



## DeviceMaster SocketServer History (1800111)

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### 9.x Revisions

Version: 9.11 (Not Released)

What Changed: Fix typo in new HTTP config API: connect-to-port for TCP connections was mislabelled as connect-to-IP.

Date: 02/27/2013

Version: 9.10 (Not Released)

What Changed: Fix bug in HTTP config API that didn't allow writing empty strings to configuration parameters (like port names).

Date: 02/26/2013

Version: 9.09 (Not Released)

Fixed problem that caused 1-port units to lock up when serial port settings were written using the new HTTP "WRITE" command protocol.

Date: 02/26/2013

Version: 9.08 (Not Released)

What Changed: Change things like MAC admin command handling so that changes to secureconfig setting don't take effect until after a reboot. [For a few things, changes used to take effect immediately.]

Date: 02/25/2013

Version: 9.07 (Not Released)

What Changed: Change admin ID response so that the "secure config" feature bit reflects the way the unit is currently operating rather than the way it's configured in flash. This change makes it easier for PortVision DX to handle the case where the secure config mode is being changed by the user.

Date: 02/25/2013

**Note:** Not all of the versions listed have been released or are planned for release.

**Version: 9.06 (Not Released)**

What Changed: Add HTML escaping for user-entered strings (host name, port name, TSAP name). Otherwise strings containing special characters (<>"&) don't display correctly.

Change name of .css file to avoid problems with IE9 caching the old file from pre-9.0 version of firmware.

Date: 12/05/2012

**Version: 9.05 (Not Released)**

What Changed: We were returning invalid MSR value the first time a port was opened after startup. Added code to make sure MSR value is updated before we report it the first time in the REMOTE\_STATUS response when a port is being opened.

Date: 10/02/2012

**Version: 9.04 (Not Released)**

What Changed: Enable TCP\_KEEPALIVE on ssh and telnet connections so that connection will time out if firewall drops the link or cable gets unplugged. Issue reported when using the port monitor command and his firewall timed out the connection.

Date: 09/21/2012

**Version: 9.03 (Not Released)**

What Changed: Fix problem with SSL NSLink connections that caused SSL packets to get "stuck" in the receive buffer. When multiple SSL packets got combined into a single TCP packet, only the first one got decoded and processed. The remaining ones sat in rx buffer until a subsequent TCP packet arrived.

Date: 09/12/2012

**Revision: 9.02 (Not Released)**

What Changed: Minor Web page tweaks.

Updated help files.

Fixes a bug in SocketServer that required a port to be disabled and then re-enabled before it would accept incoming TCP connections

Date: 7/16/2012

**Revision: 9.01 (Not Released)**

What Changed: Updated help files.

Date: 6/5/2012

**Revision: 9.00 (Not Released)**

**Note:** Not all of the versions listed have been released or are planned for release.

What Changed: Design change for use in PortVision DX removes all PortVision Plus tabs except IP Configuration options for IPv4.

All new web interface

Add IPv6 support.

Added console 'showtables' command

## 8.x Revisions

Revision: 8.04

What Changed: We were returning invalid MSR value the first time a port was opened after startup. This caused an apparent drop in CD value and logged out users who were logged in via RTS port with CLOCAL flag cleared. Added code to make sure MSR value is updated before we report it the first time in the REMOTE\_STATUS response when a port is being opened.

Correctly handle case where admin packet gets split by network stack.

Handle case where multiple SSL packets are received in a single TCP packet.

Date: 10/02/2012

Revision: 8.03

What Changed: Reduce DHCP priority to keep it from interfering with MAC mode traffic.

Reason for Change: Efficiency

Date: 5/31/2012

Revision: 8.02

What Changed: Remove limit on RC4 block cipher that forced connection to be dropped and re-established after transferring 1GB of data.

Date: 4/21/2012

Revision: 8.01

What Changed: Move code that accepts new connections into a separate thread so that SSL handshaking and session setup doesn't cause existing NSLink connections to pause.

Incorporate "reset UART after rx timeout" feature.

Date: 3/19/2012

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 8.00**

What Changed: Common nslink/socketserver binary.  
Changes names magically.  
Added display of nslink driver connections (source system MAC or IP) and port status on main web page.

Reason for Change: Driver assembly 9.02 no longer loads nslink. This version of the binary changes name based on detection of driver communication.

Date: 11/30/2011

**7.x Revisions****Revision: 7.32**

What Changed: Add support for IXANY flow control option.

Reason for Change: IXANY software flow control feature is not supported

Date: 11/30/2011

**Revision: 7.31**

What Changed: Fix handling of READ/WRITE handling of secure monitor enable.

Reason for Change: Packets not formatted properly

Date: 8/30/2011

**Revision: 7.30**

What Changed: Fix code that handles receive bytes so that it when it reaches end of rx buffer it wraps to beginning and continues. Old behavior caused received blocks of data to be "split" when using inter-char timeout feature in UDP protocol.

Reason for Change: Input Timeout allowed splitting of data block

Date: 8/23/2011

**Revision: 7.29**

What Changed: Fix UDP ser->eth code that's supposed to ignore the rx polling period if IC-timeout or EOL-detect is enabled. It was paying attention to a flag that only makes sense for TCP,not UDP, so the rx polling delay happening when it shouldn't.

Reason for Change: EOL and Input Timeout not utilized.

Date: 8/19/2011

**Note:** *Not all of the versions listed have been released or are planned for release.*

**Revision: 7.28**

What Changed: Fixed handling of Ethernet RX overflow during startup that was causing lock-up on networks with a lot of broadcast traffic.

Reason for Change: Fails to boot when attached to network

Date: 6/6/2011

**Revision: 7.27**

What Changed: Add telnet/ssh command to display connected NS-Link hosts and what ports they have open.

Add code to TcpStackInit() to add a multicast route so that we can send multicast packets even if there's no default route (no gateway) configured.

Fix bug in telnet server that was causing a write/read to be done on a socket after it was closed by the socket handler. Caused a problem if a new TCP connection was being opened at the exact same time a telnet session was being closed.

Reason for Change: When the RTS state control is set to "toggle", the socketserver application goes into a wait loop while sending serial data. A new Telnet Command is required to query the number of active connections to port 4606

UDP multicast fails if no gateway is configured.

Date: 5/26/2011

**Revision: 7.26.1**

What Changed: Moved soft-rts-toggle (with pre/post TX hold times) into nserial driver to reduce CPU usage.

Added nshosts command

Reason for Change: Customer report of data failure at low baud rates. new feature.

Date: 4/28/2011

**Revision: 7.26.**

What Changed: Fix bug that caused DeviceMaster RTS unit to slow down when placed on an Ethernet segment with a lot of multicast traffic.

Reason for Change: Customer report of DeviceMaster response times increasing

Date: 3/31/2011

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 7.25**

What Changed: Add work-around for MAC failure at cold temps where good rx packets get marked as having CRC errors. If rx packet is marked as bad by MAC, then verify the CRC in SW -- if the CRC is good, go ahead and accept the packet.

Reason for Change: Add SW CRC verification work-around for HW failure that marks good packets as having CRC errors.

Date: 3/15/2011

**Revision: 7.24**

What Changed: Double stack size for web server task to provide more margin. We were hitting almost 90%

Reason for Change: RX counter in UDP mode not operational  
Uploading encryption key/cert with odd number of bytes sometimes fails.

Date: 3/14/2011

**Revision: 7.23**

What Changed: Nothing

Reason for Change: NSLink app changed -- version bump to stay in sync.

Date: 11/08/2010

**Revision: 7.22**

What Changed: Nothing

Reason for Change: nslink app change required version bump.

Date: 10/20/2010

**Revision: 7.21.1**

What Changed: Added "monitor" command to telnet server that allows the user to see a hex dump of tx/rx data for a specified serial port.

Date: 8/26/2010

**Revision: 7.21**

What Changed: Fixes socket leak that happened when an incoming TCP connection was reset by the client immediately after opening.

Date: 7/29/2010

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 7.20**

What Changed: Fixed MD5 digest calculation that was failing on long URIs (such as those used by PV+ with the goforms/WRITE handler.

Reason for Change: Config data from PortVision Plus was not being properly loaded when using MD5 Authentication

Date: 7/22/2010

**Revision: 7.19**

What Changed: Updated SocketServer help file for RTS Toggle and Pre/Post RTS Hold Time options.

Added Pre/Post RTS Hold Time parameters to PortVision HTTP API.

Spelling fixes and minor improvements.

Reason for Change: Add RTS Toggle and Pre/Post RTS Hold Time options to SocketServer Help

Add RTS Toggle and Pre/Post RTS Hold Time options to PortVision HTTP API

Date: 4/20/2010

**Revision: 7.18**

What Changed: Increased output buffer size to 8192 to allow a full Dump Qin trace through port 4607.

Added the reporting of the firmware version to port 4607 upon connection.

Reason for Change: Add the reporting of the firmware version number to port 4607 upon connection.

Date: 3/18/2010

**Revision: 7.17**

What Changed: Added configurable Pre/Post RTS Hold Time to RTS toggle mode.

Reason for Change: Add configurable timers to raise and drop RTS in Socket mode.

Date: 2/26/2010

**Revision: 7.16**

What Changed: Change MAC-mode write operations so that they're blocking. This avoids dropped packets under heavy network loads with lots of collisions.

Date: 2/18/2010

**Note:** *Not all of the versions listed have been released or are planned for release.*

**Revision: 7.15**

What Changed: Added rx/tx buffer flush to port open.  
Reason for Change: Duplicate data received by application  
Date: 12/16/2009

**Revision: 7.14**

What Changed: Release to keep pace with devmast 7.14 which contains an HDLC fix that doesn't affect socketserver.  
Reason for Change: High incidence of HdlcResendOutpkt idx:" messages in debug (Corrects Excess Packet messages in Advisor.)  
Date: 11/10/2009

**Revision: 7.13**

What Changed: Changed period calculation to use 5 periods instead of 20.  
Reason for Change: Connection timeout is a multiple of the configured value  
Date: 10/28/2009

**Revision: 7.12**

What Changed: Changed some code in rpshsi/hdlc.c, port.c, rpshsi.c  
Reason for Change: When configured in TCP mode, there are constant link timeouts and re-connects when the hub is idle.  
Date: 10/13/2009

**Revision: 7.11**

What Changed: Added SocketServer option to allow user-configuration of RTS state similar to that for DTR.  
Reason for Change: Allow user to configure RTS state in SocketServer  
Date: 9/23/2009

**Revision: 7.10**

What Changed: SocketServer/server.c was missing a case statement for 485\_2-wire.  
Added the missing statement.  
Reason for Change: 2-wire 485 mode does not work correctly on the 2 port DM-RTS  
Date: 8/04/2009

**Note:** *Not all of the versions listed have been released or are planned for release.*



Revision: 7.09

What Changed: Fixed problems with SNMP lockup  
Fixed the restore default problem.  
Added 4-wire terminology to the web page.  
Added new help file that covers the 485 terminology changes.  
Added support for the Numonyx flash.  
Added support for 14400/28800 baudrates on the web page.

Reason for Change: SNMP Request locks up DeviceMaster  
Need to add 28800/14400 bps to the list of selectable speeds in SocketServer configuration  
Add support for Numonyx M28W320FCB70N6E Flash Memory.  
Update SocketServer Help page to capture DM 2 port RS485 additions  
Change RS-485 Full Duplex / Half Duplex nomenclature to 2-wire/4-wire  
Restore factory default switch functionality does not work on the RTS 2 port 1E DB9

Date: 7/09/2009

Revision: 7.08

What Changed: Added model numbers for the new products.  
Added support for rs485FD master and slave, in rpshsi.  
Fixed a 485 rts toggle problem, in rpshsi.  
Fixed some DHCP problems in net/common.

Reason for Change: DHCP client issues  
Add RS485 Master and Slave capability to DM RTS 2 port  
Added support for new DB9 DM 2 port.  
Added 485FD master and slave support for the DM 2 port.  
Fixed an RS485 RTS toggle problem for the AIOPIC DMs.  
Fixed a DHCP problem.

Date: 4/23/2009

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 7.07**

What Changed: In nslink, the retransmit timer and ack timer were made configurable.

Reason for Change: Changes made to devmast (8000422) for DMRTSLNX-68 and DMRTSLNX- 99. This is built at the same time to stay in sync.

Date: 3/05/2009

**Revision: 7.06**

What Changed: Fix bug in secure web server handling of sslRead() return values that was triggered by sending a very long URL.

Date: 10/30/2008

**Revision: 7.05**

What Changed: Merged in Sick LMS frame recognition feature to reduce latency variation issue mentioned in DM500-14.

Reason for Change: DM500-14 Latency variation is unacceptable when PC CPU is loaded down

Date: 10/30/2008

**Revision: 7.04**

What Changed: Fixed A2/A3 parameters returned to http READ command. They were accidentally swapped in previous version.

Date: 10/22/2008

**Revision: 7.03**

What Changed: Fix changes to security config so that enabling security doesn't take effect for MAC admin handling until after reboot. Disabling security will take effect immediately for MAC admin handling.

Date: 10/20/2008

**Revision: 7.02**

What Changed: Add version string to extended data returned by admin ID command in order to avoid bug in PortVision.

Reason for Change: PortVision locks up after polling a DM that has the Devmast v7.01 running. It's because of a bug in PortVision that was only triggered by that version 7.01 of SocketServer and NSLink firmware.

Date: 10/07/2008

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 7.01**

What Changed: Changed the way that extra ID response data is returned so that it's compatible with the UP.

Reason for Change: Changes in ID Response make it incompatible with DM UP ID Response

Date: 10/1/2008

Revision: 7.00

What Changed: Security features and socketServer tx-complete features merged into trunk.

Reason for Change: People want security features.

DMRTSFLASHMICROCODE-144 "Add wait on physical transmit to socket mode"

Date: 10/1/2009

**6.x Revisions****Revision: 6.14**

What Changed: Corrected 10MB hub issue found in the ICS1893 phy. Added code to reset phy/switch functions to properly set the samsung mac duplex mode for the 2p-1e unit based upon auto negotiation returned values.

The acs101 chip doesn't care for us changing the value so I decided to leave it alone for later investigation. The kendin has to run in half duplex so it hard coded to use halfduplex.

The 2p-2e requires full duplex so it is hard coded to use full.

Corrected a data corruption problem

Reason for Change: DMRTSDRVMICROCODE-93: RTS 2P-1E doesn't negotiate the ethernet link

Properties correctly

DMRTSBOOTLDR-49: NIC negotiation

DMRTSDRVMICROCODE-94 Loopback testing produces data corruption errors in MAC mode

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 6.13**

What Changed: Added files ics1893.c/h to handle mgmt of the new phy.  
Added polling loop to ksz code to monitor start switch value. If value goes to zero  
While running the poll, it will toggle it to 1 and restart negotiation.  
New functionality caused by ESD testing results.  
Added checks for redboot around chunks to exclude it from the redboot build.  
Various corrections and rework to support changes, etc. in other files.

Reason for Change: DMRTSDRVMICROCODE-92: Heavy packet retransmission observed on RTS  
2p and 1p units in hdlc mode

**Revision: 6.12.4**

What Changed: Security beta update from 6.12.1.

Reason for Change: Fixes Peersec SSLv3 compat bugs.  
Fixes typo on file upload page  
Fixes ACL101 PHY FD/HD mismatch problem.

**Revision: 6.12.3**

What Changed: Update to socketserver 6.12.3  
Adds socketserver feature that finishes sending buffered tx data after TCP  
connection from host has been closed.

Reason for Change: JIRA DMRSTFLASHMICROCODE 114  
Avery/Weigh-Tronix was having problems losing the end of jobs being sent to  
serial label printers via DMRTS 1-port.

**Revision: 6.12.1**

What Changed: Use version 6.12.1 of 8000426 (security features)

Reason for Change: N/A

**Note:** *Not all of the versions listed have been released or are planned for release.*

**Revision: 6.12**

- What Changed: Moved the restore function interrupt handler from ecosapps/main.c to ecos2src/hal/arm/dmrts/.../hal\_misc.c.
- Added support for DM RTS 2P 2E model.
- Added support of KSZ8893MQL Switch/PHY for DM RTS 2P 2E model.
- Modified the port configuration web page to selectively display RS modes, DTR/DSR/CD options.
- Removed the serial number filed from the homepage for RTS models.
- Disabled DTR, DSR, CD and RI operations on DM RTS 2P 1E model.
- Added RS485 full duplex mode (0x86) to RSMODE\_SET command (require driver changes).
- Modified newTree-2.0 to disable software CRC check in Ethernet driver.
- Reason for Change: Need to support DM RTS 2P 2E model.

**Revision: 6.11**

- What Changed: Fixed a possible timing violation due to removing debugging codes in iicRead().
- Fixed an issue that units with 28F320C3 flash chip lock up after clearing port configurations.
- Reason for Change: DMRTSFLASHMICROCODE-111 One RTS 8P unit returns wrong model ID, IP address etc. upon reset.
- DMRTSFLASHMICROCODE-110 Units with 28F320C3 flash chip lock up when resetting from web page with "set configuration for all ports to factory default settings" option selected.

**Revision: 6.10**

- What Changed: Added support for DM RTS 2P unit (Configuration 1).
- Added restore function for DM RTS 2P unit.
- Reason for Change: To support new DM RTS 2P unit.

**Revision: 6.09**

- What Changed: Updated SocketServer help file for the new Bootloader Timeout option in Edit Network Configuration web page.
- Reason for Change: DMRTSFLASHMICROCODE-108 Help file needs to be updated to include the new "Bootloader timeout" option on the Edit Network Configuration page

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 6.08**

- What Changed: Added runtime DM500 support to mainline code base.
- Added Security Configuration APIs for portvision.
- Added code to handle case where telnet command gets split across TCP packets.
- Fixed DTR does not go low issue.
- Fixed descriptions of DM500 1 port Embedded/DM9 in comments.
- Added support to view/change bootloader timeout value through the web page and PortVision.
- Added support to reset port configurations to the factory defaults through PortVision.
- Reason for Change: DMRTSFLASHMICROCODE-103 Add runtime DM500 support to mainline code base.
- DMRTSDRVMICROCODE-88 Add runtime DM500 support to mainline code base.
- DMRTSFLASHMICROCODE-104 problems with commercial port redirector (Tactical)
- DMRTSFLASHMICROCODE-91 When "DTR" is configured for "Socket On" in webmanager.
- DTR goes "high" when socket connection is made. Does not go low when socket connection is closed.
- DMRTSFLASHMICROCODE-106 Add ability to modify the RedBoot 'Timeout' Value through web page and PortVision
- DMRTSFLASHMICROCODE-107 Add ability to reset port configurations to Factory defaults through PortVision

**Revision: 6.07**

- What Changed: Changed "Telnet Protocol" to "Telnet Com Port Control Option (RFC 2217)" on the web pages
- Updated the help file.
- Reason for Change: DMRTSFLASHMICROCODE-101 Change "Telnet Protocol" to "Telnet Com Port Control Option (RFC 2217)" in the TCP Connection Configuration portion of the Edit Port Configuration page.

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 6.06**

What Changed: Added support for turning off SNMP through Telnet command line.  
Added a security configuration web page, allowing users to enable/disable Telnet and SNMP through the web page.

Reason for Change: DMRTSFLASHMICROCODE-100 Want to be able to turn off SNMP or edit Response strings.

**Revision: 6.05**

What Changed: Update version number to 6.05.

Reason for Change: Replace an incorrectly built binary version 6.04 for DM2 platform.  
DM2SOCKETSERVER-13 ssvr\_help.htm (8001089) out-of-date

**Revision: 6.04**

What Changed: See jira issues listed below for details.

Reason for Change: DMRTSLNX-80: RTS unit 485 mode does not work with ttyput  
DM2SOCKETSERVER-16: setbaud command returns "Invalid number of arguments".

**Revision: 6.03**

What Changed: Copy updated socketserver help file (8001089) into the apps/webpages/root directory, so that it is included in build.

**Revision: 6.02**

What Changed: Removed the 3 line change put in to close all interfaces when doing an admin reset from portvision. The change was in apps-rpshsi/hdlc.c.

Reason for Change: See jira DMRTSFLASHMICROCODE-95. problem loading firmware on rts with portvision. the rts hangs.

**Revision: 6.01**

What Changed: Changes for DeviceMaster2  
Made change to unity driver to add restore capability  
Fix problem with the id string that was being displayed,

**Revision: 6.00**

What Changed: Added support for the DM2.

Reason for Change: Added support for the DM2 1 port. This is the point where the branch is merged back into the main trunk.

**Note:** *Not all of the versions listed have been released or are planned for release.*

## 5.x Revisions

### Revision: 5.23

What Changed: 1) Added shutdown call before socket close in proto\_tcp.c intended to fix a DM2 issue (it happens to take care of the Samsung issue, too)

2) Along the same lines, added a disableAllSocketInterfaces call every place the user could effect a system reset (via telnet, web interface, portvision)

Reason for Change: DMRTSFLASHMICROCODE-92

We need to do a polite shutdown of each of our open sockets, so the client is not left hanging when the system is reset

### Revision: 5.22.01

What Changed: Modified the SocketServer to convert IP address between network order and host order.

Fixed endianness issues (DM2SOCKETSERVER-1, DM2SOCKETSERVER-2, DM2SOCKETSERVER-3, DM2SOCKETSERVER-6).

Reason for Change: Store IP address / netmask / gateway in host order instead of network order in the EEPROM.

### Revision: 5.21

What Changed: commands.c: commented out \*IPtoStr(unsigned n) definition. Defined but unused which causes compile errors since we now use -Werror switch in makefile.

server.c: serverSaveConfig() added status check variable for flash operations. ensured enable/disable flash write calls were placed correctly.

flash.c/h: made code consistently use \*ROM removed all calls to enable/disable flash writes. these calls are done in server.c added new flash\_reset function call

Reason for Change: DMRTSFLASHMICROCODE-89: RTS 1 Port Rohs fails to reboot after changing Socket configuration.

### Revision: 5.20

What Changed: Commented out all debugICTimeout related code in server.c and state.h. Bumped configversion to 09 and updated sw build version to 5.20.

Commented out all debugICTimeout related code in aiopic.c, ident.h and uart4530.c

Reason for Change: DMRTSDRVMICROCODE-79: New debugICTimeout debugging code doesn't initialize properly under NSLink control.

**Note:** Not all of the versions listed have been released or are planned for release.



**Revision: 5.19**

What Changed: The structure of the internally saved port configuration data changed due to addition of the UDP Source Port value in the previous version.

Incremented configversion in state.h

Reason for Change: DMRTSFLASHMICROCODE-88 Port config data invalidated by new parameter

**Revision: 5.18**

What Changed: Porting of code for DM2 (NIOS2) platform.

Add Intercharacter Interval timer debug code to serial port drivers

- Makefile:

- updated version to 5.18

- Add 'webcomp' to list of files deleted by "make clean"

- add linkTimeStamp.c to list of files removed when "make clean".

- state.h, websupp.c, server.c, proto\_tcp.c, editPort.asp:

- added debugICTimeout and source port variables to server config.

- added support for new source port variables.

- fixed instance where zero values saved

- in udp area would return with odd non-zero values.

- mailmsg.c: fixed instance where mail would attempt to send to 0.0.0.0 address and fill

- up diagnostic output.

- main.c, dm.h:

- Get rid of #warning so build can complete

- Add DM\_RESET\_BOARD macro

- Mixed network/host order for IP addresses. - fixed so that they're always Network order.

- Get rid of a debug printf that's no longer needed.

- Fix status LED support for DM2.

- Use new readback feature of LED control register instead of keeping track of state with avariable.

**Note:** Not all of the versions listed have been released or are planned for release.

- websupp.c. tcp.c:  
Fix host vs. network order problems.
- webs.c:  
Use IPtoStr provided by app.
- tadmin.c, madmin.c:  
Fixed network vs. host ordering problems with IP addresses, etc.
- hdlc.c:  
Fix network vs. host endian problems.  
Use DM\_RESET\_BOARD macro.
- webcomp.c & its makefile:  
Fix compiler warnings  
Add -Werror to compile flags for webcomp so build stops on compiler warnings.
- server.c:  
#if out the utoa routine -- use the one in the web server.

Reason for Change: Port to DM2 (NIOS2) platform.

DMRTSFLASHMICROCODE-82: Request to change SocketServer UDP port Assignment scheme

DMRTSFLASHMICROCODE-84 Add intercharacter timestamp debugging code to Main tree

DMRTSFLASHMICROCODE-85: Port (Socket Number) is not consistent and not the same as the assigned port number in TCP Socket

Revision: 5.17.1

What Changed: Added timestamp to receive data functions in aiopic.c and uart4530.c to show the amount of intercharacter gap between characters. Results are printed to #2 debug diagnostic port on the RTS .

Reason for Change: DMRTSFLASHMICROCODE-77: UDP packets not reacting properly to Input timeout for packet splitting

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 5.17**

What Changed: Added 76800 baud rate to SocketServer.

Reason for Change: DMRTSFLASHMICROCODE-79 Need to add 76800 to the list of selectable speeds in SocketServer configuration.

**Revision: 5.16**

What Changed: Added CYGPKG\_NET\_FREEBSD\_SYSCTL to ecos-apps/newTree-2.0 script for access to freebsd tcp stack data variables.

Added new freebsd tcp stack compatible socketserver keepalive function to ecos-apps/socketserver/server.c.

Reason for Change: DMRTSFLASHMICROCODE-66 SocketServer cannot reconnect after Ethernet Connection loss.

**Revision: 5.15**

What Changed: Removed cyg\_scheduler\_lock/unlock() from <ecos20src>/hal/arm/dmrts/current/src/iic.c

Reason for Change: DMRTSDRVMICROCODE-74 data errors in 1-port devices

**Revision: 5.14**

What Changed: Added/corrected EOL input termination handling in SocketServer UDP handling.

Reason for Change: DMRTSFLASHMICROCODE-70 Data transfer failure in UDP mode

DMRTSFLASHMICROCODE-73 EOL terminated buffering on serial input is not working.

**Revision: 5.13**

What Changed: Fixes in webpages. Add missing files. Resolve invalid links.

Reason for Change: Correct minor deficiencies.

**Revision: 5.12**

What Changed: Added 5 files required for SocketServer Help. These files comprise 8001096 v1.00.

Reason for Change: Required but left out of the previous release.

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 5.11**

What Changed: Changed display graphics in SocketServer web page.  
Added SocketServer setup help to web page.  
Changed handling of password entry over a telnet connection to suppress echo back to terminal.

Reason for Change: Use new corporate graphics.  
Move SocketServer setup help into the web page and out of a bunch of user guides.  
DMRTSFLASHMICROCODE-68 password entry echos back in clear

**Revision: 5.10**

What Changed: First build after merging the eCos for Nios 5.0 files into the source tree.  
Fixed a TCP bug, 'Delayed communication reconnection when driver in IP mode after PC reboot.'

Reason for Change: Include the NIOS 5.0 eCos files in the source tree  
DMRTSDRVMICROCODE-71, 'Delayed communication reconnection when driver in IP mode after PC reboot.'

**Revision: 5.07**

What Changed: Fixed MAC mode implementation of the DeviceMaster UP flag.

Reason for Change: The DeviceMaster UP flag as implemented in v5.06 did not function properly in MAC mode transactions.  
No JIRA opened. Continuation of the fix for DMRTSFLASHMICROCODE-64.

**Revision: 5.06**

What Changed: Bugfix: "IP info query occasionally returns bad values".  
Added a flag to the ID Reply structure to distinguish DeviceMaster UP from other models.  
The flag is primarily used by PortVision but is included in all ID Reply frames.

Reason for Change: DMRTSFLASHMICROCODE-63, "IP info query occasionally returns bad values"  
DMRTSFLASHMICROCODE-64 "Portvision cannot distinguish DeviceMaster UP from other DeviceMasters"  
This feature was a requirement of the DeviceMaster UP platform project. It was documented in the DRD and DSD. It was not implemented in the initial release to expedite completion.

**Note:** *Not all of the versions listed have been released or are planned for release.*

**Revision: 5.05**

What Changed: 1) Increased priority of admin command handlers so that they will run even under heavy CPU load. This prevents Ethernet frame buffers from accumulating in the MAC rx queue (was causing the system to run out of Ethernet frame buffers and stopping data flow)

2) Made SocketServer rx polling period adjustable in "network settings" on web page. Default setting is 50 (milliseconds). This is a good default for 8-16 port hubs, but is too fast for running 20+ ports. With a setting of 100ms, Socketserver can run all 32 ports simultaneously without problems.

Reason for Change: DMRTSFLASHMICROCODE-60 "Ports quit receiving data"

**Revision: 5.04**

What Changed: Added missing source files to complete implementation of eCos 2.0. This brings us to eCos 2.0 v1.87 plus Control proprietary modifications.

Fixed a data corruption problem in the DM RTS 1 port UART driver.

Reason for Change: Complete implementation of eCos 2.0.

DMRTSFLASHMICROCODE-56 Passing raw binary data through RTS 1-port in Socket mode yields corrupted data

DMRTSFLASHMICROCODE-53 Large file transfer fails

**Revision: 5.03**

What Changed: Added bugfix for 1-port data loss: removed unnecessary disabling of interrupts during I2C read, which was causing FIFO overruns

Reason for Change: 1-Port was dropping bytes every time there was a "Flash IP" request (broadcast from PortVision/webPortVision)

DMRTSFLASHMICROCODE-48 large file transfer between serial port and a socket fails

DMRTSWINTWOKXP-213 Large file transfers fail with DM Air

DMRTSWINNTTTS-32 DM Air has problems receiving large files

DMRTSDRVMICROCODE-66 DM-Air fails large file transfer in 422 mode

DMRTSWINTWOKXP-275 Xmodem in SocketServer does not Tx/Rx properly

DMRTSWINTWOKXP-264 Data sent bi-directionally between RS422 ports fails.

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 5.02**

What Changed: Added first draft of PortVision Hypertext API

Also fixed socket code in e-mail client

Reason for Change: API support for PortVision 3.0

eCos 1.3 -> 2.0 conversion broke network calls

DMRTSFLASHMICROCODE-47 email notices don't work

**Revision: 5.01**

What Changed: RX FIFO disable functionality was added to the firmware and device webpage

Reason for Change: DMRTSDRVMICROCODE-65 Mazatrol Device set to 7,e,2 not sending data back to app

DeviceMaster 1-port loses data when connected to a Mazak controller. The data loss is caused by a bug in the 4530 UART logic. The bypass is to disable the FIFO.

**Revision: 5.00**

What Changed: Built with eCos 2.0

Added RFC 2217 Telnet Com Port Control Option

Added support for DeviceMaster 1 port VDC models:

- 5002360 DM 1 Port 5-30 VDC
- 5002361 DM 1 Port 5-30 VDC Embedded

Reason for Change: Converted to eCos 2.0 to use the most recent and currently supported version of eCos

Added Telnet Com Port Control Option to satisfy a Product Management requirement

### 3.x Revisions

#### Revision: 3.19

What Changed: The aiopic.c file was changed in eCos nserial driver. It conditions the configuration of the interrupts. For the 5002240 model (DvcMstr 16 RM) the interrupts are configured for rising edge trigger and the other models are level triggered.

We branched the source code to make this fix. The RFC2217 telnet code had already

Been added as V4.00 when it became necessary to make this change. The branch is \$/DeviceMaster/ARM/eCos/eCos-Apps-3.19.

Reason for Change: DMRTSDRVMICROCODE-62 DevMast Firmware Loading locks up RTS 16 RM

Application would intermittently hang on the 16 prot RM (5002240) because of the floating interrupt pins from the unpopulated aiopic locations.

#### Revision: 3.18

What Changed: Aiopic.c and aiopic.h, in eCos, were changed to fix the interrupt handler problem.

Reason for Change: VI 2476/DMRTSDRVMICROCODE-61 WDT IntegrityTest XON/XOFF reboots DM 4 & 8

Set\_txxoff was broken by a change to the eCos interrupt handler in the aiopic.c file 12/06/04.

#### Revision: 3.17

What Changed: Fixed VI 2467/DMRTSDRVMICROCODE-59 - RTS 1 Port Does Not Send/Receive in RS485 Mode

#### Revision: 3.16

What Changed: Fixed VI 2374 - RTS 1 Port HW Flow Control garbles characters when CTS is toggled

Fixed VI 2418 - RTS 32 Port hangs when cloning with 'Connect To' set

Fixed VI 2303, 2365 - IP address not returned when using DHCP

Also fixed the fix for VI 2455 - RTS 1 Port output buffer reports empty (while XOFF'd) when it is not. Fix in v3.15 had a bug.

DMRTSFLASHMICROCODE-45 SocketServer Clone option can cause web page to not refresh on 32 port unit

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 3.15**

What Changed: Fixed VI 2455 - RTS 1 Port output buffer reports empty (while XOFF'd) when it is not.

Fixed VI 2410 - RTS 1 Port RTS and DTR lines not being controlled correctly.

Fixed VI 2303 - RTS 1 Port unable to change char value used for XON and XOFF away from default.

**Revision: 3.14**

What Changed: Added Air log to web page.

Fixed RTS 1 port: drain function not implemented, caused truncated data.

Fixed VI 2218 - Spurious RI indications on devices without RI.

Fixed VI 2185 - RTS 1 port: TX flush did not work in XON/XOFF mode.

Fixed VI 2208 - RTS 1 port: Control characters not being consumed in XON/XOFF mode.

**Revision: 3.13**

What Changed: Added IAD UP model numbers.

Fixed VI 2207 - device hangs after 5 minutes.

Fixed VI1882,1990, 2027, 2180 - IIC routines cause system hang.

**Revision: 3.12**

What Changed: Added inter-character timeout feature on the RTS One Port.

Fixed bug where GET\_IP\_CURRENT command returned zeros when using DHCP, should return the IP address that was obtained from the DHCP server.

Add DeviceMaster AIR ID

Reason for Change: VI 2146 - RTS 1 Port timeout feature broke

VI 2164 - GET\_IP\_CURRENT returns zeros when using DHCP

Add support for DeviceMaster AIR

**Note:** *Not all of the versions listed have been released or are planned for release.*



**Revision: 3.11**

What Changed: Increased the number of file handles, CYGPKG\_IO\_NFILE, from 48 to 512 (newTree file) to fix errors that occurred when configuring a large number of ip addresses for the UDP feature. Also separated some of the features, mailmsg etc. from the socketserver at build time by adding defines in the Makefile.

Reason for Change: Fix a problem that occurred when configuring a large number of ip addresses for UDP feature.

**Revision: 3.10**

What Changed: Added UDP Feature

Fixed One Port RTS/DTR problem, they were not being asserted when the port was open and de-asserted when closed.

XON & XOFF characters were being stripped from data stream when SW flow control was not active

Reason for Change: VI 1963 - RTS 1 Port Possible Data Corruption

Fixed problem introduced during previous XON/XOFF One Port work, which caused

- XON and XOFF characters to be consumed when SW flow control was not active.
- Fixed VI 1997. RTS 1 port - RTS and DTR state never changes

**Revision: 3.09**

What Changed: changes to the dmrts.c/h , aiopic.c and uart4530.c files in ecos nserial code to fix a problem with lost data when running the sstput test.

Reason for Change: Failures when running sstput test.

**Revision: 3.08**

What Changed: Added new model id's for the Serial Hub and DvcMstr Pro 8/16 port products.

Reason for Change: New products.

**Revision: 3.07**

What Changed: Fixed SocketServer RS485 problem in the 1 port - it did not work. Problem was the TxFlush routine was clearing the UART HW Flow Control flag, which needs to be set for RS485.

Reason for Change: VI 1836: DM RTS 1port RS485 Rx or Tx will work, not both

**Note:** Not all of the versions listed have been released or are planned for release.

Revision: 3.06

What Changed: Fixed TCP origination (client mode) code that was broken during addition of RFC1006 support.

Reason for Change: VI#1761: Serial tunnelling was broken.

Revision: 3.05

What Changed: Fixed word wrap for warning paragraph on "reset" web page.

Reason for Change: Text wasn't wrapping.

Revision: 3.04

What Changed: Fixed bug that caused extra data to be sent in first packet of new connection if EOL was enabled in previous connection and socket was shut down with partial line pending.

Reason for Change: Fix bug.

Revision: 3.03

What Changed: Fixed some minor layout problems on web pages.

Reason for Change: Inconsistency between pages. Column headers wrapping when they shouldn't.

Revision: 3.02

What Changed: Fixed default values of RFC1006 stuff when upgrading from 1.x or 2.x.  
Disabled incoming RFC1006 connections for ports whose local TSAP is blank

Reason for Change: xCustomer request from Siemens for RFC1006.  
VI#762 for UI changes.

Revision: 3.01

What Changed: Added web page to configure RFC1006 TSAPs and TCP port number.  
Added support for originating RFC1006 connections if remot TSAP is non-empty.

Reason for Change: Customer request from Siemens for RFC1006.  
VI#762 for UI changes.

**Note:** Not all of the versions listed have been released or are planned for release.

Revision: 3.00

What Changed: Added support for RFC1006 (ISO over TCP).  
Added EOL/timeout support.  
Added port cloning.  
Added port config default checkbox on reboot page.  
Changed layout of flash config struct to allow features to be added in future without breaking config compatibility.

Reason for Change: Customer request from Siemens for RFC1006.  
VI#762 for UI changes.

## 2.x Revisions

Revision: 2.03

What Changed: uart4530.c file in eCos.  
Numerous eCos changes for bug fixes

Reason for Change: VI 1233 DeviceMaster resets itself continually when IP addressing disabled  
VI 1343 DM RTS - IOCTL\_SERIAL\_SET\_XOFF does not work  
VI 1421 DM RTS - Disabling IP causes reset.  
VI 1444 DM RTS 1 port Xon/Xoff fails  
VI 1445 DM RTS not handling 'discard null' correctly

Revision: 2.02

What Changed: Changed watchdog strobe interval

Reason for Change: fixes RTS RM 32 rebooting issue

Revision: 2.01

What Changed: add 1 port

Reason for Change: performance improvement, bug fixes

Revision: 2.00

What Changed: changed the ack and resend timers

Reason for Change: performance improvement

**Note:** Not all of the versions listed have been released or are planned for release.

## 1.x Revisions

### Revision: 1.40

What Changed: Fixed bug where Xon/Xoff failed on the DM RTS 1 port running in 7 bit mode  
Added 3600 and 7200 baud to DM RTS 1 port  
Fixed TCP mode bug where the upper numbered ports were failing on 16/32 RTS units.

Reason for Change: VI :  
1294  
1296  
1299  
1302

### Revision: 1.39

What Changed: Fixed 1 port Xon/Xoff mode  
Fixed 1 port RTS control  
Increased Eth buffers to 2.4 m ( was 2.0)  
Performance improvement for 32 port

Reason for Change: VI :  
1287  
1278  
1277  
1279

### Revision: 1.38

What Changed: 1-port reboot when baud rates mismatched fixed 300 baud on 1-port fixed driver  
HW flow control fixed for 1-port fixes the version number shown

Reason for Change: VI :  
1269  
1266  
1264

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 1.37**

What Changed: changed help text ( added space between socket and server in text string)

Reason for Change: lack of space between socket and server was causing production test to fail.

**Revision: 1.36**

What Changed: Changed TCP/IP mbuf size to 2M total (was 1M). Required for the 32 port model. This area is a static array, so cannot be a function of number of ports.

Added setbaud command to telnet.

**Revision: 1.35**

What Changed: added RTS 1 port support changed model id for RTS RM 16/32

Reason for Change: new device

**Revision: 1.34**

What Changed: Added support for RTS RM 16/32 models.

Reason for Change: Added support for RTS RM 16/32 models.

model id changed ( RTS RM 16/32)

**Revision: 1.33**

What Changed: Removed diag messages for parity/overrun/framing.

Added port status (open/closed) to idle message

Reason for Change: Don't want to slow things down when baud mismatch.

**Revision: 1.32**

What Changed: Fixed bug that caused reset when packets were lost under heavy load.

**Revision: 1.31**

What Changed: Fixed port mode select logic for ports 8+

Reason for Change: VI 963

**Revision: 1.30**

What Changed: Fixed bug in mail task that was using up all of the sockets.

Reason for Change: Eventually the stack runs out of sockets and new TCP connections can't be made.

**Revision: 1.29**

What Changed: Fixed watchdog initialization.

**Note:** *Not all of the versions listed have been released or are planned for release.*

**Revision: 1.28**

What Changed: Added support for Intel 28F320C3 flash ROM

Reason for Change: New boards are switching from B3 part to C3 part.

Added support for inter-char timeout.

Reason for Change: Boards were timing out and resetting if TE bit in REGB ever got cleared.

**Revision: 1.27**

What Changed: Reduced latency special

Reason for Change: Test version for Tim Jone's Customer in Germany

**Revision: 1.26**

What Changed: Changed serial port scan from 10ms to 5ms

Added toggle of port pin 14 in ISR

Reason for Change: Special test version for customer in Germany (Michael Jones)

**Revision: 1.25**

What Changed: Disable Nagle algorithm on data sockets.

Reason for Change: reduce latency

**Revision: 1.24**

What Changed: Fixed three bugs:

1) Ports were always in RS-232 mode and didn't switch to RS-422 or RS-485

2) Edit port web page always displayed RS-232 instead of the currently configured web page.

3) SocketServer didn't detect incompatible flash config data and display garbage config.

Reason for Change: eCos sources for production and for API work got mixed together and cause some of the problems

**Revision: 1.23**

What Changed: Removed code.

Reason for Change: This version removes the configuration language

**Note:** *Not all of the versions listed have been released or are planned for release.*

Revision: 1.22

What Changed: webserv/telnetserv.c

Reason for Change: This fixes a problem with string length causing strings sent as commands to be truncated. code that was added in release 1.18.

Revision: 1.21

What Changed: websupp.c file.

Reason for Change: This fixes a problem when configuring DTR signal.

Revision: 1.20

What Changed: More DHCP fixes.

Reason for Change: Previous DHCP fixes didn't work well w/ Linux server.

Revision: 1.19

What Changed: Added gateway request to DHCP packets.

Reason for Change: Win2K DHCP server won't send gateway IP unless you ask for it. VI#824

Revision: 1.18

What Changed: most changes in telnetserv.c

Reason for Change: added phase I of programmability project

Revision: 1.17

What Changed: Added configurable TCP keepalive timeout.

Added web page to configure IP addr info.

Added reboot button.

Reason for Change: TCP keepalive fixes VI #771

Revision: 1.16

What Changed: Added support for the email client.

Reason for Change: New functionality.

**Note:** Not all of the versions listed have been released or are planned for release.

**Revision: 1.15**

What Changed: Added "RTS" to web pages and to telnet greeting.  
Added code to flicker status LED once every 10 seconds.

Reason for Change: D. Minker wanted it to say "RTS".  
I like to be able to tell if the SW is alive by watching the status LED.  
This change doesn't actually affect SocketServer.

Reason for Change: VI#1100

**Revision: 1.14**

What Changed: Fixed DHCP code to work with server that doesn't supply T1/T2 values (e.g. Novell Netware).

Reason for Change: Similar problem seen with IA at UPS Louisville

**Revision: 1.13**

What Changed: Fixed support for 7 data bit configuration.

**Revision: 1.12**

What Changed: Fix typo in telnet server error message

**Revision: 1.11**

What Changed: Fixed typo in web pages.

Reason for Change: DM logo wouldn't load

**Revision: 1.10**

What Changed: Fixed values for IP address used to specify DHCP and IP disable.  
Fixed Tx data bug in serial code.  
Web page updates from LN..

**Revision: 1.07**

What Changed: Fixed TcpTx task so that data is transferred as it arrives  
at the serial port rather than waiting for 1K chunks.  
Added Half-Duplex option for flow control.  
Changed so that serial port configuration changes take effect immediately (no  
need to take connection down/up) to get new settings in place.

**Note:** *Not all of the versions listed have been released or are planned for release.*



**Revision: 1.06**

What Changed: Fixed receive flow control (both RTS/CTS and Xon/Xoff).  
Changed web pages so that port numbers are displayed as 1--8 instead of 0-7.  
Added "terse" and "reset" commands to telnet server.  
Changed IP logic so that 0.0.0.0 means use DHCP and 255.255.255.255 means disable IP.

**Revision: 1.05**

What Changed: Fixed bug in SocketServer that used up all sockets and caused new TCP connections to fail after 30-40 seconds.  
Added versioning to flash config data for socket server so that we won't try to use old config struct if it has changed.

Reason for Change: TCP bug occurred when socket server was configured to initiate connections to an IP address that refused connections.

**Revision: 1.04**

What Changed: Fixed Rx overflow errors at 230K baud.  
Fixed "owned" flag in MAC ID response.

**Revision: 1.03**

What Changed: Fixed TxTcp code so that socket is closed when there is a TCP transmit error.

Reason for Change: Host end could crash and DM would never close connection.

**Revision: 1.02**

What Changed: Fixed TCP initiation code. Fixed so MAC mode works when DHCP is in process or failed. Added "connect always" option. Added the configuration for port mode.

**Revision: 1.01**

What Changed: Watchdog timer code fixed.

Reason for Change: WD timer wasn't enabled

**Revision: 1.00**

What Changed: Initial Release

**Note:** *Not all of the versions listed have been released or are planned for release.*