

VMM 1615 Application Release Notes (935602)

Parker Vansco Software Product Number: 935602

Description: VMM Application Code (as described in the [VMM Embedded Software Topic](#)) for use with VMM 1615 hardware.

VMM System Version 7

Version 3.12 build 128 (September 29, 2022, Case 81197)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.11 build 125:

- ▶ Fixed issue related to receiving PDU1 messages on CAN2 sent to the VMM's primary address (i.e. 0xD0 to 0xEE). (Case 81075)

Version 3.11 build 125 (February 24, 2022, Case 76556)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.10 build 124:

- ▶ Added support for a CAN message to be configured to periodically transmit a global J1939 request. (Case 75865)
- ▶ Fixed error that caused on request messages and CAN messages with a VMM source address to always transmit through CAN 1, even when set to transmit through CAN 2. (Case 75815)

Version 3.10 build 124 (August 16, 2021, Case 72756)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.09 build 122:

- ▶ Modified the CAN2 500kbps sample mode setting from triple to single. (Case 71987)

Version 3.09 build 122 (July 22, 2020, Case 64507)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.

- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.07 build 116:

- ▶ Updated the increased limits for J1939 messages introduced in V3.06 (Case 53419) to support all configured J1939 addresses, as opposed to only one J1939 address per CAN bus. (Case 64215)

Version 3.07 build 116 (October 18, 2019, Case 58325)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V0.60 build 114:

- ▶ Production release of V0.60.

Version 0.60 build 114 (July 19, 2019, Case 56793)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V3.06 build 113:

- ▶ Fixed frequency input duty cycle not being broadcast in memory flag message. (Case 56655)

Version 3.06 build 113 (June 18, 2019, Case 56343)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.05 build 103:

- ▶ Removed EEPROM save trigger on power control input deactivating (regardless of power control flag state). (Case 53419)
- ▶ Increased limits for J1939 messages (see [VMM 1615](#) topic). (Case 53419)
 - ▶ Increased "Parameters" to 250 (from 200).
 - ▶ Increased "Messages" to 120 (from 60).
 - ▶ Increased "Standard sized transmit messages" to 36 (from 18).
 - ▶ Increased "Large transmit messages" to 4 (from 2).
- ▶ Added J1939 diagnostics to [VMM Input/Output Message](#) type 48.

Version 3.05 build 103 (August 23, 2018, Case 50429)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V0.55 build 98:

- ▶ Production release of V0.55.

Version 0.55 build 98 (July 18, 2018, Case 49746)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.54 build 95:

- ▶ Added outbound VMM system message routing to CAN2 (Case 49662).

Version 0.54 build 95 (June 28, 2018, Case 48880)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.53 build 92:

- ▶ Increased the number of [CAN Router](#) entries supported from 512 to 1024. (Case 47586)

Version 0.53 build 92 (April 26, 2018, Case 47592)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V3.04 build 91:

- ▶ Increased the number of [CAN Router](#) entries supported from 64 to 512. (Case 47586)

Version 3.04 build 91 (July 05, 2017)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.03 build 85:

- ▶ Reduce CAN bus loading by staggering time at which VMM 1615 sends CAN messages, and by sending the following VMM status messages only when used in ladder logic: digital flag, memory flag and timer messages. (Case 32579)

Version 3.03 build 85 (February 05, 2014)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.02 build 84:

- ▶ Added a flag to [PGN 0xFF30](#) to indicate if the [analog](#) values are in raw or mV format. (Case 18945)
- ▶ Added support for 125K bit rate on CAN 2. (Case 19266)

Version 3.02 build 84 (December 09, 2013)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V0.50 build 83:

- ▶ Changed to a production version.

Version 0.50 build 83 (June 06, 2013)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.49 build 82:

- ▶ Updated the Slave initialization routine so that the VMM does not reboot during the startup. (Case 15625)

Version 0.49 build 82 (June 05, 2013)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.48 build 81:

- ▶ Updated the SPN initialization so that [SPN](#) 65535 can be used. (Case 16074)
- ▶ Updated the VMM initialization routine so that the VMM does not reboot during the startup. (Case 15625)

Version 0.48 build 81 (April 04, 2013)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.48 build 80:

- ▶ Changed the duty cycle of the frequency input to allow the duty cycle calculations to be done on a wider frequency range. (Case 15906)

Version 0.48 build 80 (March 04, 2013)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.47 build 79:

- ▶ Updated the system timer routine to have the stopwatch timer keep better time in general. (Case 14589)
- ▶ Updated a digit to the OEM ID to support the full decimal range of a 32-bit value. (Case 12819)

Version 0.47 build 79 (January 10, 2013)

- ▶ VMM System Version 7.3.
- ▶ Blackbox interface version 8.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.46 build 78:

- ▶ New feature: (Case 8153)
 - ▶ Added [blackbox](#) support.
 - ▶ Added a logs interface for blackbox applications.

Version 0.46 build 78 (November 27, 2012)

- ▶ VMM System Version 7.2.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.45 build 77:

- ▶ New feature: (Case 13890)
 - ▶ Added 32 more digital flags allowing a total of 64 digital flags.
- ▶ Update the stopwatch to keep better time when ladder logic processed time is greater than 25 ms. (Case 14589)
- ▶ Added extra digit to the OEM ID to open up more available OEM IDs. (Case 12819)

Version 0.45 build 77 (October 25, 2012)

- ▶ VMM System Version 7.2.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V3.01 build 76:

- ▶ New feature: (Case 13989)
 - ▶ Added [reverse heartbeat monitoring](#) support for SPN and CAN messages.

Version 3.01 build 76 (September 5, 2012)

- ▶ VMM System Version 7.2.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V3.00 build 73:

- ▶ New feature: (Case 12682)
 - ▶ Added [heartbeat monitoring](#) support for SPN and CAN messages.

Version 3.00 build 73 (May 11, 2012)

- ▶ VMM System Version 7.2.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V0.42 build 68:

- ▶ New features: (Case 9952)
 - ▶ Added standard CAN ID format (11-bit CAN identifier) support.
 - ▶ Added support to configure CAN 2 bit rate to either 250kbps (default setting if there is no ladder logic to indicate what the bit rate is) or 500kbps.
- ▶ Fixed the "on request message" not working issue introduced in build 50, when case 6647 was resolved in 935605 build 31.(Case 12437).

Version 0.42 build 68 (January 19, 2012)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.41 build 67:

- ▶ Analog input change: enhanced 249 ohm pull down fault management. (Case 11416)
 - ▶ Made the 4 to 20 mA protection mechanism's trip threshold flexible: either the input saturation point for the given max input voltage set or 12.450V (50 mA), which ever is lower.
 - ▶ On fault detection the 249 ohm pull down is disabled. Automatically re-enable 249 ohm pull down after 10 seconds (if still commanded). Allow automatic reset up to 3 times after which keep 249 ohm pull down off until power cycled.

Version 0.41 build 67 (January 10, 2012)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V2.04 build 65:

- ▶ Analog input change: corrected issue with the 249 ohm pull down for inputs 11 to 14 and 16 tripping off at approximately 7.2 mA. (Case 11311)

Version 2.04 build 65 (September 7, 2011)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V2.03 build 63:

- ▶ [Frequency input counter](#) change: corrected issues with edge counting. (Case 9269)
 - ▶ **Note:** when input 8 is used as a frequency input counter, if the initial state of the input signal is high, it is possible that the first two edges (high to low, and then low to high) may report a count of 0 if the low time is less than twice the time required to execute the longest ladder logic rung. Subsequent counts will report correctly (i.e. after the next edge, the count of 3 will be reported, etc.).

Version 2.03 build 63 (August 24, 2011)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V2.02 build 61:

- ▶ Output change: fixed an issue that could result in false short circuit faults on outputs 11, 12, 14 and 15. (Case 9980)

Version 2.02 build 61 (August 18, 2011)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.

- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V2.01 build 58:

- ▶ Output change: fixed an issue that could result in false short circuit faults on outputs 11, 12, 14 and 15. (Case 9956)
- ▶ Improved the timing of wake on CAN internal power control signals. (Case 9536)

Version 2.01 build 58 (June 29, 2011)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V0.40 build 57:

- ▶ Production release of V0.40 Build 57. (Case 8639)

Version 0.40 build 57 (May 30, 2011)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V0.39 build 55:

- ▶ Output fault information changes:
 - ▶ Additional output fault information is now included to provide platform specific output fault information, requires [VMMS](#) build 745 or newer to view. (Case 8590)
 - ▶ Fixed an issue that resulted in false output open and over current faults. (Case 8893)
- ▶ [Frequency input counter](#) change: count reported is now an edge count, instead of a pulse count. (Case 9269)

Version 0.39 build 55 (February 8, 2011)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Prototype release.

Changes from V2.00 build 51:

- ▶ [VMM1615](#) J1939 change: J1939 message parameters (SPN or other) supported increased from 100 to 200 (Case 8061).
- ▶ Sensor supply voltage change: removed sensor supply disabled option. Only 5 or 8V allowed, with 5V default. (Case 7083)
- ▶ Ladder logic not understood change:
 - ▶ Corrected issue that resulted in VMM address going to V1 when ladder logic is not understood. (Case 7316)
 - ▶ Corrected issue that prevents ladder logic not understood error when too many J1939 message parameters are defined in ladder logic (Case 8061).

- ▶ New Features:
 - ▶ Added support for frequency duty cycle measurement in ladder logic (Case 6802).
 - ▶ Added support for frequency input counting in ladder logic (Case 7984).

Version 2.00 build 51 (October 27, 2010)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 733.
- ▶ Supports [VMM1615 x](#) hardware.

Production release.

Changes from V1.01 build 46:

- ▶ Minimum VMMS build number change: increased to 733. (Cases 6507, 6644, 5964)
- ▶ New feature: bus bar voltage monitoring. See [VMM 1615](#) topic for complete details. (Case 6507)
- ▶ Analog to digital hysteresis threshold change: switched from 1.32V & 1.98V to 2.00V and 2.5V for inputs 9 to 16. (Case 6852)
- ▶ New feature: [output](#) load type specification for outputs that require it (outputs 7, 8, 11, 12). (Case 6644)
- ▶ Hardware version reporting change: reports an additional digit for the hardware version to indicate board revision, e.g. V7.5.2. (Case 5964)
- ▶ VMM1615 hardware support change: supports hardware version 7.5.2 and lower, in addition to version 7.5.3 and higher. (Case 5964)
 - ▶ **Note:** if an earlier version of software is downloaded to hardware version 7.5.3 (or higher), analog inputs 11 to 14 and 16 will report incorrect values.

Version 1.01 build 46 (July 14, 2010)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 723.
- ▶ Supports [VMM1615 x](#) hardware version 7.5.2 and lower.

Production release.

Changes from V0.33 build 40:

- ▶ Standby mode change: if in standby mode during a plug and play operation, on the power LED on the master VMM overrides the standby LED turning it off, and the power LED on solid. After plug and play is complete, if still in standby mode, the standby LED functions normally. (Ticket #254)
- ▶ NET2 LED change: reenabled functionality disabled in build 40. (Ticket #256)
- ▶ VMM system error detection change: disable system error detection during plug and play, while in standby mode, and when master power is not active. (Ticket #255)

Version 0.33 build 40 (May 10, 2010)

- ▶ VMM System Version 7.1.
- ▶ Minimum [VMMS](#) build number allowed: 723.
- ▶ Supports [VMM1615 x](#) hardware version 7.5.2 and lower.

Prototype release (obsoleted by Version 1.01 build 46).

Changes from V1.00 build 39:

- ▶ Standby mode changes:
 - ▶ Messages are no longer routed to CAN2 while in standby mode. (Ticket #216)
 - ▶ Eliminated system error generated while in standby mode when master power is enabled. (Ticket #205)
- ▶ Power & NET1 LED change: LED behavior during plug and play changed to match VMM1210/2820. The

power LED stays on solid, and NET1 flashes. (Ticket #221)

- ▶ New feature: support for optional VMMS added. It is because of this feature that the VMM System Version increased to 7.1. (Ticket #164)
- ▶ [CAN Router](#) change: a message originating from the VMM can no longer be routed from CAN 2 to 1 when CAN 2 is bus off (and vice versa). (Ticket #211)

Version 1.00 build 39 (March 29, 2010)

- ▶ VMM System Version 7.0.
- ▶ Minimum [VMMS](#) build number allowed: 722.
- ▶ Supports [VMM1615 x](#) hardware version 7.5.2 and lower.

First production release.