

BridgeWay Release Notes

Part No. AB7606
Revision 2.11
Date October 9, 2019

Files Included

The following files are included with this release.

AB7606_Update_2.11.01.nvs	NVS script file for use with BWConfig.
AB7606_Exec_2.11.01.bin	BridgeWay carrier board executive firmware image.

Upgrade Instructions

Upgrading the BridgeWay Firmware:

1. Connect the PC running BWConfig to the BridgeWay with a Null-Modem serial cable.
2. Select 'Update' from the 'Flash' menu.
3. Select the .nvs script file.
4. Complete the update; the BridgeWay will reset.

Revision 2.11.01 – October 9, 2019

Other Changes

- Updated flash memory interface to support both old and new flash hardware.

Revision 2.10.01 – January 31, 2014

Bug Fixes

- Fixed an issue where large J1939 messages over 32 bytes long would not be copied in or out of the input and output tables completely. (Issue #1390)
- The unused portion of the input data point buffer is now cleared to 0 if the received PGN message is shorter than the space configured for the input data point. This fixes issues with receiving variable length PGNs when the message length shrinks from one receipt to the next. (Issue #1391)
- The entry count in the Diagnostics Table header may indicate that there are more entries in the table than there are. An Active (DM1) or Previously Active (DM2) diagnostic table may only have 1 or 2 entries in it, but the header may indicate that there are many more. (Issue #1404)

Revision 2.09.01 – September 30, 2013

New Features

- CAN interface reset control was added to the command register. Bit 5 of the command register in the output data will cause the J1939 CAN interface to be reset when it is set. The reset occurs on the rising edge of the bit.

Bug Fixes

- Fixed an issue in the J1939_IO where data was being pulled from the message buffer, as defined in configuration, with no regard to the actual amount of data in the buffer. This left open a possibility for data corruption, or misinterpretation.
- Fixed an issue in the J1939_IO where user configurations passed the 20 data points per PGN limit were causing crashes and reboots when the BridgeWay was placed in RUN mode. Now data points over 20 are ignored.

Revision 2.08.01 – March 21, 2012

Bug Fixes

- Fixed an issue in the J1939 communications where incoming large messages could cause cyclic output message transmissions to be held off. This caused the cyclic transmission times to randomly have very large delays.

Revision 2.07.01 – August 15, 2011

New Features

- 125K baud rate is now supported on J1939.

Revision 2.06.01 – February 15, 2011

New Features

- Made the J1939 baud rate configurable. It may now be set to 250K or 500K baud.

Revision 2.05.01 – November 22, 2010

New Features

- Added offline detection to the J1939 interface. The module is now able to detect when it is no longer connected to the network or is the only node on the network. See the user manual for complete details. (CR 6454)

Bug Fixes

- Fixed an issue where the module status may indicate that it is online on J1939 after it has booted when it is not connected to the network or is the only node on the network. (CR 6435)
- Fixed an issue with the input timeout mechanism where input datapoints with non-zero update rates may not correctly indicate a timeout (FFh value) when the module is not connected to the J1939 network or is the only node on the network. (CR 6281)
- Improved cyclic message transmission performance on a loaded system. Previous releases (v2.02-v2.05) had issues with large latency and jitter in the cyclic transmission rates when the module was used in a loaded system. (CR 6337)

Revision 2.04.01 – September 23, 2009

Bug Fixes

- Fixed an issue where J1939 PGNs that are periodically transmitted (non-zero Update Rate) may stop being transmitted. When the transmission stops, a module reset is required to restart the transmission. This is especially likely on a loaded system with a lot of network activity. (CR 6225)

Revision 2.03.01 – July 9, 2009

Important Notes

- The Occurrence Count field in the J1939 diagnostic table entries now contains the SPN Conversion Method Flag in the high bit. The Occurrence Count value must be masked from the lower 7 bits. See the user manual for details on use of the Conversion Method Flag.

New Features

- The module now supports up to 35 incoming J1939 Transport Protocol (large message) sessions. Previously the module was limited to a single BAM and RTS/CTS session. (CR 6153)
- The module can now monitor up to 120 different PGNs in the Input data point configuration and transmit up to 100 different PGNs in the Output data point configuration. The previous limitation was 50 and 50. (CR 6160)
- The J1939 Transport Protocol (large message) handler now rejects incoming session requests (both BAM and RTS/CTS) for PGN/Address pairs that are not configured as input data points. Previously all large message sessions were accepted and the messages were filtered after they had been completely received. (CR 6152)
- The SPN Conversion Method Flag is now included in the high bit of the Occurrence Count field in the J1939 diagnostic table entries. See the important notes section above and the user manual for more details. (CR 6154)

Revision 2.02.01 – June 2, 2009

Bug Fixes

- Fixed an issue in the timer logic that may cause the module to hang and reset if there are a lot of I/O data points with small update rates. (CR 6128)
- Fixed an issue with cyclic messages that may cause a transmit queue overflow if the module is overloaded or offline. (CR 6130)
- Fixed an issue where messages may be transmitted before the J1939 address is claimed in the case where the module is powered up offline then is connected to the J1939 network. (CR 6131)
- Fixed an issue where the module would continue to response to address claim messages for the previous address after it has lost the address due to a higher priority claim from another module. (CR 6137)

Revision 2.01.01 – March 31, 2009

New Features

- The Modbus Timeout that is configured in the BWConfig will now control the Run/Idle mode of the module. The module will switch to Run mode when requests are received from a Modbus master. If no requests are received from the master within the configured timeout period, the module will be switched to Idle mode. This provides a safe state where J1939 messages will not be transmitted if the Modbus master is no longer online.

Other Changes

- The module now starts in Idle mode.

Bug Fixes

- Fixed an issue where J1939 messages longer than 8 bytes were not getting set correctly on a receive timeout indication.
- The Bus-Off Reset option was not being set on a reset to factory default operation, the last configuration setting was being maintained.
- The J1939 status now indicates “Offline” correctly if the module is unable to claim an address on the J1939 network.

- Fixed an issue where cyclically transmitted PGNs would continue to be transmitted if the module lost its J1939 address due to address contention on the network.
- Fixed an issue in the J1939 large message transport protocol where re-sent packets were not being handled correctly and could cause message data to be mapped incorrectly.
- The J1939 large message transport protocol now recognizes missed data packets correctly rather than waiting for a timeout on the transaction if not enough packets are sent.

Revision 1.08.01 – October 6, 2008

- Resolved internal timer issue that could impact long term contiguous operation of the module.
- Fixed an issue where PGN's with DP=1 were not being handled correctly.

Revision 1.06.01 - February 10, 2006

- Added configurable message priority for transmitted J1939 messages. The message priority of output data points can now be configured; previously all messages were transmitted with priority 6.
- Fixed a problem where fragmented J1939 messages (Transport Protocol BAM or RTS/CTS), would not be received correctly. If the datapoints associated with the fragmented message were each less than 8 bytes, the message would not be mapped into the data table correctly.

Revision 1.05.01 - March 17, 2005

- Added configurable I/O byte swapping. Previously I/O data was always byte swapped on 16-bit boundaries; now this is a configurable option.
- Added parameter timeout indication. If an input parameter is configured with a non-zero request rate, the timeout indication is enabled. If the module does not receive a message for the parameter within the configured request rate, the parameter data will be set to 0xFF.

Revision 1.04 – May 21, 2004

- Added support for J1939 DM1 and DM2 messages (active and previously active diagnostics).

Revision 1.03 – August 19, 2003

- Fixed a problem in the Modbus driver that may cause the incorrect serial port configuration to be used when used on a module that does not support configurable Modbus ports. This may result in the inability to communicate on the Modbus network.

Revision 1.02 – July 2003

- J1939 PDU type 2 messages are now supported correctly. The module was unable to transmit PDU type 2 messages; there was an issue where the PDU type 2 PGN was truncated and sent with a destination address as if it was a PDU type 1.