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

# DeviceMaster Bootloader History (1800110)

## 3.x Revisions

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|---|---|
| Revision: | 3.39 (Released) |
| What Changed: | NXP only: Enable WD timer before starting a downloaded binary in order to avoid locking up when the downloaded file is invalid (e.g. it's an ARM7 binary).<br>Load MAC address from EEPROM into Ethernet controller earlier in the boot process so that DHCP client code doesn't use a random MAC address. ISS-006520, ISS-006522 |
| Date: | 04/23/14 |

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| Revision: | 3.38 |
| What Changed: | NXP only: Increase size of EEPROM from 128 bytes to 256 bytes.<br>NXP only: Add 32-bit application feature flags field to serial EEPROM and to ID response. Fix network support so that default app loading and MAC-mode continues to work right when the unit is configured for DHCP and there is no DHCP server. ISS-006518 |
| Date: | 04/23/14 |

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| Revision: | 3.37 |
| What Changed: | Initial release of combined binary |
| Date: | 03/03/14 |

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| Revision: | 3.36 (Released) |
| What Changed: | No functional changes for ARM7. |
| Reason for Change: | NXP release. |
| Date: | 01/08/14 |

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|---|---|
| Revision: | 3.34 |
| What Changed: | Disable some engineering-only commands that read/write/erase EEPROM. |
| Reason for Change: | N/A |
| Date: | 12/10/13 |

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| Revision: | 3.32 |
| What Changed: | No functional change. |
| Reason for Change: | For ARM7 we added serial number support. |
| Date: | 12/03/13 |

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| Revision: | 3.23 (Released) |
| What Changed: | Close TCP admin connection to port 4606 if SSL handshake or other invalid packet is seen. |
| Reason for Change: | Prevent 60-send delay for TCP admin timeout before application is loaded in the case where NSLink is attempting an SSL connection. |
| Date: | 10/13/2011 |

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| Revision: | 3.22 |
| What Changed: | Fix handling of "disable" state so that no TCP connections are accepted. Previously it allowed connection and one command on port 4606 if it was received immediately. |
| Date: | 8/24/2011 |

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| Revision: | 3.21 |
| What Changed: | Two more fixes for DHCP support:<br>1) On cold-boots, a random MAC address was being used during the DHCP transactions.<br>2) Incorrect MAC address comparison made acceptance of DHCP offers depend on what padding bytes the server used in the client MAC field. This version fixes both of these problems. |
| Date: | 5/18/2011 |

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| Revision: | 3.20 |
| What Changed: | Fix Ethernet driver bug that caused DeviceMaster RTS unit to slow down when placed on an Ethernet segment with a lot of multicast traffic.<br><br>Update fix to DHCP so that it correctly falls back to BOOTP-only mode if server doesn't support DHCP. |
| Reason for Change: | DHCP fixes |
| Date: | 3/31/2011 |

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| Revision: | 3.19 |
| What Changed: | Fix problems in RedBoot DHCP: retry mechanism didn't work and there was a race condition that sometimes corrupted received IP configuration. |
| Reason for Change: | DHCP fails |
| Date: | 3/23/2011 |

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| Revision: | 3.18 |
| 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 |

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| Revision: | 3.17 |
| What Changed: | Make buffer for password entry longer so that it allows the entry of longer passwords (max is buf size - 2). DMRTSBOOTLDR-64 |
| Reason for Change: | Password length did not allow 15th character |
| Date: | 7/26/2010 |

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| Revision: | 3.16 |
| What Changed: | Remove code that checks MAC address and refuses to initialize network stack if MAC address doesn't belong to Comtrol's address block.<br><br>This breaks production test and efforts to private label devices. |
| Reason for Change: | Production programming fails with message "Failure loading hub" |
| Date: | 1/27/2010 |

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| Revision: | 3.15 |
| What Changed: | Fixed a problem with RS485 internal and external tests. |
| | Added a check to prevent running the RS422 loopback test on serial port 0 when it's the console port. |
| | Added the 'flash' command to display flash type |
| | Added the ability to allow a static 0.0.0.0 ip address for Profinet IO |
| Reason for Change: | RS485 internal self test fails on 2-port units after a port-to-port test has been run |
| | Add check to prevent loopback test being run on in-use console port |
| | Add a command to query and report the flash chip ID |
| | Profinet IO requirement |
| Date: | 10/23/2009 |

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| Revision: | 3.14 |
| What Changed: | Add support for 2-port DB9 |
| | Add support for Numonyx flash |
| Reason for Change: | Add support for Numonyx M28W320FCB70N6E Flash Memory. |
| | Redboot goes into a tight loop when RS485 internal test is run on port 0 while it's running a serial terminal connection |
| Date: | 7/01/2009 |

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| Revision: | 3.13 |
| What Changed: | Fix bugs in PHY handling code for 2-Port models that was causing RedBoot to lock-up waiting for Ethernet link at startup. |
| Date: | 5/13/2009 |

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| Revision: | 3.12 |
| What Changed: | Added model numbers and defines in comtrol/redbootAdmin. |
| Reason for Change: | Added support for the new DB9 models of the DM 2 port. |
| Date: | 4/23/2009 |

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| Revision: | 3.11 |
| 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.<br><br>The acs101 chip doesn't care for us changing the value so I decided to leave it alone for later investigation.<br><br>The kendin has to run in half duplex so it hard coded to use half.<br><br>The 2p-2e requires full duplex so it is hard coded to use full.<br><br>Corrected a data corruption problem |
| Reason for Change: | RTS 2P-1E doesn't negotiate the ethernet link properties correctly NIC negotiation.<br><br>Loopback testing produces data corruption errors in MAC mode |
| Date: | 3/11/2008 |

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| Revision: | 3.10 |
| What Changed: | Added files ics1893.c/h to handle mgmt of the new phy. Added checks for redboot around chunks to exclude it from redboot build.<br><br>Various corrections and rework to support changes, etc. in other files. |
| Reason for Change: | Heavy packet retransmission observed on RTS 2p and 1p units in hdlc mode |

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| Revision: | 3.09 |
| What Changed: | Changes to 'devs/eth/arm/dmrts/current/src/phy.c' to read the address in the Micrel KSZ8893 Ethernet switch containing the Micrel Ethernet chip id. If it finds a legitimate id, it enables the Ethernet. If it is not a micrel, there is nothing at this address and it does nothing. This is necessary and only of any value when trying to program a new/raw rts 2 port 2e. Once programmed, it uses the model number to make this decision.<br><br>The primary purpose of this change is to create a new default version for the vendor to put on the raw flash parts. |
| Reason for Change: | DMRTSBOOTLDR-54 Ethernet is disabled after boot up with no Model ID defined<br><br>The Ethernet on the RTS 2 port 2E is disabled at power up. It needs to be enabled for the production test to communicate with the box and program the default values. |

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| Revision: | 3.08 |
| What Changed: | Added support for DM RTS 2P 2E model. |
| | Added support of KSZ8893MQL Switch/PHY for DM RTS 2P 2E models. |
| Reason for Change: | Need to support DM RTS 2P 2E model. |

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| Revision: | 3.07 |
| What Changed: | Fixed a possible timing violation due to removing debugging codes in iicRead(). |
| Reason for Change: | DMRTSFLASHMICROCODE-111 One RTS 8P unit returns wrong model ID, IP address etc. upon reset. |

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| Revision: | 3.06 |
| What Changed: | Added support for DM RTS 2P unit (Configuration 1). |
| | Added restore function for DM RTS 2P unit. |
| | Reformat to standard formatting. |
| | Fixed a few bugs. |
| Reason for Change: | To support new DM RTS 2P unit. |

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| Revision: | 3.05 |
| What Changed: | Fixed loopback test failure in RS232 mode on 1 Port units. |
| | Fixed #!DM on DM500 4 Port unit. |
| Reason for Change: | DMRTSBOOTLDR-50 Loopback test failed in RS232 mode on 1 Port units |
| | DMRTSBOOTLDR-51 #!DM does not work on DM500 4 Port unit |

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| Revision: | 3.04 |
| What Changed: | Added runtime DM500 support to mainline code base. |
| | Fixed default value of CYGNUM_HAL_CPUCLOCK. |
| | Fixed RTS does not go low on RTS 1 port when hardware flow control is disabled. |
| | Fixed descriptions of DM500 1 port Embedded/DM9 in comments. |
| Reason for Change: | DMRTSBOOTLDR-48 Add runtime DM500 support to mainline code base. |
| | DMRTSFLASHMICROCODE-91 When "DTR" is configured for "Socket On" in webmanager. |
| | DTR goes "high" when socket connection is made. Does not go low when the socket connection is closed. |

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| Revision: | 3.03 |
| What Changed: | Added support for turning off SNMP in RedBoot. Telnet, SSL/SSH and SNMP enable flags in I2C EEPROM are consolidated into one service enable byte. |
| Reason for Change: | DMRTSFLASHMICROCODE-100 Want to be able to turn off SNMP or edit response strings. |

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| Revision: | 3.02 |
| What Changed: | Corrected serial port mis-behavior during device initialization<br>The file changed was cos2src/trunk/comtrol/dm2/unitydiag/current/src/unitydiag.c.<br>The comtrol/redbootAdmin/.. version files were touched to bump the version number.<br>The redboot/current/src/main.c file was touched to update the copyright year. |
| Reason for Change: | DM2REDBOOT-7, Physical port spews out Redboot info automatically on power-up or reboot<br>This fix has no bearing on the RTS, but the build was done to keep the code changes and version numbers in sync. |

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| Revision: | 3.01 |
| What Changed: | Made changes to the idle loop to add restore for DM2. Jun made changes to fix the id string displayed. |
| Reason for Change: | Add restore to DM2 and fix id string problem. |

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| Revision: | 3.00 |
| What Changed: | Merge DM2 branch into trunk. |
| Reason for Change: | Merging the branch used for testing DM2 back into the main trunk. |

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## 2.x Revisons

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|---|---|
| Revision: | 2.06 |
| What Changed: | Modified the RedBoot to convert IP address between network and host order when necessary. |
| Reason for Change: | Store IP address / netmask / gateway in network order in stead of host order in EEPROM. |

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| Revision: | 2.05 |
| What Changed: | Fixed a number of Telnet problems. |
| Reason for Change: | DMRTSBOOTLDR-34 Password returned in clear text<br>DMRTSBOOTLDR-35 Command line error in Telnet access to Redboot<br>DMRTSBOOTLDR-36 Telnet enable/disable broken<br>DMRTSBOOTLDR-37 Telnet server doesn't ask for password when password has been set.<br>DMRTSBOOTLDR-38 Telnet can lock-up the DeviceMaster<br>DMRTSBOOTLDR-39 No telnet idle-session timeout.<br>DMRTSBOOTLDR-40 No password request when redboot loaded<br>DMRTSBOOTLDR-42 Password not required in bootloader 2.04 |

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| Revision: | 2.04 |
| What Changed: | First build after merging the eCos for Nios 5.0 files into the source tree.<br>Fixed a TCP bug, DMRTSDRVMICROCODE-71.'Delayed the communications 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. |

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| Revision: | 2.03 |
| What Changed: | Fixed MAC mode implementation of the DeviceMaster UP flag. |
| Reason for Change: | The DeviceMaster UP flag as implemented in v2.02 did not function properly in Mac mode transactions.<br>No JIRA opened. Continuation of the fix for DMRTSFLASHMICROCODE-64. |

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| Revision: | 2.02 |
| What Changed: | Bugfix: "IP info query occasionally returns bad values".<br>Added a flag to the ID Reply structure to distinguish DeviceMaster UP from other models.<br>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"<br>DMRTSFLASHMICROCODE-64. "Portvision cannot distinguish DeviceMaster UP from other DeviceMasters"<br>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. |

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| Revision: | 2.01 |
| What Changed: | Added missing source files to complete implementation of eCos 2.0. This brings us to eCos 2.0 v1.87 plus<br>Comtrol proprietary modifications.<br>First build of Redboot under eCos 2.0.<br>Replaced the version string to fix production test problem. see 8000425 description. |
| Reason for Change: | version string was removed from v1.12 which caused a problem with production test programming.<br>DMRTSBOOTLDR-30 - version string removed causing production programming to fail some of required files needed to build ecos 2.0 redboot were missing. |

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| Revision: | 2.00 |
| What Changed: | eCos 2.0 |

## 1.x Revisions

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|---|---|
| Revision: | 1.12 |
| What Changed: | Fixed DMRTSBOOTLDR-25 - Lost TCP ACK recovery incorrect.<br>Fixed DMRTSBOOTLDR-26 - Hang during TCP socket close. |
| Revision: | 1.11 |
| What Changed: | Fixed VI 2496 - Redboot failed to load default app after PortVision did an ID Query<br>Fixed VI 2494 - Redboot failed to close TCP socket after OwnershipGranted 60 second timer counted down to zero, leaving socket still open. |
| Revision: | 1.10 |
| What Changed: | Added model number for DeviceMaster AIR.<br>Added model numbers for the IAD UP devices. |
| Reason for Change: | New models.<br>This version displays in User Interfaces as Version 1.20.<br>Version 1.10 reflects the SWA version, not the component version that the Customers view. A V1_20.txt file was added to the ftp dirs 11/8/04 per JIRA CORPWEB-502. |
| Revision: | 1.09 |
| What Changed: | Changes made to the dmrts.c/h, aiopic.c and uart4530.c in the ecos nserial code to fix a problem with lost data when running the sstput test.<br>**User will see version 1.18, not 1.09** |
| Reason for Change: | problems with lost data when running sstput test. |
| Revision: | 1.08 |
| What Changed: | Added new model id's for the Serial Hub and DvcMstr Pro 8/16 port products. |
| Reason for Change: | New products. |
| Revision: | 1.07 |
| What Changed: | Delete duplicate I/O routines. The 45xx routines are used for both internal and external ports. |
| Reason for Change: | we don't need a duplicate set. |
| Revision: | 1.06 |
| What Changed: | RedBoot version 1.15 |

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| Revision: | 1.05 |
| What Changed: | Added RTS 1 port support. |
| | Model id has been changed for RTS RM 16/32 |
| Reason for Change: | New device model id's were changed on the 16/32 devices |
| Revision: | 1.04 |
| What Changed: | Added support for RTS RM 16/32 models. |
| Reason for Change: | Added support for RTS RM 16/32 models. |
| Revision: | 1.03 |
| What Changed: | Fixes to support for 28F320C3 |
| Reason for Change: | Failure with alternate Intel flash part |
| Revision: | 1.02 |
| What Changed: | Fixed updater to work with Intel 28F320C3 and incorporate RedBoot 1.10 |
| Reason for Change: | Failure with alternate Intel flash part |
| Revision: | 1.01 |
| What Changed: | Incorporate 8000425 v1.07 |
| Revision: | 1.00 |
| What Changed: | Initial Release |