



PLUS+1[®] J1939 Function Block Library SDL 10104786v510

Revision History

This file contains important supplementary and late-breaking information that may not appear in the main product documentation. We recommend that you read this file in its entirety.

Version 5.10 (November 2020)

What is Included

- PLUS+1[®] GUIDE Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- This is a software package to support the J1939 Library. The following defects and features have been addressed in this release:
 - AddrClaim_Tx_Rx
 - Pseudo-random time between request reception and responding on it included.
 - Status 0x8400 by J1939 name conflict included.
 - TransProtocol_Tx
 - New parameters to support RTS/CTS and BAM communication included.
 - EJM_Rx
 - Support for signals Button 13 to 16 included.
 - EJM1_Rx
 - Support for signals Button 13 to 16 included.
 - EJM2_Rx
 - Support for signals Button 13 to 16 included.
 - DM1_Tx
 - Occurrence Count (OC) issue correction when sending invalid (greater than 127) OC values.
 - Sending of the message by changing of Device Trouble Codes (DTCs) when the amount of DTCs remains unchanged.
 - Signals Active9 to Active14 included to support up to 445 Device Trouble Codes (DTCs).
 - DM2_Tx
 - Occurrence Count (OC) issue correction when sending invalid (greater than 127) OCs values.

- Signals Active9 to Active14 included to support up to 445 Device Trouble Codes (DTCs).
- VEP1_Tx
 - Test Definitions removed.
- VF_Tx
 - Test Definitions removed.
- AT10G2
 - New function block included.
- OHECS
 - New function block included.

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 10.7 or greater

Version 5.00 (September 2019)

What is Included

- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- All blocks have had their descriptions updated to a standard look.
- The following defects and features have been addressed in this release:
 - AAI_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
 - AddrClaim_Tx_Rx
 - Fixed an issue where the block failed to respond to an address claim if it had previously failed to claim an address.
 - Improved the timing logic used in the block.
 - AMB_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
 - AT1S1_Rx
 - This function has been renamed from AT1S_Rx to AT1S1_Rx.
 - AT1T1I_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
 - BJM1_Rx
 - Improved the fault logic relating to the axis signals.
 - BJM2_Rx
 - Improved the fault logic relating to the axis signals.
 - CM1_Rx
 - Destination Address now has an allowed range of 0 to 255.
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
 - CM1_Tx
 - Added the capability to send an NA value for CabIntTempCmd
 - DM13_Rx
 - Corrected an issue where the block did not perform address filtering on the destination.
 - Corrected the time base used for clearing the hold signal, hold should now clear after 6 seconds.
 - Hold signals were held true at boot, this is no longer the case. The block now requires a message before a hold is activated.
 - Byte 3 in the message had the upper and lower nibble flipped resulting in an issue with the hold and suspend signals.
 - DM1_DM2_Tx_Rx
 - Added the TP_Priority signal to allow for a different priority when sending transport protocol messages.
 - DM1_Tx

- Added functionality that allows On-Change of Active bits to send a message sequence, only one message sequence will be sent between normal repetition.
 - Added the TP_Priority signal to allow for a different priority when sending transport protocol messages.
- DM2_Tx
 - Added the TP_Priority signal to allow for a different priority when sending transport protocol messages.
- EEC1_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EEC1_Tx
 - Corrected an issue where invalid parameters did not trigger a status flag.
- EEC2_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EEC3_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EFL_P1_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- EJM1_Rx
 - Improved the fault logic relating to the axis signals.
- EJM2_Rx
 - This was previously set to receive EJM1, it is now corrected to receive EJM2.
 - Improved the fault logic relating to the axis signals.
- ET1_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- ET2_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero
- ET3_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- ETC1_Rx
 - Added High Resolution outputs for TrnInShfSpd and TrnOutShfSpd.
- ETC2_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- IC1_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- NACK_Tx_Rx
 - Corrected Byte 1 of transmitter. Group function is now set to 255 instead of 0.
- TD_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- Transport_Protocol_Tx
 - Corrected an issue where BAM timing would switch from 50 ms to 1 ms.
 - Corrected an issue where high bus loads would cause messages in queue to be overwritten and lost.

- TRF1_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- TSC1_Tx
 - Added additional parameters to disable the checksum and counter used in the message.
 - Added additional parameters to set the disabled values of speed and torque.
 - SPN 3350 incorrectly declared a status fault when values were set to a reserved value. The block no longer triggers a status fault in this condition.
 - Improved the description of EngReqTorq_HiRes to reduce confusion.
 - SPN 4191 can now be set to a Not Available value.
- VDS_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- VEP1_Rx
 - This function has been renamed from VEP_Rx to VEP1_Rx.
- VF_Rx
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- VP1_Rx
 - This function has been renamed from VP_Rx to VP1_Rx.
 - Corrected SLOT handling, on NA or Fault, Data will switch to zero.
- 29 new function blocks are introduced in this version.
 - A1DEFI1_Rx
 - A2DEFT1I1_Rx
 - ACCS_Rx
 - ACK_Tx
 - AT1S2_Rx
 - BJM_Rx
 - CA_Parser
 - CI_Parser
 - CM2_Tx
 - DLCC1_Rx
 - DM3_Rx
 - DM4_Parser
 - DTC_Parser
 - EC1_Parser
 - EJM_Rx
 - EOI_Rx
 - ERC1_Rx
 - PGN_Rx
 - PGN_Mask_Rx
 - PGN_Tx
 - SCRSC_Rx
 - Select_TP_Msg
 - SEP1_Rx

- Store_TP_Msg
- TP_BAM_Rx
- TP_RTS_CTS_Rx
- VEP1_Tx
- VF_Tx
- VIN_Parser

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 10.1 or greater

Version 4.00 (June 2016)

What is Included

- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- Support for Professional Licensing.

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 8.1 or greater

Version 3.02 (December 2012)

What is Included

- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- 2 new function blocks are introduced in this version for Tier IV engine support:
 - CM1_Tx
 - CM1_Rx
- The following defects are addressed in this release:
 - DM1_Tx
 - Internal checkpoints were not removed before the previous release, resulting in compiler warnings. These checkpoints have been removed.

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 5.1 or greater

Version 3.01 (September 2012)

What is Included

- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- The following defects are addressed in this release:
 - BJM1_Rx, BJM2_Rx, EJM1_Rx, EJM2_Rx
 - The default timeout was equal to the maximum transmission interval for these messages. This timeout value was increased from 100 to 250 ms.
 - User Manual
 - Certain fonts did not appear correctly for all users. Special fonts are now embedded in the pdf document.
 - DM1_Tx
 - When multiple trouble codes were active and the enable is constantly true the DM1 message was not always transmitted. This defect has been corrected.
 - Req_PGN_Rx
 - The PGN was misinterpreted if its input was not a U32 data type. The software is updated to handle all integer types.
 - EEC1_Tx
 - The PGN shown on the inner function block was incorrect. This has been fixed.

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 5.1 or greater

Version 3.00 (March 2012)

What is Included

- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- 30 New function blocks including support for messages commonly used Tier IV Emissions Compliant systems and support for new Sauer-Danfoss products.
 - AT1S_Rx
 - AT2S_Rx
 - DPFC1_Rx
 - EBC1_Rx
 - EEC3_Rx
 - ET2_Rx
 - ET3_Rx
 - ETC5_Rx
 - SHUTDN_Rx
 - TCO1_Rx
 - TD_Rx
 - VDS_Rx
 - VP_Rx
 - WFI_Rx
 - CCVS1_Tx
 - DD_Tx
 - DPFC1_Tx
 - EBC1_Tx
 - EEC1_Tx
 - ETC2_Tx
 - ETC5_Tx
 - SHUTDN_Tx
 - TRF2_Tx
 - WFI_Tx
 - Req_PGN_Rx
 - Req_PGN_Tx
 - DM1_Tx
 - DM2_Tx
 - PMI_Tx_Rx
 - TransProtocol_Tx
- 12 Updated function blocks with defect fixes, protocol updates, and new features
 - DM1_Rx
 - Changed the lamp interface and added support for fast and slow blink patterns introduced in newer versions of J1939-73.
 - Optimized areas for RAM use.
 - Improved transport protocol session handling with more accurate rejection of packets received out of session.
 - Adjusted internal timeouts to match transport protocol specifications.
 - Fully support DM1 messages with 0xFF or 0x0 indicating no active faults, lamp states were previously not updated.
 - DM2_Rx
 - Changed the lamp interface and added support for fast and slow blink patterns introduced in newer versions of J1939-73.

- Optimized areas for RAM use.
- Improved transport protocol session handling with more accurate rejection of packets received out of session.
- Adjusted internal timeouts to match transport protocol specifications.
- Fully support DM2 messages with 0xFF or 0x0 indicating no previously active faults, lamp states were previously not updated.
- DM1_DM2_Tx_Rx
 - Changed the lamp interface and added support for fast and slow blink patterns introduced in newer versions of J1939-73.
 - Added DM1 request support
 - Added periodic broadcast of DM1 when no faults are active as defined in newer versions of J1939-73.
 - Fixed DM2 response to requests when DM1 transport session is active.
 - Now prevents DM3 acknowledgment when request was sent to global address.
 - Corrected DM3 acknowledgement message content.
- Addr_Claim_Tx_Rx
 - Added Enable input, allows delayed address claim to be determined by the application.
 - Added Force input, allows the application to respond to its own PGN request for NAMES (claimed addresses).
- AMB_Rx
 - Fixed incorrect comment for the RoadSurfaceT data type.
 - Names_Rx
 - Increased performance on receiving NAME messages. Now up to 4 responses can be received in a single application loop.
- TSC1_Tx
 - Changed the default message priority from 6 to 3, matching the recommended default.
 - Added support for additional signals introduced in newer versions of J1939-71, SPNs 3349, 3350, 4191, 4206, 4207.
 - Addressed defect by setting unused bits in the CAN message to true.
- LFE_Rx
 - Fixed incorrect comment for the EngineInstEcon and EngineAvrgEcon units.
- DD_Rx
 - Added support for additional signal introduced in newer versions of J1939-71, SPN 38.
- ETC1_Rx
 - Added support for additional signals introduced in newer versions of J1939-71, SPNs 4816, 5015.
- FD_Rx
 - Added support for additional signals introduced in newer versions of J1939-71, SPNs 4211, 4212.

- LFI_Rx
 - Added support for additional signal introduced in newer versions of J1939-71, SPN 5458.

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 5.1 or greater

Version 2.22 (June 2009)

What is Included

- PLUS+1 GUIDE® Function Blocks (In SDL)
- User Manual (In SDL)

What is New

- DM1_DM2_Tx_Rx function block issue resolved: Messages transmitted during high bus load can cause continual transmission of messages.
- DM1_DM2_Tx_Rx function block issue resolved: Notes contained within the function block gave incorrect values for the lamp codes. Also, additional lamp codes are provided per the updates to J1939-73.
- DM1_Rx function block issue resolved: Improper parsing of SPN values from alternate conversion methods.
- DM2_Rx function block issue resolved: Improper parsing of SPN values from alternate conversion methods.

Known issues

- None

Minimum Requirements

- PLUS+1 GUIDE 4.1 or greater

Support

Web

<https://www.danfoss.com/en/products/software/dps/plus1-software-services-support-and-training/plus1-support-and-services/>

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