

Revision Information V2.4.0.1412 Automation Runtime SG3 Update (V2.36

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B&R Revision Information (23-Jun-2004)

V2.4.0.1412 Automation Runtime SG3 Update (V2.36)

The most current revision information can be downloaded from the B&R Homepage download area (<http://www.br-automation.com/download>).

1A4000.02 Automation Runtime

AR – C2xx

ID#81460 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1406 [AR-X6.10]

Errors 9199 and 7012 during AR boot

Faulty handling of IRQs may cause errors 9199 and 7012 when booting AR. These errors only occur when the serial interface is receiving data.

AR – CP476

ID#88870 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1410 [AR-X6.14]

MAC ID changes

Repeatedly turning the CP476 (ME020 with IF681) on and off may cause the MAC address to be read incorrectly. This incorrect MAC ID causes the target to no longer be "found" by other communication stations (ARP table no longer matches).

AR – General SG3

ID#89155 : solved problem, known since V2.4.0.0008, solved since V2.4.0.1409 [AR-X6.13]

Sysconf settings can lead to overlaps of the system and user areas

If Sysconf settings are made which define the respective system areas as very large, this may cause the system and user areas to overlap causing different kinds of errors (checksum errors, etc.).

ID#83535 : solved problem, known since V2.4.0.1403, solved since V2.4.0.1404 [AR-X6.00]

Deleting individual BR modules

For targets CP260, IF260 and CP476, it is possible that individual BR modules cannot be deleted from the target when requested explicitly. Deleting whole memory ranges does not cause problems.

ID#76595 : solved problem, known since V2.4.0.7001, solved since V2.3.0.1406 [AR-X5.90]

Powerlink time task class can never be interrupted

Setting the priority of a Powerlink timer taskclass has no effect on its ability to be interrupted --> the Powerlink timer task class can never be interrupted.

ID#14971 : solved problem, known since V2.2.1.1404, solved since V2.4.0.1401 [AR-X5.91]

Crash when transferring a project with DHCPclient

If a project is transferred which has a DHCP client configured, the target crashes with error entry 9106 "EXCEPTION: Unimplemented Instruction" after fbtcpip.br and ethernet.br are transferred.

ID#83925 : known problem since V2.4.0.9503, correction planned for V2.4.0.1404 [AR-X6.00]

PG2000 V2.44 with AR V2.34

When using the AR V2.34 with PG2000 V2.44, the online services long longer function correctly with CP476, IF260 and CP260 targets. For example, all modules are shown under one system and RAM is always entered as target memory in the PLC Monitor.

AR – PPxx

ID#90675 : solved problem, known since V2.4.0.9444, solved since V2.4.0.1409 [AR-X6.13]

4EX101.01 recognized as a 4EX101.00 during a hardware upload

A 4EX101.01 is recognized as a 4EX101.00 during a hardware upload.

AR – XP152

ID#92775 : solved problem, known since unbekannt, solved since V2.4.0.1410 [AR-X6.14]

3XP152.60-2 boot problem (outputs set)

Faulty accessing while the XP152.60-1 is booting may cause all digital outputs of the modules located on the backplane to be reset.

Library – CANIO

ID#80335 : solved problem, known since V2.3.0.0009, solved since V2.4.0.1409 [AR-X6.13]

Error if tasks are overloaded with CANIO PVs

If there is an overload of tasks that use CANIO PVs, a bus error can occur on SG3 targets.

ID#71230 : new function since V2.4.0.1401 [AR-X5.91]

Expanded CANIO X67 support

- Increase in the number of possible analog modules from 12 to 16
- Freely selectable slots for analog modules (modules no longer have to be placed in the first slots)
- Increase in the number of possible digital modules from 8 to 28
- Elimination of "virtual" modules

ID#90530 : known problem since V2.3.0.0010, correction planned for V2.4.0.1410 [AR-X6.14]

Outputs temporarily set after disconnecting and reconnecting the CAN bus (to the CPU)

If CAN objects are passed along to the CAN chip, they are stored in a queue. If the CAN cable is disconnected, additional CAN objects cannot be sent on the bus and the CAN chip retains the objects already in its queue. If the cable is then reconnected, these CAN objects are sent.

This can lead to a problem e.g. when using CANIO, CAN objects still in the CAN chip do not represent the desired output states at the point when the cable is removed (problem occurs since the CANIO node is still configured at the time the cable is connected).

To solve this problem, the CANIO master now sends a start signal which lets the CANIO node know when to apply the corresponding output data. CANIO nodes need to be used with the appropriate firmware for this.

!!WARNING!! (possible source of problems)

Having the CANIO master use a start signal means that it has to detect every time a CANIO slave fails so that a corresponding restart can be triggered. This can be problematic since the default timeout of the CANIO slave is 640 ms and the timeout for slave monitoring on the CANIO master is 3 s (1000 ms I/O timeout x 3 (number of retries)). In other words, if the communication between the master and slave fails for e.g. 2 seconds, the slave has already detected that the master is no longer responding and discards its outputs accordingly. On the other side, the master doesn't recognize the loss of communication to the slave because of its higher timeout and therefore doesn't send a new start signal.

To correct this problem, the default settings for the CANIO master or slave node must be changed so that the CANIO master at least recognizes a communication loss at the same time as the slave.

Library – Ethernet

ID#94725 : new function since V2.4.0.1410 [AR-X6.14]

SMTPxSendMail()

The new SMTPxSendMail() function block now allows targets to send emails with attachments.

Library – IF361

ID#93710 : solved problem, known since V2.4.1.0004, solved since V2.4.0.1410 [AR-X6.14]

The status 5556 is returned if local variables are stored in the UserRam

If the local variables which are connected to the IF361 FBK are stored in the User-Ram, the FBK returns the status 5556 when called (incorrect address data_adr given). This problem does not occur if the local variables are stored in the memory pool.

Library – INAcient

ID#77445 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1401 [AR-X5.91]

Page fault when downloading modules if a PV is registered whose name is too long (SG4)

If a task is loaded to the INA server while an INA client is reading a variable with a long name, the target crashes with Error 25314 "Page Fault".

Library – IOConfig

ID#66415 : solved problem, known since V2.2.1.1404, solved since V2.4.0.1401 [AR–X5.91]

IOC2003() or IOCGeneral() – initialization after a warm restart

If the IOC2003() or IOCGeneral() FBK is called cyclically and FBK memory is remanent, problems are caused after a warm restart. The FBK continues at the same internal step. This means that e.g. IO_data() may be called with an old, now invalid Ident and Error 5576 "Error for Direct I/O" is returned.

ID#60190 : solved problem, known since V2.2.0.1402, solved since V2.4.0.1403 [AR–V2.34]

X350 – IOCGeneral.status = 5556

The IOCGeneral() FBK always returns status 5556 "incorrect address data_adr given" if an EX350 is inserted into the system.

Library – LoopConR

ID#95190 : solved problem, known since unbekannt, solved since V2.4.0.1410 [AR–X6.14]

Error corrections LCRPID()

LCRPID():

–Override value A is still limited to Y_min and Y_max in manual operation. This influenced the value of Yi when Y_min was changed. Changed to limit +/- 100%.

–If the paramter "invert" = TRUE (inverse mode), the derivative element was not correctly calculated in several cases. Especially with D_MODE_X, the derivative element normally set out in the wrong direction.

–The deadband now works as follows: The actuator signal is frozen when it enters the deadband range as if the controller had been switched to

LRCPID_MODE_MAN_JOLTFREE (with Y_man = Y). If the integral element is configured, the actuator signal freezes only when the control deviation "e" reaches zero after entering the deadband or the sign changes. When exiting the deadband, control takes place again without jolting.

ID#78000 : solved problem, known since V2.3.0.1407, solved since V2.4.0.1401 [AR–X5.91]

Version conflict when downloading the LoopConR library to SG3 targets

A version conflict occurs when trying to load the LoopConR library in an SG3 project to the target.

Library – LoopCont

ID#83751 : solved problem, known since V2.4.0.1351, solved since V2.4.0.1410 [AR–X6.14]

Value of tick_count shifted one cycle

The value of the tick_count is one cycle behind. The value can be read using the SYSInfo() FBK.

ID#85740 : new function since V2.4.0.1410 [AR–X6.14]

LCPIDpara() changes

LCPIDpara():

In CALCMODE_EXACT, a large Tv (> 65,535) may cause an error. Determining the internal prescaler value was therefore changed so that a large Tv value is also considered along with a large Tn value.

Kp may now also be less than 1.

Because of this, the following limits/error conditions have been added:

- The Kp/Tn precalculated by LCPIDpara() had to be limited to $4 * 2^{-16}$ when using extreme values to avoid error functions. This takes place silently without any warnings or error messages.

- The Kfbk/Kp precalculated by LCPIDpara() had to be limited to $4 * 2^{-16}$ when using extreme values to avoid error functions. The condition for the error message

LC_ERR_LCPID_PAR_KFBK is now:

(NOT((Kfbk/Kp >= $4 * 2^{-16}$) AND (Kfbk/Kp <= 32767))).

Library – PowerLnk

ID#78345 : solved problem, known since V2.3.0.1315, solved since V2.4.0.1407 [AR–X6.11]

Using Powerlink on PP devices causes a timeout during booting

The long booting process when using Powerlink on PP devices can cause a timeout in communication between the CPU and the PP. This is noted accordingly with the following entry in the error logbook:

9501 "PPMAN: Timeout in CPU PP boot handshake".

ID#77177 : new function since V2.4.0.1407 [AR–X6.11]

SG3: IF firmware version not checked

The Powerlink library doesn't check the version of the IF firmware. Necessary functionalities of the IF firmware (old version) may not be available.

Library – SYS_lib

ID#74235 : solved problem, known since V2.3.0.1401, solved since V2.4.0.1403 [AR–V2.34]

ERRxread() overwrites memory

Using ERRxread() writes over the connected structure which results in other data being overwritten.

System Modules – FBINACAN

ID#82215 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1409 [AR–X6.13]

INA CAN communication doesn't work for PP15/PP35

Due to faulty IRQ acknowledgement, INA CAN communication doesn't work for PP15/PP35 targets.

ID#76240 : solved problem, known since V2.3.0.0009, solved since V2.4.0.1403 [AR–V2.34]

INACAN connection doesn't work after booting the target

If another station is used to try to establish an INACAN connection to a target while it's booting, the INACAN connection may not occur and various errors are entered into the error logbook.

These errors can be:

14827 "FBCAN: Receive Callback Overrun"

8840 "INA2000 CAN: No Rx Buffer Free"

System Modules – MCIimage

ID#77980 : new function since V2.4.0.1403 [AR-V2.34]

MCIimage update

MCIimage now supports a new mode whereby the active modules in SYSROM and USRRAM are saved or restored. This functionality is useful when it is not necessary to backup data in USRRAM or PV values.

This new mode can be applied with switch settings 0xF2 and 0xF3.

In addition, some changes were made to MCIimage which minimize the danger of losing Automation Runtime on target when a powerfail occurs during the update procedure (MEMCARD to CPU).

System Modules – MEMCARD Manager

ID#79895 : solved problem, known since unbekannt, solved since V2.4.0.1403 [AR-V2.34]

Erasing USRRAM not possible after second update

System Modules – Profiler

ID#90275 : solved problem, known since V2.4.0.1408, solved since V2.4.0.1410 [AR-X6.14]

Memory hog during booting (SG3)

Due to an initialization problem, free USRRAM is decreased by 4,288 bytes during each warm restart. This memory can be released once again after a cold restart.

ID#89355 : solved problem, known since V2.4.0.1008, solved since V2.4.0.1409 [AR-X6.13]

DVFrame library doesn't work if the Profiler is active

The DVFrame library doesn't work after a warm restart on a system where the Profiler is active (e.g. Profiler is stored in USRRAM).

ID#93265 : new function since V2.4.0.1410 [AR-X6.14]

Profiling data remains in the event of error (cycle time violation)

Due to a Profiler update, profiling data now remains past a boot (e.g. in the event of a cycle time violation error).

SG4:

If a reset is triggered during profiling (e.g. cycle time violation, etc.), the present data is

saved and is still available after a reboot (power failure is an exception since there isn't enough time to save the data).

SG3:

On SG3 targets, profiling data is stored in USRRAM, which basically preserves it after a reboot (exception: cold restart). The difference to SG4 targets is that not only active Profiler recordings are saved, but already existing recordings also remain after a reboot.

System Modules – tcpipdrv

ID#95295 : solved problem, known since V2.4.0.1410, solved since V2.4.0.1411 [AR–X6.15]

AR update doesn't work

Due to an error in the TCPIPDRV memory management, the AR update may fail (address error, etc.).

ID#90670 : solved problem, known since V2.4.0.1407, solved since V2.4.0.1410 [AR–X6.14]

4EX101.01: Changes on the node number switch are not detected during warm restart

Any changes made to the node number switch on the 4EX101.01 are only accepted after a cold restart, and not after a warm restart (as is normally the case).

ID#79610 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1406 [AR–X6.10]

System cycle time violation when using UDP communication

An error initializing the SG3 Ethernet driver may cause Error 6002 "System cycle time violation/Total time bottle-neck in system ".

ID#77335 : solved problem, known since V2.4.0.0009, solved since V2.4.0.1401 [AR–X5.91]

CP260 goes into Service Mode if INA Ethernet communication is in effect during booting

If attempting to establish an INA connection over Ethernet to a CP260 while it is booting, it will boot into Service Mode.

ID#78810 : new function since V2.4.0.1407 [AR–X6.11]

Support of 4EX101.01

Support of 4EX101.01

1A4000.02 Automation Tools

Version Changer

ID#86850 : solved problem, known since V2.5.0.7002, solved since V2.5.0.7003

Not all registry keys described in the help system

Not all registry keys which need to be enabled are described in the help for the Version Changer.

ID#83335 : solved problem, known since V2.4.0.0009, solved since V2.5.0.7002

Changing versions without administrator rights not possible

Changing versions is not possible for users who do not have administrator rights.

ID#83280 : solved problem, known since V2.4.0.0010, solved since V2.5.0.7001

Help button not activated

If the Version Changer is started, the Help button is not activated. It is also not possible to start Help with the F1 key.

ID#82605 : new function since V2.5.0.7001

Display of upgrade versions

In addition to the installed full versions, the upgrade versions are also displayed in the tree view. Furthermore the active version can be started right from the dialog.