>`	Sets the AES decryption key for Accept Mode tunneling using ASCII format. *<string>* = AES decryption key to be set.
`accept aes decryption key binary <string>`	Sets the AES decryption key using binary format. *<string>* = AES decryption key to be set.
`accept aes encryption key <string>`	Sets the AES encryption key using ASCII format. *<string>* = AES encryption key to be set.
`accept aes encryption key binary <string>`	Sets the AES encryption key using binary format. *<string>* = AES encryption key to be set.
`accept always`	Enables the tunneling server to accept connections.
`accept any character`	Enables Accept Mode when a character is received through the corresponding line (serial port).
`accept block network`	Discards all data coming in from the network interface from the Accept Mode tunneling connection (generally used for debugging).
`accept block serial`	Discards all data coming in from the serial interface associated with this tunnel (generally used for debugging).
`accept cp set group <group>`	Configures the CP Group to set upon making or breaking a connection. *<group>* = CP group.
`accept cp set group connect <value>`	Sets CP Group to a value upon making a connection. The CP Group is defined by "accept cp set group."
`accept cp set group disconnect <value>`	Sets CP Group to a value upon breaking a connection. The CP Group is defined by "accept cp set group."
`accept email connect <email profile>`	Sets the email profile (from 1 to send upon connection).
`accept email disconnect <email profile>`	Sets the email profile to send upon breaking a connection.

Tunnel Menu Command	Description
`accept flush serial data`	Flushes the serial data buffer upon a connection.
`accept keep alive` `<seconds>`	Enables TCP keepalives and sets the timer in seconds. *<seconds>* = timer value, in seconds.
`accept modem control` `active`	Enables Accept Mode if the modem control pin is asserted.
`accept modem emulation`	Enables Accept Mode's modem emulation support.
`accept password <string>`	Sets the Tunnel password in Accept Mode. *<string>* = password string.
`accept port <number>`	Sets a specific port to use as the local port. *<port>* = number of port to be used as the local port.
`accept prompt for` `password`	Prompts for the password in Accept Mode upon a connection.
`accept protocol ssh`	Uses SSH protocol for Accept Mode tunneling.
`accept protocol ssl`	Uses SSL protocol for Accept Mode tunneling.
`accept protocol tcp`	Uses TCP protocol for Accept Mode tunneling.
`accept protocol tcp aes`	Uses TCP protocol with AES encryption for Accept Mode tunneling.
`accept protocol telnet`	Use Telnet protocol (IAC) for Accept Mode tunneling.
`accept start character`	Enables Accept Mode tunneling when the configured start character is received.
`auto show statistics`	Continuously displays connection statistics.
`clear accept counters`	Sets the accept counters to zero.
`clear aggregate counters`	Sets the aggregate counters to zero.
`clear all counters`	Sets all the tunnel counters to zero.
`clear connect counters`	Sets the connect counters to zero.
`clrscrn`	Clears the screen.
`connect aes decryption` `key <string>`	Sets the AES decryption key using ASCII format. *<string>* = AES decryption key to be set.
`connect aes decryption` `key binary <string>`	Sets the AES decryption key using binary format. *<string>* = AES decryption key to be set.

Tunnel Menu Command	Description
connect aes encryption key *<string>*	Sets the AES encryption key using ASCII format. *<string>* = AES encryption key to be set.
connect aes encryption key binary *<string>*	Sets the AES encryption key using binary format. *<string>* = AES encryption key to be set.
connect always	Enables Connect Mode.
connect any character	Enable Connect Mode when a character is received.
connect block network	Blocks the tunneling of network data.
connect block serial	Blocks the tunneling of serial data.
connect cp set group *<group>*	Configures the CP Group to set upon making or breaking a connection. *<group>* = CP Group.
connect cp set group disconnect *<value>*	Sets the CP Group to a value upon disconnection. The CP Group is defined by "connect cp set group."
connect cp set group disconnect *<value>*	Sets the CP Group to a value set upon connection.
connect email connect *<email profile>*	Configures the email profile (from 1 to 4) to send upon a connection.
connect email disconnect *<email profile>*	Configures the email profile (from 1 to 4) to send upon breaking a connection.
connect flush serial data	Flushes the serial data buffer on a connection.
connect keep alive *<seconds>*	Enables TCP keepalives and sets timer in seconds. *<seconds>* = number of seconds to which the timer is set.
connect modem control active	Enable Connect mode when the modem control pin transitions from inactive to active.
connect modem emulation	Enables modem emulation.
connect port *<number>*	Sets the specific port to use as the local port. *<number>* = number of the port to be used as the local port.
connect protocol ssh	Uses SSH protocol for Connect Mode tunneling.
connect protocol ssl	Uses SSL protocol for Connect Mode tunneling.
connect protocol tcp	Uses TCP protocol for Connect Mode tunneling.

Tunnel Menu Command	Description
connect protocol tcp aes	Uses TCP protocol with AES encryption for Connect Mode tunneling.
connect protocol udp	Uses UDP protocol for Connect Mode tunneling.
connect protocol udp aes	Uses UDP protocol with AES encryption for Connect Mode tunneling.
connect reconnect timer *<milliseconds>*	Sets the reconnect time value in milliseconds. *<milliseconds>* = number of milliseconds.
connect remote *<host>*	Sets the remote address to connect to. *<host>* = host IP address.
connect remote port *<number>*	Sets remote port *<number>* = port number of remote port.
connect ssh username *<string>*	Sets the SSH user information. *<string>* = SSH user information.
connect start character	Enables connect mode on reception of the start character.
disconnect flush serial data	Flushes serial data buffer upon disconnection.
disconnect modem control inactive	Enables Disconnect Mode to disconnect when the modem control pin transitions from active to inactive.
disconnect stop character	Enables Disconnect Mode to disconnect when a stop character is received.
disconnect timeout	Enables Disconnect Mode to disconnect on a timeout.
disconnect timeout *<milliseconds>*	Sets the Disconnect Mode timeout value in milliseconds. *<milliseconds>* = Disconnect Mode timeout value, in milliseconds.
echo start character	Enables forwarding (tunneling) of the start character.
echo stop character	Enables forwarding (tunneling) of the stop character.
exit	Exits the Tunnel menu and returns to the Enable menu.
kill accept connection	Kills the active Accept Mode connection.
kill connect connection	Kills the active Connect Mode connection.
line *<line>*	Displays the Line *<line>* menu.

Tunnel Menu Command	Description
modem connect string <*string*>	Adds to the connect string in modem emulation. <*string*> = connect string.
modem echo commands	Sends modem commands.
modem echo pluses	Echoes the +++ characters when entering modem command mode.
modem error unknown commands	Returns an error upon unknown AT commands.
modem numeric response codes	Uses numeric response codes.
modem text response codes	Uses text response codes.
modem verbose	Uses verbose status codes.
no accept	Disables Accept Mode.
no accept aes decryption key	Removes the AES decryption key.
no accept aes encryption key	Removes the AES encryption key.
no accept block network	Forwards (tunnel) network data.
no accept block serial	Forwards (tunnel) serial data.
no accept cp set group	Removes the CP set group.
no accept email connect	Removes the email profile set to send upon makiing connection.
no accept email disconnect	Removes the email profile set to send upon breaking a connection.
no accept flush serial data	Do not flush serial data buffer on connection.
no accept keep alive	Disables TCP keepalives.
no accept password	Removes the password protection from a tunnel.
no accept port	Uses a random port number as the local port.
no accept prompt for password	Removes the prompt requesting the password in Accept Mode upon a connection.
no clear accept counters	Restores the accept counters to the aggregate values.

Tunnel Menu Command	Description
no clear aggregate counters	Restores aggregate counters to the aggregate values.
no clear all counters	Restores all tunnel counters to the aggregate values.
no clear connect counters	Restores connect counters to the aggregate values.
no connect	Disables Connect Mode.
no connect aes decryption key	Removes the AES decryption key.
no connect aes encryption key	Removes the AES encryption key.
no connect block network	Forwards (tunnel) network data.
no connect block serial	Forwards (tunnel) serial data.
no connect cp set group	Removes the CP set group.
no connect email connect	Removes the email profile to send upon a connection.
no connect email disconnect	Removes the email profile to send upon breaking a connection.
no connect flush serial data	Does not flush serial data buffer on connection.
no connect keep alive	Disables TCP keepalives.
no connect port	Uses a random port number as the local port.
no connect remote address	Removes a remote address to connect to.
no connect remote port	Removes remote port to connect to.
no connect ssh username	Does not specify SSH user.
no disconnect	Disables Disconnect Mode.
no disconnect flush serial data	Does not flush serial data buffer on disconnection.
no echo start character	Disables forwarding (tunneling) of start-character.
no echo stop character	Disables forwarding (tunneling) of stop-character.
no modem connect string	Removes optional CONNECT string information.
no modem echo commands	Does not send modem commands.

Tunnel Menu Command	Description
no modem echo pluses	Does not echo the +++ characters when entering modem command mode.
no modem error unknown commands	Returns OK on unknown AT commands.
no modem verbose	Uses decimal status codes.
no packing	Disables packing mode.
no packing send character	Removes the send character.
no packing trailing character	Removes the trailing character.
no serial buffer size	Sets buffers used in tunneling of data to the default size.
no serial wait for read timeout	Disables waiting for read timeout before returning serial data.
no start character	Removes the start character.
no stop character	Removes the stop character.
packing send character	Enables packing mode to pack data and transmit on upon the send character.
packing send character *<string>*	Sets the send character. *<string>* = send character. (string format: character, hexadecimal \0x##, decimal \###)
packing threshold *<bytes>*	Sets the threshold (byte count).
packing timeout	Enables packing mode to pack data and transmit using a timeout.
packing timeout *<milliseconds>*	Sets the timeout value in milliseconds. *<milliseconds>* = timeout value, in milliseconds.
packing trailing character *<string>*	Sets the trailing character. *<string>* = trailing character. (string format: character, hexadecimal \0x##, decimal \###)
serial buffer size *<bytes>*	Sets the size of the buffers to use in tunneling of data. *<bytes>* = size of buffers, in bytes.
serial read timeout *<milliseconds>*	Sets the time to wait for serial data. *<milliseconds>* = wait time for serial data, in milliseconds.

Tunnel Menu Command	Description
serial wait for read timeout	Makes tunneling wait for read timeout before returning serial data.
show	Displays tunneling configuration.
show history	Displays previously entered commands.
show statistics	Shows connection statistics.
start character *<string>*	Sets the start character. (string format: character, hexadecimal \0x##, decimal \###)
stop character <string>	Sets the stop- character. (string format: character, hexadecimal \0x##, decimal \###)
tunnel *<line>*	Displays the Tunnel *<line>* menu. *<line>* = number of the line to be configured.
write	Stores and applies current configuration into permanent memory.

4: Configuration Using XML

The MatchPort AR provides an Extensible Markup Language (XML) interface that can be used to configure MatchPort AR devices. Every configuration setting that can be issued from the MatchPort AR Web Manager or command mode can also be specified using XML.

Using the XML interface, you can Import/Export MatchPort AR configuration settings as XML configuration records (XCRs) using the CLI, filesystem, Web browser, or FTP. This simplifies the task of configuring multiple MatchPort AR devices. The XCR being imported or exported can contain many configuration settings or just a few. For example, it might change all of the configurable parameters for a MatchPort AR, or it may only change the baud rate for a single serial line. In this way, using the XML interface makes it straightforward to change the configuration for MatchPort AR devices.

XML Configuration Record Schema

An XML schema is a description of a type of XML document, expressed in terms of constraints on the structure and content of documents of that type, above and beyond the basic syntax constraints imposed by XML itself. An XML schema provides a view of the document type at a high level of abstraction.

XML Configuration Records (XCRs) are exported using the following DTD:

```
<!DOCTYPE configrecord [
<!ELEMENT configrecord (configgroup+)>
<!ELEMENT configgroup (configitem+)>
<!ELEMENT configitem (value+)>
<!ELEMENT value (#PCDATA)>
<!ATTLIST configrecord version CDATA #IMPLIED>
<!ATTLIST configgroup name CDATA #IMPLIED>
<!ATTLIST configgroup instance CDATA #IMPLIED>
<!ATTLIST configitem name CDATA #IMPLIED>
<!ATTLIST value name CDATA #IMPLIED>
]>
```

The MatchPort AR's schema is structured as follows.

The XML document element is known as a *<configrecord>*. This is the root element and can take a "version" attribute.

A *<configrecord>* must have one or more *<configgroup>* elements. The configuration group can take "name" and "instance" attributes.

Note: The items in the *<config group>* are the groups listed in the Web Manager groups. See the User Guide for more information.

Each configuration group must have one or more *<configitem>* elements. The configuration item is a specific group of configurable parameters relevant to the parent group. It accepts the "name" attribute.

A *<configitem>* must have at least one *<value>*. This element specifies the actual value of the configuration parameter. It accepts the "name" attribute.

Note: In general, an empty <value> clears the value to its default setting. Exceptions are passwords and SSH/SSL certificates.

A *<value>* element contains the configuration value that gets parsed by the MatchPort AR and may take a "name" attribute.

Attributes

◆ Use the "name" attribute to identify a group, item, or value. It is always a quoted string.

◆ Use the "instance" attribute to identify the specific option (such as the serial port number). It is always a quoted string.

Quick Syntax Tour for XCRs

Figure 4-1 shows a simple XML example.

Figure 4-1. Simple XML Group Example

```
<?xml version="1.0" standalone="yes"?>
<configrecord>
   <configgroup name = "serial command mode" instance = "1">
       <configitem name = "mode">
               <value>disable</value>
       </configitem>
   </configgroup>
</configrecord>
```

The first line:

```
<?xml version="1.0" standalone="yes"?>
```

is the "XML declaration." It is required and indicates the XML version in use (normally version 1.0).

The remainder of the document consists of nested "elements," some of which have "attributes" and "content."

◆ An element typically consists of two tags, a "start tag" and an "end tag," possibly surrounding text and other elements.
   – The start tag consists of a name surrounded by angle brackets, like *<configrecord>*.
   – The end tag consists of the same name surrounded by angle brackets, but with a forward slash preceding the name, like *</configrecord>*.

◆ The element's content is everything that appears between the start tag and end tag, including text and other (child) elements.

In addition to content, an element can contain attributes — name-value pairs included in the start tag after the element name. Attribute values must always be quoted, using single or double quotes. Each attribute name should appear only once in an element.

The Evolution OS™ uses these attributes to differentiate and group configuration settings.

Records, Groups, Items, and Values

A group is a logical grouping of config parameters and must contain one or more item elements. It takes the name and may take an instance.

◆ A name identifies the group, item, or value. It is always quoted (as are all XML attributes). For example, a group that contains serial port parameters has the name "line".

◆ An instance identifies which of several instances is being addressed. It is always quoted. For example, the serial port name might have the instance "1" to indicate serial port 1 or "2" to specify serial port 2.

An item is a specific grouping of configuration parameters relevant to its parent group. An item takes the name attribute and must contain one or more value elements. For example, the line group might have parameters such as baud rate, data bits, and parity.

A value may specify the value of a configuration parameter. It may take the name attribute. In our example, a value of 9600 might be specified for baud rate, 7 may be specified for data bits, and even may be specified for parity.

The following figures show color-coded examples of XML pages that use records, groups, items, and values.

Figure 4-2. XML Group Example

```
<?xml version="1.0" standalone="yes"?>
<configrecord>
   <configgroup name = "serial command mode" instance = "1">
      <configitem name = "mode">
              <value>disable</value>
      </configitem>
   </configgroup>
</configrecord>
```

Figure 4-3. XML Example with Multiple Named Values

```
<?xml version="1.0" standalone="yes"?>
<configgroup name = "ssh server">
      <configitem name = "host rsa keys">
            <value name = "public key"></value>
            <value name = "private key"></value>
      </configitem>
   </configgroup>
```

Figure 4-4. XML Example with Multiple Items

```
<?xml version="1.0" standalone="yes"?>
<configgroup name = "email" instance = "1">
        <configitem name = "to">
                <value>john.doe@somewhere.com</value>
        </configitem>
        <configitem name = "from">
                <value>evolution@xportar.com</value>
        </configitem>
    </configgroup>
```

Figure 4-5. XML Example with Multiple Groups

```
<?xml version="1.0" standalone="yes"?>
<configgroup name = "ftp server">
        <configitem name = "state">
                <value>enable</value>
        </configitem>
        <configitem name = "admin username">
                <value>admin</value>
        </configitem>
        <configitem name = "admin password">
                <value><!-- configured and ignored --></value>
        </configitem>
 </configgroup>
 <configgroup name = "tftp server">
        <configitem name = "state">
                <value>enable</value>
        </configitem>
        <configitem name = "allow file creation">
                <value>disable</value>
        </configitem>
</configgroup>
```

Importing and Exporting an XML Configuration File

An XML configuration file can be imported or exported using the following methods:

◆ Filesystem — see the *Filesystem Page* in the User Guide.

◆ CLI — an XML configuration file can be imported or exported during a Telnet, SSH, or serial line session. This can be done on any level, including the root, by pasting (or "capturing") the XML file into a CLI session. Special tags allow for providing Root and Enable level passwords (see *Including Passwords in the XML File* on page *51*).

◆ Web browser — using the Web Manager interface. See the *XML Status Record: Export System Status Page* in the User Guide.

◆ FTP — to export a file, execute a "get" on the file xport_ar.xml. To import a file, execute a "put" on the file xport_ar.xml. When you execute a get or put with this XML file, the file is intercepted by the MatchPort AR and acted upon, without being placed on the filesystem. See *FTP Page* in the User Guide.

Note: The Trivial File Transfer Protocol (TFTP) is not supported for importing or exporting XML configuration files because it does not provide any security features.

Best Practices

Testing the XML Configuration File

The group name *<processmethod>* and item name *<method>* allow the XML configuration file to be tested for accuracy before processing the file. During testing, the file is checked for configuration errors, such as an incorrect baud rate entry for a serial port. When you use *<processmethod>* and *<method>*, you can indicate how the MatchPort AR behaves if it finds configuration errors during testing:

◆ If you select the "pair" value, all valid commands are processed and any configuration errors in the XML file are ignored.

◆ If you select the "group" value, an error found during testing stops the processing and no commands are executed. This is the default.

Note: <processmethod> only deals with configuration errors. Any syntax errors in the XML configuration file that prevent the file from being parsed, such as a missing angle bracket or delimiter, cause the MatchPort AR to reject the entire configuration file. For security reasons, passwords, private keys, and certificates are not imported.

Importing and Exporting Partial Configurations

You can import or export an entire XCR, or just a portion of it, by specifying the group and/or group instances. Import/Export operations are performed from the local filesystem and require a file on the local filesystem.

The following syntaxes can be used to import configurations:

```
xcr import <file>

xcr import <file> <groups and/or group:instances>
```

These lines import all groups specified in the XML config record named in <*file*>. Any filename is valid, and the file name and extension are not important. However, the file name xport_ar.xcr is not acceptable, since performing a get on that name produces the current configuration and does not get anything from the filesystem.

In the second example:

◆ Instance follows group with a colon (see the third example on the next page).

◆ Multiple groups are separated with a comma.

◆ Any white space requires the list of groups to be quoted.

The following syntaxes can be used to export configurations:

```
xcr export <file>

xcr export <file> <groups and/or group:instances>
```

The same guidelines regarding importing configurations also apply to exporting configurations, except only groups are written to the file. If instances are specified after the groups, only those group instances are written. If no instance is specified, all instances of that group are written.

The following example exports only the tunnel 1 settings to the file "tunnel_1.xcr" on the MatchPort AR filesystem:

```
xcr export tunnel_1.xcr "tunnel:1"
```

The following example exports only tunnel settings for all ports to the file "tunnel_all.xcr" on the MatchPort AR filesystem.:

```
xcr export tunnel_all.xcr "tunnel"
```

The following example imports only the settings for line 1 from a complete XCR named "factory_config.xcr" on the MatchPort AR filesystem:

```
xcr import factory_config.xcr "line:1"
```

The following example imports only line settings for all ports from a configuration record on the MatchPort AR filesystem named "foobar.xcr":

```
xcr import foobar.xcr "line"
```

Note: If you edit an XCR with Microsoft Word, you will not be able to import the file, even if you save the document as Plain Text (.txt) or XML Document (.xml) file. Use Wordpad or Notepad instead.

Including Passwords in the XML File

If you log in to a MatchPort AR to which you will be sending an XML configuration file, you do not need to include passwords in the file, since you are already logged in to the device. However, if you will be sending an XML configuration file to one or more MatchPort AR devices that are password protected, you can include the appropriate passwords in the XML configuration file and forego the usual login steps.

The *<level passwords>* group name is used with the <passwords> item name and "enable" value to specify the passwords to use if an enable function is password protected. The password value is clear text; to protect the password and all other data on that channel, establish an SSH connection to the MatchPort AR.

Special XCR Groups

The MatchPort AR has special XCR groups that are used to delete settings, control how the XML is processed, or control the device. They are not used for configuration purposes. For example, the Reboot group, which causes the MatchPort AR to reboot, is not a configurable setting that can be exported. However, it may be added to an XML configuration record manually to ensure the MatchPort AR reboots after applying new configuration settings.

XML Groups

The following table lists the MatchPort AR XML Import/Export groups in alphabetical order. This table also indicates whether the group can be imported and/or exported.

Table 4-1. MatchPort AR Import/Export Groups

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
arp	*arp timeout*			*Import/Export*	
	arp entry	*ip address*		*Import*	*Add a dynamic entry to the ARP table.*
		mac address		*Import*	
	arp delete			*Import*	*Remove an entry from the ARP table. Specify the entry by its IP address.*
cli	*quit connect line*			*Import/Export*	
command mode password	*system*			*Import/Export*	*Set the password for the system (root) level of the CLI.*
	enable			*Import/Export*	*Sets the password for the enable level of the CLI.*
cp	*cp*	*type*	*input*	*Import/Export*	
			output	*Import/Export*	
			nonpio	*Import/Export*	
		assert low	*enable*	*Import/Export*	
			disable	*Import/Export*	
cp group	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	set			*Import*	*Set group named by "instance" attribute to the value.*
	cp delete			*Import*	*Delete a CP from a group. Specify the cp to delete in the value element.*
	group delete			*Import*	*Delete the CP group from the configuration. Specify the group to delete in the value element.*
device	*short name*			*Import/Export*	
	long name			*Import/Export*	
	serial number			*Export*	
email	*to*			*Import/Export*	*Multiple to addresses may be separated with semicolons or input as separate "to" items.*
	from			*Import/Export*	
	reply to			*Import/Export*	

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
	cc			*Import/Export*	*Multiple cc address may be separated with semicolons or input as separate "cc" items.*
	subject			*Import/Export*	
	message file			*Import/Export*	
	local port			*Import/Export*	*Port number or "Random"*
	server port			*Import/Export*	
	priority		*Very Low*	*Import/Export*	
			Low	*Import/Export*	
			Normal	*Import/Export*	
			High	*Import/Export*	
			Urgent	*Import/Export*	
	overriding domain			*Import/Export*	
	cp	*group*		*Import/Export*	
		trigger value		*Import/Export*	
ethernet	*auto negotiate*		*enable*	*Import/Export*	*Auto-negotiation determines the link speed*
			disable	*Import/Export*	*Link speed is contained in the speed item.*
	speed		*10*	*Import/Export*	
			100	*Import/Export*	
	duplex		*auto*	*Import/Export*	
			half	*Import/Export*	
			full	*Import/Export*	
exit cli	*state*		*enable*	*Import*	*Enable = close CLI session when XCR processing is complete*
			disable	*Import*	
firmware	*version*			*Export*	*Displays current Firmware version*
ftp server	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	Admin username			*Import/Export*	
	Admin password			*Import/Export*	
http authentication uri	*realm*			*Import/Export*	*Attribute of "instance" specifies the uri.*
	type			*Import/Export*	
	user	*username*		*Import/Export*	
		password		*Import/Export*	
	user delete			*Import*	*Delete the HTTP Authentication URI user. The value element is used to specify the user for deletion.*

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
	uri delete			*Import*	*Delete the HTTP Authentication URI. The value of the element is used to specify the URI for deletion.*
http server	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	port			*Import/Export*	
	secure port			*Import/Export*	
	max timeout			*Import/Export*	
	max bytes			*Import/Export*	
	logging state			*Import/Export*	
	max log entries			*Import/Export*	
	log format			*Import/Export*	
icmp	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
interface	*bootp state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	dhcp state		*enable*	*Import/Export*	
			disable	*Import/Export*	
	dhcp client id			*Import/Export*	*Set the identity of the client device.*
	mac address			*Export*	*The MAC address of the Ethernet card.*
	domain			*Import/Export*	
	hostname			*Import/Export*	
	ip address			*Import/Export*	
	network mask			*Import/Export*	
	default gateway			*Import/Export*	
	primary dns			*Import/Export*	
	secondary dns			*Import/Export*	
ip filter	*filter entry*	*ip address*		*Import/Export*	*Add an IP filler entry*
		net mask		*Import/Export*	
	filter delete	*ip address*		*Import*	*Delete an IP filter entry.*
		net mask		*Import*	
level passwords	*passwords*	*system*		*Import*	*This group specifies the passwords to use when importing an XCR using the CLI capture feature. The system value specifies the root password used if the root level is password protected. Passwords are not required if the CLI is already logged in to the system level.*

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
		enable		*Import*	*The enable value specifies the enable level password to use if the enable level is password-protected. The password is not needed if the CLI is already logged in to the enable menu.*
line	*name*			*Import/Export*	*Line name*
	state		*enable*	*Import/Export*	
			disable	*Import/Export*	
	baud rate			*Import/Export*	*Any value from 300 to 230400.*
	data bits		*7*	*Import/Export*	
			8	*Import/Export*	
	parity		*none*	*Import/Export*	
			even	*Import/Export*	
			odd	*Import/Export*	
	stop bits		*1*	*Import/Export*	
			2	*Import/Export*	
	flow control		*hardware*	*Import/Export*	
			software	*Import/Export*	
			none	*Import/Export*	
	protocol		*tunnel*	*Import/Export*	
			ppp	*Import/Export*	
			none	*Import/Export*	
	xon char			*Import/Export*	*Set the x-on character. Enter as a hexadecimal byte.*
	xoff char			*Import/Export*	*Set the x-off character. Enter as a hexadecimal byte.*
ppp	*local ip*			*Import/Export*	
	peer ip			*Import/Export*	
	network mask			*Import/Export*	
	authentication mode		*pap*	*Import/Export*	
			chap	*Import/Export*	
			none	*Import/Export*	
	username			*Import/Export*	
	password			*Import/Export*	
query port	*state*		*disable*	*Import/Export*	
			enable	*Import/Export*	
reboot	*state*		*disable*	*Import*	

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
			enable	*Import*	*Force the MatchPort AR to reboot after processing.*
restore factory configuration	*state*		*disable*	*Import*	
			enable	*Import*	*Before processing, reset the MatchPort AR to factory defaults.*
rss	*feed*		*disable*	*Import/Export*	
			enable	*Import/Export*	
	persist		*disable*	*Import/Export*	
			enable	*Import/Export*	
	max entries			*Import/Export*	
serial command mode	*mode*		*disable*	*Import/Export*	
			enable		
			always	*Import/Export*	
			cp	*Import/Export*	
			serial string	*Import/Export*	
			cp and serial string	*Import/Export*	
	echo serial string		*enable*	*Import/Export*	
			disable	*Import/Export*	
	serial string			*Import/Export*	
	signon message			*Import/Export*	
	wait time			*Import/Export*	
	cp	*group*		*Import/Export*	
		trigger value		*Import/Export*	
snmp	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	system name			*Import/Export*	
	system contact			*Import/Export*	
	system location			*Import/Export*	
	traps	*state*	*enable*	*Import/Export*	
			disable	*Import/Export*	
		primary destination		*Import/Export*	
		secondary destination		*Import/Export*	
ssh client	*known host*	*server*		*Import/Export*	
		public rsa key		*Import/Export*	

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
		public dsa key		*Import/Export*	
	client users	*username*		*Import/Export*	
		password		*Import/Export*	
		remote command		*Import/Export*	
		public rsa key		*Import/Export*	
		private rsa key		*Import/Export*	
		public rsa key		*Import/Export*	
		private dsa key		*Import/Export*	
	known host delete			*Import*	*Specify the server host for deletion.*
	client users delete			*Import*	*Specify the username for deletion.*
	client rsa key delete			*Import*	*Specify the username.*
	client dsa key delete			*Import*	*Specify the username.*
ssh command mode	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	port			*Import/Export*	
ssh server	*host rsa keys*	*public key*		*Import/Export*	
		private key		*Import/Export*	
	host dsa keys	*public key*		*Import/Export*	
		private key		*Import/Export*	
	authorized users	*username*		*Import/Export*	
		password		*Import/Export*	
		public rsa key		*Import/Export*	
		public dsa key		*Import/Export*	
	authorized users delete			*Import*	*Delete an SSH authorized user.*
	host keys delete			*Import*	*Delete an SSH host key.*
ssl	*certificate*	*certificate*		*Import/Export*	*Enter the text of the certificate.*
		private key		*Import/Export*	*Enter the text of the private key.*
	delete			*Import*	*Deletes the current SSL certificate.*
syslog	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	host				
	local port				
	remote port				
	severity log level				

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
tcp	*resets*		*enable*	*Import/Export*	
			disable	*Import/xport*	
telnet command mode	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	port			*Import/Export*	
tftp server	*state*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	allow file creation		*enable*	*Import/Export*	
			disable	*Import/Export*	
tunnel accept	*accept mode*		*enable*	*Import/Export*	
			disable	*Import/Export*	
			any character	*Import/Export*	
			start character	*Import/Export*	
			modem control asserted	*Import/Export*	
			modem	*Import/Export*	
	local port			*Import/Export*	
	protocol		*tcp*	*Import/Export*	
			tcp aes	*Import/Export*	
			ssh	*Import/Export*	
			telnet	*Import/Export*	
	flush serial		*enable*	*Import/Export*	
			disable	*Import/Export*	
	block serial		*enable*	*Import/Export*	
			disable	*Import/Export*	
	block network		*enable*	*Import/Export*	
			disable	*Import/Export*	
	tcp keep alive			*Import/Export*	
	password	*prompt*		*Import/Export*	
		password		*Import/Export*	
	cp set group	*cp*		*Import/Export*	
		connection value		*Import/Export*	
		disconnection value		*Import/Export*	
	email connect			*Import/Export*	
	email disconnect			*Import/Export*	
tunnel aes accept	*encrypt key*			*Import/Export*	
	decrypt key			*Import/Export*	
tunnel aes connect	*encrypt key*			*Import/Export*	
	decrypt key			*Import/Export*	
tunnel connect	*connect mode*		*enable*	*Import/Export*	

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
			disable	*Import/Export*	
			any character	*Import/Export*	
			start character	*Import/Export*	
			modem control asserted	*Import/Export*	
			modem	*Import/Export*	
	local port			*Import/Export*	
	remote address			*Import/Export*	
	remote port			*Import/Export*	
	protocol		*tcp*	*Import/Export*	
			udp	*Import/Export*	
			ssh	*Import/Export*	
			tcp aes	*Import/Export*	
			udp aes	*Import/Export*	
	reconnect time			*Import/Export*	
	flush serial		*enable*	*Import/Export*	
			disable	*Import/Export*	
	ssh username			*Import/Export*	
	block serial		*enable*	*Import/Export*	
			disable	*Import/Export*	
	block network		*enable*	*Import/Export*	
			disable	*Import/Export*	
	tcp keep alive			*Import/Export*	
	cp set group	*cp*		*Import/Export*	
		connection value		*Import/Export*	
		disconnection value		*Import/Export*	
	email connect			*Import/Export*	
	email disconnect			*Import/Export*	
tunnel disconnect	*disconnect mode*		*disable*	*Import/Export*	
			timeout		
			stop character	*Import/Export*	
			modem control not asserted	*Import/Export*	
	timeout			*Import/Export*	
	flush serial		*enable*	*Import/Export*	
			disable	*Import/Export*	
tunnel modem	*echo pluses*		*enable*	*Import/Export*	
			disable	*Import/Export*	
	echo		*enable*	*Import/Export*	

Group Name	Item Name	Value Name	Value	Import/Export	Additional Information
	commands		*disable*	*Import/Export*	
	verbose response		*enable*	*Import/Export*	
			disable	*Import/Export*	
	response type		*text*	*Import/Export*	
			numeric	*Import/Export*	
	error unknown commands		*enable*	*Import/Export*	
			disable	*Import/Export*	
	connect string			*Import/Export*	
tunnel packing	*packing mode*		*disable*	*Import/Export*	
			timeout	*Import/Export*	
			send character	*Import/Export*	
	timeout			*Import/Export*	
	threshold			*Import/Export*	
	send character			*Import/Export*	
	trailing character			*Import/Export*	
tunnel serial	*buffer size*			*Import/Export*	
	read timeout			*Import/Export*	
	wait read timeout		*enable*	*Import/Export*	
			disable	*Import/Export*	
tunnel start	*start character*			*Import/Export*	
	echo		*enable*	*Import/Export*	
			disable	*Import/Export*	
tunnel stop				*Import/Export*	
	stop character			*Import/Export*	
	echo		*enable*	*Import/Export*	
			disable	*Import/Export*	

XSR Groups and Items

The following table lists the supported XML Status Record (XSR) groups and items. These groups and items show the status of the device in XML form and can only be exported.

The XSR DTD differs slightly from the XCR DTD in that the XSR allows groups within groups. The only current use of this is the buffer pool group, which has the following groups as sub groups:

◆ protocol stack

◆ ethernet drive

◆ line

The CLI command usage is identical to the XCR export, dump, and list.

Table 4-2. MatchPort AR XSR Groups and Items

Group Name	Item Name	Value Name	Valid Values
arp	*arp entry*	*ip address*	
		mac address	
		age	
		type	*dynamic*
			static
buffer pool			
cps	*cp 1*	*pin*	
		configured as	*input*
			output
		state	*0*
			1
		logic	*inverted*
			not inverted
		active group	
		group	
	…		
	cp 11	*pin*	
		configured as	*input*
			output
		state	*0*
			1
		logic	*inverted*
			not inverted
		active group	
		group	
cp groups	*<name>*	*state*	*enabled*
			disabled
		cps	
cp group	*state*		*enabled*
			disabled
			enabled and locked
			disabled and locked
	value		
	cp x	*state*	
		output	

Group Name	Item Name	Value Name	Valid Values
		logic	*inverted*
			not inverted
		position	
	…		
	cp y	*state*	
		output	
		logic	*inverted*
			not inverted
		position	
device	*product info*	*product type*	
		serial number	
		firmware version	
		uptime	
		permanent config	*saved*
			unsaved
email	*success*	*sent*	
		sent with retries	
	failed		
	queued		
email log	*entry*	*time*	
		log	
ethernet driver	*buffer headers*	*total*	
		free	
		used	
		max used	
	cluster pool	*cluster size*	
		total	
		free	
		used	
filesystem	*filesystem*	*size*	
		available clean	
		available dirty	
		used total	
		used data	
		busy	*blocking*
			not blocking
	entries	*file count*	
		directory count	
		system count	
		open count	
		lock count	
		share count	
	banks	*current*	*a*
			b
		bank a begin	
		bank a end	
		bank a erase cycles	
		bank b begin	
		bank b end	
		bank b erase cycles	
ftp	*status*		*enable*
			disable
	admin username		
	connections	*rejected*	
		accepted	
	last client	*ip address*	
		port	
hardware	*cpu*	*type*	

Group Name	Item Name	Value Name	Valid Values
		speed	
	memory	*flash size*	
		ram size	
http	*state*		*enable*
			disable
	ports	*http port*	
		https port	
	max timeout		
	max bytes		
	logging	*state*	*enable*
			disable
		max entries	
		format	
		entries	
		bytes	
http log	*totals*	*entries*	
		bytes	
	entry		
icmp	*state*		*enable*
			disable
	in	*messages*	
		messages detected	
		errors	
		destination unreachables	
		time exceeded messages	
		parameter problems	
		source quench requests	
		redirects	
		ping requests	
		ping replies	
		timestamp requests	
		timestamp replies	
		address mask requests	
		address mask replies	
	out	*messages*	
		messages detected	
		errors	
		destination unreachables	
		time exceeded messages	
		parameter problems	
		source quench requests	
		redirects	
		ping requests	
		ping replies	
		timestamp requests	
		timestamp replies	
		address mask requests	
		address mask replies	
interface	*status*		
	ethernet	*ip address*	
		mac address	
	phy	*speed*	*10*
			100
		duplex	*full*
			half
	arp	*encapsulation*	*ARPA*
		type	*ARPA*

Group Name	Item Name	Value Name	Valid Values
		timeout	
	mtu		
	last change		
	transmits	*octets*	
		unicast	
		non unicast	
		discards	
		errors	
		broadcast packets	
		multicast packets	
		filtered packets	
		deferred	
		multiple retries	
		one retry	
		underflows	
		late collisions	
		retry errors	
		carrier lost errors	
	receives	*octets*	
		unicast	
		non unicast	
		discards	
		errors	
		broadcast packets	
		multicast packets	
		filtered packets	
		unknown protocol	
		framing errors	
		overflows	
		crc errors	
		missed frame errors	
ip	*state*		*enabled*
			disabled
	default ttl		
	forwarded		
	route discards		
	in	*receives*	
		header errors	
		address errors	
		unknown protocols	
		discarded	
		delivered	
	out	*requests*	
		discards	
		discards no routes	
	reassembly	*timeout*	
		needed	
		success	
		failures	
	fragments	*needed*	
		failure	
		success	
ip sockets	*ip socket*	*protocol*	
		rx queue	
		tx queue	
		local address	
		remote address	
		local port	

Group Name	Item Name	Value Name	Valid Values
		remote port	
		state	
line 1	*buffer headers*	*total*	
		free	
		used	
		max used	
	cluster pool	*cluster size*	
		total	
		free	
		used	
		max used	
line 2	*buffer headers*	*total*	
		free	
		used	
		max used	
	cluster pool	*cluster size*	
		total	
		free	
		used	
		max used	
line 3	*buffer headers*	*total*	
		free	
		used	
		max used	
	cluster pool	*cluster size*	
		total	
		free	
		used	
		max used	
line statistics	*receiver*	*bytes*	
		breaks	
		parity errors	
		framing errors	
		overrun errors	
		no receive buffer errors	
		queued bytes	
		flow control	
	transmitter	*bytes*	
		breaks	
		queued bytes	
		flow control	
	line levels	*cts*	
		rts	
		dsr	
		dtr	
memory	*main heap*	*condition*	*clean*
			corrupt
		total memory	
		available memory	
		fragments	
		allocated blocks	
processes	*process*	*pid*	
		cpu %	
		stacks	
		thread name	
protocol stack	*buffer headers*	*total*	
		free	

Group Name	Item Name	Value Name	Valid Values
		used	
		max used	
	cluster pool	*cluster size*	
		total	
		free	
		used	
		max used	
query port	*status*		*enabled*
			disabled
	last connection	*ip address*	
		port	
	in	*discoveries*	
		unknown queries	
		erroneous packets	
	out	*discovery replies*	
		errors	
rss	*state*		*enabled*
			disabled
	persist		*enabled*
			disabled
	max entries		
	url		
	data	*entries*	
		bytes	
sessions	*line*	*interface*	*rs232*
			rs485 half-duplex
			rs485 full-duplex
		baud	
		parity	*none*
			even
			odd
		data bits	
		stop bits	
		flow control	*none*
			hardware
			software
	telnet	*local port*	
		remote ip address	
		remote port	
		duration	
	ssh	*local port*	
		remote ip address	
		remote port	
		duration	
ssh	*state*		*enable*
			disable
	local port		
	totals	*uptime*	
		bytes in	
		bytes out	
syslog	*state*		*enable*
			disable
	host		
	severity to log		
	messages send		
	messages failed		

Group Name	Item Name	Value Name	Valid Values
tcp	*send reset*		*enabled*
			disabled
	retransmission	*algorithm*	
		timeout minimum	
		timeout maximum	
	connections	*maximum*	
		open active	
		open passive	
		failed	
		resets	
		established	
	segments	*in*	
		out	
		retransmitted	
	resets	*in*	
		out	
	errors	*in*	
telnet	*state*		
	local port		
	totals	*uptime*	
		bytes in	
		bytes out	
	last connection	*local ip address*	
		local port	
		remote ip address	
		remote port	
tftp	*state*		*enabled*
			disabled
	creation		*enabled*
			disabled
	downloaded		
	uploaded		
	not found		
	errors	*read*	
		write	
		unknown	
	last client	*ip address*	
		port	
tunnel	*aggregate*	*completed connects*	
		completed accepts	
		disconnects	
		dropped connects	
		dropped accepts	
		octets from serial	
		octets from network	
		connect connection time	
		accept connection time	
		connect dns address changes	
		accept dns address invalids	
	current connect connections	*local ip address*	
		local port	
		remote ip address	
		remote port	
		uptime	

Group Name	Item Name	Value Name	Valid Values
		octets from serial	
		octets from network	
		connect dns address changes	
		accept dns address invalids	
	current accept connections	*local ip address*	
		local port	
		remote ip address	
		remote port	
		uptime	
		octets from serial	
		octets from network	
udp	*in unknown ports*		
	in datagrams		
	in errors		
	out datagrams		
xsr	*out*	*bytes*	
		lines	
		elements	
	errors		