

AML Management Unit

Release Notes

Version 3.12

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Version 3.12 AMU Release Notes

This release notes cover the release of the AML Management Software (AMU) Version 3.12. For more information, call the ADIC Technical Assistance Center at:

- 1.800.827.3822 (outside of Europe and Japan)
- 00.800.9999.3822 (Europe and Japan)

For Your Safety



WARNING:

AMU SENDS TIME CONTROLLED COMMANDS TO ITS ROBOTS. WHEN STARTING AMU, MAKE SURE THAT NO PERSON, NO ARMS OR HANDS, ARE PLACED INSIDE THE STORAGE DEVICE. THE AMU SENDS COMMANDS INDEPENDENT OF THE HOST SOFTWARE RUNNING ON THE SYSTEM.

Requirements

The CD-ROM of this AMU version is a complete version, which does not require a previous version of AMU software. AMU 3.12 can replace all previous installed AMU versions.

The following software releases are required:

Software	Version	DCI Requirements
AML/2 control unit	2.20D or higher	Standard gripper
	2.30D or higher	Parallel gripper
AML/E control unit	2.20D or higher	Standard gripper
	2.30C or higher	Parallel gripper
AML/J control unit	2.40D or higher	
DAS	3.12 or higher	UNIX, OS/2
ROBAR	V2.5 or higher	V3.02 recommended
HACC/OS400	V2.2 or higher	
HACC/MVS	3.0 PTF ZY30015	older version does not support the DUAL- and CLEAN function
TwinATL	S0308D20 or higher	

Other host application software version prerequisites do not apply.

System Hardware and Software

Hardware/software	Requirements
Processor	min. Intel Pentium 350 MHz
Memory	min. 64 MB RAM (128 MB recommended, required for systems with 2 or more hosts)
Hard disk	min. one hard disk with 850 MB free space (2 hard disks recommended)
Operating system	OS/2 4.0 with fixpack 15, MPTS 6.0, and TCP/IP 4.31
Database manager	IBM DATABASE 7.01
Communication	TCP/IP 4.31
Data Switch (only AML/2 and AML/E with Dual AMU)	Automatic Data Switch The Manual Data Switch, previous used for Backup AMU is no longer supported on AML/2 and AML/E.

Software and Hardware Dependencies

Special cases are described in table 4. If the actual case is not a part of table 4 please look in table 1-3 for general cases.

If information about AMU and DAS is needed for special cases please use table 1 in addition to table 4.

For the general cases please use Table 1, Table2, and Table 3.

Table 1 AMU Hardware General Dependencies

AMU	DAS	HACC/MVS	Robot SW AML/2	Robot SW AML/E	Robot SW AML/J	AMU HW
>= 2.4i ; <= 3.0	1.3x	2.4 or >= 3.00	>= 2.30D or >= 2.20D	>= 2.30D or >= 2.20D	>= 2.40D	>= 486, >= 16 MB
>= 3.0	3.x	PTF ZY300012	>= 2.30E or >= 2.20F	>= 2.30E or >= 2.20F		>= P120, >= 32 MB
>= 3.11	>= 3.11	3.00 + PTF ZY300015				>= P350, >= 64MB

Table 2 Gripper Dependencies, AML/J Systems

Gripper	Robot SW	Eprom	AMU
V0 (201000060)	≥ 2.4D	V 1.2 od. V 1-3	≥ 2.4i
V1 (201001140)			
V2 (201001300)	≥ 3.0	V 2.2, V 3-3 od. V 3-4	
V2 (201001980)			
V2 (201002869)	≥ 4.01	V 4-4	
V2 (201003500)		V 5-5	

Table 3 Gripper Dependencies, AML/2 and AML/E Systems

Gripper		Robot SW	AMU
3480	V1 (401000700)	2.2 or 3.0	≥ 2.4i
	V2 (401002100)		
	V3 (401004840)		
MM	V1 (401001220)		
D2	V1 (401003090)		
	V2 (401004050)		
PS	V1 (401004930)	2.3 or 3.0	
	V2 (401002021)		
	V3 (401002093)		
PL	V1 (401004920)		
	V2 (401002019)		
	V3 (401002092)		
PW	V1 (401002235)		≥ 2.3G
	V2 (401003600)		

Table 4 Special cases for drive and media integration

Medium	Drive ^a	Gripper (with Eprom)		Robot Software		AMU	DCI
		I/J	I/2 + I/E	I/J	I/2 + I/E		
9840	9840 TX30	V4 (with V4-4)	PL / PS / PW	≥ 4.01	≥ 2.3G	≥ 2.4i	no
DLT	7001S LP + 8001S LP		PL / PS / PW	≥ 4.03	≥ 2.3G4	≥ 3.1	>V2
AIT 1+2	all AIT LP	V3 (with V3-4) V4 (with V4-4)	PL / PS / PW		2.3 or 3.0	≥ 2.4i	no
D2M	all D2	V4 (with V4-4)	PL / PS / PW	≥ 4.01	≥ 2.2	≥ 2.4i	no
DTF-L	all DTF	V4 (with V4-4)	PL / PS / PW	≥ 4.01	2.3 or 3.0	≥ 2.4i	no
Betacam-L	all Betacam	V4 (with V4-4)	PL / PS / PW	≥ 4.01	2.3 or 3.0	≥ 2.4i	no
DVCPro-L	Panasonic AJ-D960	V4 (with V4-4)	PL / PS / PW	≥ 4.11	≥ 2.30H	> 3.10D	no

Table 4 Special cases for drive and media integration

Medium	Drive ^a	Gripper (with Eprom)		Robot Software		AMU	DCI
		/J	/2 + /E	/J	/2 + /E		
LTO Ultrium1	IBM 3580 LTO LP	V5 (with V5-5)	PW V2 (401003600)	>= 4.11	>= 2.30H	> 3.10D	>V3

a. Drive type see in list of supported drives

Table 5 Drive-to-AMU and DCI compatibility

Medium	Drive ^a	Firmware	DCI	AMU
AIT-1	SDX-300	04E5	4	3.11
AIT-2	SDX-500	0200.cy10	4	3.11
AIT-3	SDX-700	0103.cy10	4	3.11
DLT IV	DLT 7000 LP	107	4	3.10
	DLT 8000 LP	80	4	3.10
SDLT	SDLC 220	70	4	3.11
3590	3590 B1A		4	3.11
	3590E1A		4	3.11
LTO-1	Ultrium TD1	3481	4	3.11
LTO-2	Ultrium TD2 SCSI	34X0	4	3.11
	Ultrium TD2 FC	34X0	4	3.12

a. Drive type see in list of supported drives

Updates

Updates of any of these products should be performed by authorized and trained personnel.

Update from AMU 2.40, AMU 3.02, AMU 3.10, and AMU 3.11

If the correct prerequisites have already been installed, an update to AMU 3.12 may be performed by trained customer personnel.

AMU Installation Program

This AMU 3.12 Release can be used to upgrade existing AMU systems, to fix current bugs, or to enable you to use the latest supported hardware/drives. To install or upgrade please use *Install.cmd* script.

Installation

To install the AMU version 3.12, perform the following steps:

- Step 1** Check the correct level of your system software with the command `syslevel` (MPTS, DB/2). AMU version 3.12 requires Database Manager 7.01 and MPTS Fixpack 6.0; without them, the AMU software cannot be installed.
- Step 2** If you install an update, stop the current processing. Run shutdown AMU. If you run an initial installation, begin with step 5.
- Step 3** Open an OS/2 window.
- Step 4** Insert the AMU-Software CD-ROM in the installation directory
- Step 5** Run the Install program and follow the instructions
- Step 6** Accept the computer restart when it is requested.



NOTE: Do not interrupt the installation process. This may lead to undefined conditions and problems with the database.

Deinstallation

During the installation, the previous AMU version, if present, was saved into backup directories. Selecting the corresponding option from the installation program menu allows you to deinstall the AMU Version 3.12 and restore the previous installed AMU Version:

- Step 1** Stop the operation of the AML Management Software. (Host commands *ROSO* and *HOLD*, or DAS commands *Robhome* and *Shutdown*). Select "Shutdown AMU" from the AMU User Interface.
- Step 2** Insert the first diskette of AMU Software into the diskette drive or CD-ROM in the CD-ROM drive.
- Step 3** Open an OS/2 window and change to install drive (e.g A:).
- Step 4** Type "Install" and press <ENTER>.
- Step 5** Select the deinstallation option from the installation menu.

Wait until the deinstallation process is completed.

Changes and Updates

This section contains information about changes performed in various versions of AMU system.

AMU 3.12



NOTE: AMU 3.12 is required for DAS 3.12 and vice versa.

Fixed Bugs

Table 6 Bugs fixed in AMU 3.12

Related Ticket	Explanation of Changes
PR105	Error in menus and help files. Some lexical errors in dialogs and on-line help
PR108	Fix for "AMU looping". On Dual-AMU configuration AMU can go in infinitive loop when it receives a wrong ABBA/1 command. In this case AMU will resend this command to itself forever. Fixed in AMU3.11H3
PR114	AMU sends too short answer to ROBAR. AMU sends wrong command in ABBA/2 format to ROBAR host which expects only ABBA/1 format commands. Because of this, ROBAR terminates. Fixed in AMU3.11H5
PR122	AmuSave.cmd fails when the output data doesn't fit on floppy. AmuSave is used to get configuration information from the customer system. Normally it puts data on the floppy but when it doesn't fit, AmuSave does nothing. The fix for this is to pack the data via pkzip. Fixed in AMU3.11H2 and in AMU3.11H5
PR123	Sequence number has been used twice. This situation can happen when the robot has the cartridge in the gripper and a DAS command arrives. Under this condition the DAS command will be answered with code 1122 -- "sequence number has been used twice" and this command will stay in AMU queue, thus producing this message every 1000 DAS commands. Fixed in AMU3.11H4
PR124	Error "DIM: error reading configuration data for drive T02". This message was caused by memory corruption. This can be manifested under the following conditions : DCI device has KEEP in progress and MOUNT arrives (MOUNT becomes pending). After this, the bug in CanLib can corrupt the preceding commands. Fixed in AMU3.11H4
PR125	Pending MOUNT can fail if cleaning started (on DCI device). Fixed in AMU3.11H4
PR127	MOCL in cleaning process. Normally AMU should queue mount command when drive is cleaning. However it did not for MOCL-initiated drive cleaning. Fixed in AMU3.11H3

Table 6 Bugs fixed in AMU 3.12

Related Ticket	Explanation of Changes
PR128	'Frozen' command queue. There can be a situation (not often) when the AMU command queue hangs. In this state AMU accepts the commands (from host or DAS) but doesn't issue any command for robot. This state can be as long as 15 minutes. Fixed in AMU3.11H2
PR129	HOC tcp/ip sockets leak. Under some customer configurations
PR130	Trap in BUD module. When there is no available socket (see PR129), BUD can trap on allocating the new connection. Fixed in AMU3.11H1
PR131	'Hanged' KEEPs. Under some conditions (MOUNT, pending KEEP and cleaning combination) the pending keep can 'hang'. Fixed in AMU3.11H1
PR132	HOC AMU-to-AMU connection. There was an error in AMU-to-AMU connection. It accepted only ABBA/2 commands. If the link from active AMU to host is lost, then AMU-to-AMU link would be used to transfer ABBA/1 commands. In this case these commands can be corrupted during the transfer. Fixed in AMU3.11H5
PR133	Error when accessing DCI drives on systems with more than 1 DCI unit. Fixed in AMU3.11H1
PR135	There was an error in installation script of AMU3.11. It led to inability to update database binding during upgrade and requires a manual intervention.
PR150	Thread leaking in Dual-AMU in some wrong configurations
PR153	Trap in AMU GUI when in drive's description is entered with more than 30 chars.
PR155	ACOM shows the incorrect status of AMU/AMU connection when active AMU was shut down
PR159	Sometimes AMU closes with error at the time of changing parameters for interfaces.
PR181	Service - Dual-AMU: Option Activate this AMU doesn't work
PR192	Switching between AMUs should not be allowed if switch on ADS is in a position different from AUTO.

Improvements

Table 7 Improvements in AMU 3.11

Related Ticket	Explanation of Changes
PR120	Installation script should check for active AMU/DAS during installation/upgrade process and terminate upgrade if necessary
PR133	Improved configuration handling for CanLib. On some customer configurations there are some non-DCI type drives connected to the DCI unit. This fix is a wrap-around for such configurations. Fixed in AMU3.11H1
PR142	Support of LTO-2 FibreChannel drives (as DCI-connected). The FibreChannel-related parameters should be set from AMU GUI (FC AL address, WorldWideName). Also FC-related information should be available in AMU GUI (FC Status etc.)
PR151	Some improvement for BUD

Table 7 Improvements in AMU 3.11

Related Ticket	Explanation of Changes
PR152	Media Identifier settings should be changeable from AMU GUI

Configuration changes

Support of LTO-2 FibreChannel drives (as DCI-connected) added in AMU 3.12.

AMU 3.11



NOTE: AMU 3.11 is required for DAS 3.11 and vice versa.

Table 8 Changes in version 3.11

Related Ticket	Explanation of Changes
PR205	Drive Control Interface extension AMU 3.11 supports new drives as DCI-connected. Now AIT-1, AIT-2, AIT-3, Super DLT and IBM 3590 drives are supported as well as Quantum DLT and IBM LTO. All new drives (except Super DLT) require DCI unit with firmware version 4. IBM 3590 drive also require a special connection cable.
PR206	GUI information about DCI-connected drives Now status information about each DCI-connected drive can be viewed in AMU graphical configuration. Also DCI unit information (firmware version and status) can be viewed there too. To look on DCI unit information, please double click on DCI interface icon. To look on drive status information, please open drive dialog box and then click on "HW info" button.
PR207	ADIC Common Barcode Label Support (media identifier) Now AMU supports the LTO, DLT and AIT cartridges with media identifier (or checksums for AIT cartridges).
PR208	Additional Logwrites for AML/J support

Configuration changes

AMU 3.11 supports new drives Super DLT (DR) and AIT-3 (DC).

AMU 3.10



NOTE: AMU 3.10 is required for DAS 3.10 and vice versa.

Version 3.10E

Table 9 Changes in version 3.10E

Related Ticket	Explanation of Changes
	New Function: AMU version will be shown in the AMU log
	New Function: The AMU checks for configurations with wrong load modules (only functional working combinations will be allowed and started)
ET90532	<p>New Function: Drive serial number. Assign serial numbers for the drives. ACI applications can access this information. The "Drive Configuration" dialog box (Admin->Configuration and double-click on any drive) was extended. Now at the bottom of this box is an additional field "Drive's serial number" and additional button "HW info" -- "Hardware information" can be seen. Field "Drive's serial number" is available for reading/changing and it can be used to assign any sequence up to 50 characters. Button "HW Info" will be enabled only for DCI drives and in this release its functionality is not implemented.</p>
ET36851	<p>New Function: Additional pushbutton to reset Trace Buffer Now a "Clear" button can be seen in the "Trace" window and it can be used to reset the trace buffer.</p>
ET43402	<p>New Function: AMU should use old clean cartridges first Now the AMU will look at the use-count of clean cartridges to select those with the highest use-count (but not higher than watermark)</p>
ET44142	<p>New Function: Repeat the NTFY 1339 in intervals until communication is OK. After a link between AMUs in a Dual-AMU configuration was lost, each AMU would issue notification 1339. Now this notification can be repeated in intervals until communication is restored. To configure this, an additional field "Dual AMU link lost" in the "Process Configuration" dialog box (menu Admin -> Process Configuration can be used. The default value for this field is blank, which is the old behavior (without repeat). Any number from 1 to 120 minutes can be entered in this field. Changes (after hitting OK) will take place immediately.</p>
ET44151	<p>New Function: Configure time interval clean pool notification Now a time interval for notification 1312 "Please insert clean cartridges for CleanPool: XXXX" can be configured. Default value is 5 min (previous behavior). It is possible to set up any value from 1 to 120 min. Zero will mean that a repeat of this notification is suppressed.</p>
	<p>Changed Behavior: Scratch Pool Dialog, graphical configuration Checkbox "Scratch" will be read-only</p>
	<p>Changed Behavior: Cleaning commands will be added to the "operator" menu. Cleaning commands (Insert Clean, Eject Clean, Clean Drive) are duplicated from "Commands" menu to the "Operations" menu.</p>
ET65747}	<p>Changed Behavior: AmuLog.exe, missing function quit AmuLog.exe needs to be left by pressing 'Q' key (previously you Ctrl + Break had to press)</p>

Version 3.10D

Table 10 Changes in the named modules for version 3.10D

Module	Explanation of Changes
	New Feature: Support of new Media Types: <ul style="list-style-type: none"> • IBM LTO (C3) • DVC-Pro Large (VB) • DVC-Pro Medium (VC)
	New Feature: Support of New Drives: <ul style="list-style-type: none"> • IBM LTO Ultrium (only with Drive Control Interface - DCI) (D1) • DVC (DD)

Version 3.10C

Table 11 Changes in the modules for version 3.10C

Module	Explanation of Changes
amuconst.rc amuconst.ini	modify the version number
ArcSQLe.dll	(+ ArcSQLe.BND, ArcSQLeN.BND, ArcBSQL.BND) Prevent the error: 'normal' termination of the ARC process
Art.exe	TrcAssign macro added, function EvtReceive is now called with the correct szReceiver parameter. These changes should make analysis easier.
Bud.exe	Only LogWrite improved for EvtSend errors. Self triggering was added, that means if the communication to the partner is lost, a flag is set when update requests are received by the 'active on error'- BUD. After reconnect, the flag is used to start the transmission of database updates without an external trigger (until now a next command / next update was necessary to restart the transmission of updated database records.
Cfg.dll	default version changed to "V03.10C "
Cfg.dll, HocPmac.dll	Next try to prevent SYS 3170; our own routines should be called before the system exit routines are done.
CIm.exe	insert of cleaning cartridges to pre-defined slots skip cleaning request (internal MOCL sent by KRNP), when drive cleaning bit wasn't reset by a previous cleaning operation;this prevents having a cleaning loop until all cleaning cartridges are wasted;
ConClean.exe	Currently mounted clean cartridges are shown in the correct way.
ConCont.dll	Maximum number of records (which may be stored) increased from 64 to 128 commands.
ConLog.exe	The current window position and size and the current font type and size are stored into the os2.ini (Appl. AMU, keys: ConLog_Fontsize, ConLog_WinPosSize). During startup of the online log these values are read from the inifile and used for convenience. Window-Pos-Size is corrected if the window was moved outside the visible screen.

Table 11 Changes in the modules for version 3.10C

Module	Explanation of Changes
DBconv.exe	When started with option '-d' (restore existing DBconv.dat file) the existence of the DBconv.dat file was not checked before the database was dropped. So it was possible to loose the ABBA database by a simple user mistake. Now DBconv stops with an error message if the datafile doesn't exist.
filetr.exe	Now the configured files will be permanently saved.
hoc3964.dll, hocaml2.dll	enable DTR for support of a new 8 multi-port PCI adapter
HocAml2.dll	For Dual-AMU systems send received messages to RTE only. If this isn't possible, send directly to KRN (until now all received messages were sent directly to KRN, no routing was possible)
HocEhll.exe	When RTE is inactive if we can't send HACC request to RTE, we send directly to KRN. Fixed problem, Added ExitList function; added DosError () function to prevent 3170 popup window, when hocehll.exe process ends due to inactive 3270 presentation screen
HocScan.dll	Changed open and initialization of serial communication port. Now some trace messages are written.
HocTcplp.dll	fixed ROBAR reconnect (no more timeout)
install.cmd	enhancement for set to ACTIVE and correct KRNLOAD
KrnLStep.dll	changed fct. KrnGetRequester. A switch normal didn't work, when only one host is configured; the loop end criteria, which checks valid AMU requesters, was derived from KrnCfghosts->usNumOf instead of KrnCfghosts->usNumOf. Better (more expressive) LogWrites in some error cases. Send LOOK-Kommand direct to KrnP (do not use the routing via the KRN-receiving queue). Use of the newer constants (more expressive constants) for the option (= select case) of ArcEView calls.
KrnLUtil.dll	Prevention of a double-mount situation in case of the following command sequences: MOVE - KEEP - MONT (Keep and Mount same drive) INVT - KEEP - MONT (Keep and Mount same drive) in both case the MONT must wait until the KEEP ends, this was done by a query with KrnManageTapeDevStatus, but the function-call was done with the wrong coordinate. Now this function is called with the drive coordinate of the (possibly) next cmd. An additional command sequence is triggered inside of KrnActMontOrKeep (KKLR = Keep, Keep, same drive, same robot). Correct answers to the ABBA1-Inventories. The part of generating an ABBA1-answer when no volser was detected (starting at line 226) is nearly new, the return values NO_ERROR and AMU_WRN_INVNT_MISMATCH must be handled in separated parts
KrnPhys.dll	added synchronization for KRNP list access via hmtx-semaphore in function KrnRhoRecv() and KrnAMUPRecv()

Table 11 Changes in the modules for version 3.10C

Module	Explanation of Changes
KrnPmac.dll	fixed problem with PMAC register dump Build answer for correct command with correct return code. Avoid blocking of KrnP when first command is to a DG drive and it fails. Remember PIDDATA for command if there is an error in KrnReadAMUPQueue called from KrnSendContMsg. Build answer for failed command if KrnSendContMsg fails, not for command that triggered this function. New function KrnTriggerResponseAndCommand that replaces the calls of KrnBuildAMUPResponse. This function triggers the next RHO command by KrnSendContMsg and handles its errors. It also builds the answer for the requested command by calling KrnBuildAMUPResponse.
Log.dll	Trace messages added (especially for LogInitReadForce), length for strcmp corrected, so the name of the monitoring queue should be found during the second run. Length for EvtSend of the name of the new monitoring queue corrected (sending the zeroterminated string).
LogView.exe	After use of push button 'View,' the correct tool (Log2Asc.exe or LogCopy.exe) is used to generate the logview.txt. The choice is done by the filename of the selected file (starting with log* indicates the use of Log2Asc). This is an additional feature for more convenience.
Rte.exe	Rte should only work on commands with a minimum of 70 characters, AML/2 format has 70 characters, usable ABBA1 format has 80 characters. On shorter commands there is the risk of an access violation.

Version 3.10B

Module	Description
KrnPmac.DLL	Changes in the synchronization of the threads (Problems with fast > 300MHz Computers). Initialization of variables with 0. Changes in the memory management.
Bud.exe	<ul style="list-style-type: none"> Changes in the Log- and Traces for better analysis for the problem of a lost of communication between the two AMU computers. Additional changes in the memory management.
Clm.exe	If the user increased the MaxUseCount of a drive when cleaning had started (already sent NTFY 1309) the clm now completed this cleaning to prevent a permanently locked drive.
FileTr.exe	GUI fields can now be entered by the Tab key.
AmuConst.ini AmuConst.rc	ADS icon was missing because a value DTYP NUMOF was not correct.
ConArc.DLL	Check boxes now only enabled for devices from tower type
ConEdVol.DLL	For Update all in Edit Volser Range, now the field Owner must be filled with values 1-3.
ArcBase.DLL	Additional check of the COwner, modification only to 1,2 or 3 allowed.

Module	Description
KrnPhys.DLL	access to the request table now with a semaphore.
cfg.dll	CAN address for DCI changed to 2 digits, additional PROC KRNLOAD

Version 3.10A

Module	Description
KrnUtil.DLL	Krn Trap after a negative answer for a no longer necessary KEEP (rc=1094 or N203) changes of the logwrites for **kernel** state mismatch
ConTrc.DLL	Write/Formate trace produced an error message
KrnPMAC.DLL	Teach with option 1P has produced a trap, because of a too small buffer
HocEHLL.exe	Trap if the communication session is inactive
KrnPhys.dll	Drive is not able to operate if the drive name is higher than 99 (Coordinate not found in KrnRefPt)
KrnP.exe	corrected exit list
DBconv.exe	invalid values in the column VTYPE will be replaced with U instead of X
AMU.msg	changed Logwrites for BUD (remove the wrong %)
AmuConst.ini	additional Drive M8100 (Diana-4)
HOCScan.DLL	Correction in the protocol to the scanner communication (Barcode reading with fast AML controller)

Configuration Changes

AMU 3.10a supports the new M8100 drive from Fujitsu (Diana-4) for the media type 3590 (Magstar). To use the drive, you need the robot code 4.00 or higher for AML/J and 2.30G for AML/2 and AML/E. The new drive has the AMU type 'DZ'.

Changes in Version 3.10

The following changes have been done in AMU version 3.10.

Drive Control Interface

AMU 3.10 can be configured with a communication line to the Drive Control Interface (CAN-Bus) for

- Check the drive state
- Check Drive Clean requirements

- Determine time for drive dismount by the robot

Backup Demon

AMU 3.10 will be distributed with a new BUD for increased safety control of the database on the Dual-AMU. The new features are:

- No more updates are possible from a passive to an active AMU
- In the case of a missing coordinate, the BUD will now send further updates to the other coordinates.

Configuration

For the DCI, create the new Interface type ID (DCI-SOTEC) to configure CAN address and the DCI port.

For the Host, a new configuration field for Insert ranges and Eject ranges for Default is used if the Host does not send an Insert or Eject area in the command.

For the AMU to AMU communication with TCP/IP, the configuration is changed to only 2 hostnames and 2 ports (automatic duplication for the second AMU communication ICON)

File Transfer

The new Graphical User Interface (GUI) in Service is used to transfer configuration files from one PC to another PC using FTP.

Detailed AMU process changes

The detailed process changes are described here.

ARC

- no changes

ART, LOG, TRC

- fixed trap in ART in some conditions at midnight

BUD

- fixed trap in BUD module if no sockets available.
- some improvement for passive AMU

CON

- fixed some lexical errors in dialogs and on-line help
- Media Identifier can be changed from AMU GUI
- Service - Dual-AMU: Option Activate this AMU works now
- Fixed trap (very rare) in configuration at time of changing parameters of interface.

CLM

- MOCL in cleaning process

DIM

- no changes

HOC

- fixed HOC tcp/ip sockets leak for some misconfigured host connections
- If the link from active AMU to host is lost, then AMU-to-AMU link would be used to transfer ABBA/1 commands. In this case these commands can be corrupted during the transfer. Fixed in AMU3.11H5
- Fixed thread leaking in Dual-AMU in some wrong configurations
- Fix for communication with Scalar 1000
- ACOM shows the incorrect status of AMU/AMU connection when active AMU was shut down. Fixed.

KRN-L

- You cannot switch between AMUs if switch on ADS is in position different from AUTO.

- Fix for "AMU looping"
- Fix for 'Hanged' KEEPs
- Fix for 'Frozen' command queue

KRN-P

- Error when accessing DCI drives on systems with more than 1 DCI unit. Fixed in AMU3.11H1
- Support of LTO-2 FibreChannel drives (as DCI-connected).
- Bug in CanLib can corrupt the preceding commands. Fixed in AMU3.11H4

RFM

- no changes

RTE

- no changes

PMMANT

- no changes

CFG

- no changes

Addressed Tickets

The addressed tickets and issues are described in this section.

AMU 3.11

Ticket number	Problem
ET31428 CR12218	Eject to 'unknown' position (not scanned by Auto-Invt). This ticket was announced as fixed in AMU 3.10E but was actually fixed in AMU 3.11. The problem was related with eject commands to EIF unit with Auto-Inventory command running. Under this condition (not all I/O slots were scanned) AMU can produce the error "Source position is unknown."
	DCI communication problem with port 1
CR12209	Database update problem for flip and move to the problem box
	Cleaning fails in case of KEEP error
	Asynchronous clean request fails during high workload
	DBBACKUP killed the system if drive is read-only
CR12220	BUD time settings and communication failures
	NetOp – cannot enter in drive configuration dialog (in GUI configuration)
	'Hanged' KEEPs

AMU 3.10

The AMU 3.10 tickets are listed below.

Version 3.10E

Ticket number	Problem
ET43401	Help button of ConLog has no function The Help button of ConLog will display the help information about ConLog.
ET60326	Scratch volumes are possible in more than one pool The AMU will check the presence of a given volser in other pools and prevent the user from entering it in another pool. This problem has not been resolved
ET70065	Problems with disaster recovery There was a problem with disaster recovery -- 10th cartridge in recover list was moved to the position of the first one. This problem has not been resolved

Ticket number	Problem
ET81763	Dual-AMU problem with ACOM command There was a problem with the ACOM command during switch -- AMU generated wrong response on these conditions. This problem has not been resolved.
ET65185	DB update for drive failed in the case of a move to the problem box -- Trap with IBM RICC Adapter. Enhancement -- LTO no longer requires DCI.

Version 3.10D

Ticket number	Problem
GR000004295	Solved pass-through problem (AML/2). Now if AMU detects that source and target MOUNT & KEEP commands are not accessible by the same robot, and if it can find a temporary slot in the tower, it will automatically use the pass-through mode. Changes in behavior: added new CTYPE "Temporary" - it can be viewed and changed in the Archive management dialog box. User needs to mark the areas of the common tower (accessible by both robots) as "Temporary" before this feature can be used.
ET0000042138	Solved "Mount while cleaning" problem. If a drive cleaning is active and the application sends a mount to this drive, the AMU queued the command until the cleaning is complete.
ET0000069580	Solved Problem "Keep: drive still occupied after moving wrong volser into problembox".
ET0000041575	Added ability to configure in the GUI the list of modules that are automatically started by kernel. The Clean Manager (CLM), Dismount Manager (KIM) and Dual AMU Services (BUD + RTE) can be configured from GUI. Changes in behavior: dialog box "Process configuration" in area "Kernel" now contains additional button named "Change". After pressing this button, an additional dialog box will appear. From there, start CLM, DIM and dual AMU services.

Version 3.10C

Ticket number	Problem
ET0000025079	wrong status returned for HACC/MVS command INC and INV
ET0000031435	Backup from RFM menu does not work
ET0000035284	TCP/IP Communication problems
ET0000035904	SYS3175 during save the configuration

Ticket number	Problem
ET0000036288	3270 communication problems without RTE
ET0000037043	Insert Cleaning cartridges to a predefined position in the AML
ET0000037074	TCP/IP Communication to ROBAR
ET0000040136	Installation of AMU with BUD
ET0000040136	Installation of AMU with BUD
ET0000041574	Online Log is hanging up
ET0000044344	SYS 3170 bei HOC EHLL Communication
ET0000045397	Display of Online Log, if moved to the outside of monitor
ET0000046169	Cleaning DLT7000 endless loop

Version 3.10B

Ticket number	Problem
ET0000036640 ET0000031062	KRN Tap SYS 3175
ET0000036863	Problems with configuration changes and locked drives
ET0000036525	Problems with wrong COwner in the database (Owner = 0)
ET0000038039	internal Problems with the command list access, which produced a complete system stop

Version 3.10A

Ticket number	Problem
ET0000033419	KRN-Trap direct after a KEEP which is no longer necessary (drive is already empty)
ET0000033919	Failure message during the format trace direct on a floppy drive (drive a:\)
ET0000033920	Teach with the option 1P produced a trap
ET0000034028	Trap if the Host communication session not active
ET0000034432	Drive with names about D99 will not found in the teach point file

Version 3.10

Ticket number	Problem
ET0000030906	Enhancement of Logwrite for the FLIP command
ET0000033088	Kernel State mismatch produced a stop of the system
ET0000030878	sort files in the View Log files dialog
ET0000031062	Prevent the system failure SYS3170
ET0000015086	Move to the second problembox in a AML/J
GR000002985	Problems with the file transfer of the AMUCONF.INI file to the DUAL-AMU

Known Bugs and Work Arounds

Ticket number	Problem	Workaround
ET0000050741	Rho File Manager starts KRN without any options (Problem with DAS or Dual-AMU)	After using RFM, restarts the AMU (shutdown AMU, call AmuStart.cmd)
GR000002878	AMU-Manual Mode also for AML/J	Configure the robot type R0 (AML/2)
PR213	Router between active and passive AMU doesn't work for ROBAR commands	use only the active AMU when sending commands from ROBAR. This problem will be fixed in the first hotfix to AMU 3.12
PR227	AMU trap when kernel is starting, if KRN_5 trace is opened	turn on KRN_5 trace after AMU kernel startup
PR218	Linear devices L9 - AML/J above 3/6 drive bay. LTO cartridges (C3) is not handled	Exchange your LTO sections with other linear (not L9). The fix for this will be available in first hotfix for AMU 3.12
PR215	it's not possible to send a mechanical UNLOAD (via robot) to the DCI-connected drives in the situations when DCI communication is down or the cartridge has been stuck in the drive	will be fixed in first hotfix to AMU 3.12

Example of Start Scripts

Examples of start scripts are shown here.

Startup.cmd

```
startcm
cd amu
call AmuStart.cmd
```

AmuStart.cmd

```
@REM -----
@REM      Filename:      AmuStart.cmd
@REM      Description:   Start Script for the AMU modules
@REM
@REM      [cd can
@REM      DL                      Download binaries to CAN-controller
@REM      cd ..]
@REM      start /C /min "AMU Kernel" krn [/S]
@REM      Options: /S      AMU with a DAS
@REM      start con [/L]      Option: /L automatic start of Online Log
@REM -----
cd can
DL
cd ..
start /C /min "AMU Kernel" krn /S
start con /L
```