Release Notes for iCube Control Products

Release 2025.6

Date: 2025-12-18

Version Information:

iCube Engineer Version: 2025.6.1 (Build 7.2.51137)

iC9226M-EC Firmware Version: 2025.6.2 (Build 167381)

iC9226M-FSoE Firmware Version: 2025.6.2 (Build 167385)

Profinet Version: 114

Ethernet/IP Version: 1.2

Based on PLCnext runtime version 2024.6 and PLCnext Engineer version 2024.6.

SUMMARY

1. NEW FEATURES

Projects created in iCube Engineer 2024.9 and earlier may need some additional conversion steps to get new features available in 2025.6. Contact the applications support team for more details.

1.1 Breaking Changes

The list of every breaking change in iCube Engineer is documented in : Help/Application Notes/Programming and Project Management Using iCube Engineer/Known breaking change in ICE. The online help will have the latest information.

1.1.1 PLCnextBase Library updated to version 1.7.1

With iCube Engineer 2025.6, the PLCnextBase library has been updated to version 1.7.1. iCube Engineer Toolboxes (libraries) that depend on PLCnextBase have been updated to use the new version. Applications that include PLCnextBase should also be updated to use PLCnextBase version 1.7.1. (reference #63832).

1.1.2 ESI Plausibility-Check expects the communication parameter in wrong Endianess

The parameter data for safety related parameter must be in big endian. In previous version, the endianess has been configured at the parameter description in the modules FDCML file. In 2025.6, the data type has been changed to a different type, which does not support to configure the endianess. Therfore, the swapping must be made during ESI import. When an existing project is opened with the "old" module parameter description and downloaded to the controller the safety modules going to error state. The user must replace the safety modules of a project with a newer version with updated parameter data description in FDCML file.

To correct this issue when bringing a project from a earlier version into iCube Engineer 2025.6, update the safety modules in iCube Engineer device library (catalog). In existing projects, replace the safety modules with a newer version of the module in the catalog. This concerns EtherCAT and eventually SliceBus safety modules. (reference #67453)

1.1.3 Removed Y_GroupBrakeRelease from PLCopenPart4 Toolbox

The function block Y_GroupBrakeRelease has been removed from the Y_PLCopenPart4_Toolbox Library. The function block was removed because the implementation did not support locally hosted groups. For locally hosted groups use Y_AX_BrakeRelease individually for each axis. For remote hosted groups use Y_MS_GroupBrakeRelease for the group.

1.2 Motion

1.2.1 Sigma-XS 400V

Sigma-XS 400V EtherCAT servo drives are supported.

1.2.2 SCARA

SCARA kinematics are supported, including an option for coupled Z and Theta axes.

1.2.3 Delta 5

Delta 5 kinematics are supported, in addition to Delta 2 and Delta 3. Projects created in iCube Engineer 2024.9 and earlier with Delta kinematics may need some additional conversion steps. Contact the applications support team for more details.

1.2.4 Motion scan timing variables

In the PLC->Data List->Connected Fields list you can see a set of variables: Y_FMK_MOTIONSCAN_INFO.xxxx. This includes the last execution duration and the maximum execution duration. These variables can be used to track the CPU usage by the motion kernel. These variables are updated synchronously with the task selected in Motion Groups->Settings->Update task.

1.2.5 Selectable "Level of Detail" setting to reduce startup time with high axis count systems

In applications with more than 20 servo axes, the startup time can be reduced by reducing the level of detail of parameters read from the servo drives at startup. See Motion Axes->Settings->Level of detail. Available settings are High, Medium, and Low. The default is High, which provides the same functionality as 2024.9 and prior releases. See the help topic "Level of Detail setting" in the online help files for more information.

For a 32 servo axes with an EtherCAT cycle time of 2ms, the startup time is reduced by 7 seconds with the Medium setting and 20 seconds with the Low setting. For 64 servo axes with an EtherCAT cycle time of 4ms, the startup time is reduced by 30 seconds with the Medium setting and 80 seconds with the Low setting.

1.2.6 AXES_GROUP_REF updates synchronously with the assigned task

Prior to the 2025.6 release the AXES_GROUP_REF variable was updated using the function block Y_UpdateAxesGroupRef. Projects created in iCube Engineer 2024.9 and earlier using the AXES_GROUP_REF variables that are updated to use the iC9226 Firmware version 2025.6 or later should be updated to no longer use the function block. In iCube Engineer 2025.6 the axis group variables are listed in the PLC->Data List->Connected Fields. The variables are updated synchronously with the task selected in Motion Groups->Settings->Update task. For more detail on the conversion steps, refer to the application note linked in the help file of Y_UpdateAxesGroupRef in the online help.

1.2.7 Cam scan compensation

Scan compensation for synchronized motion is now supported. See for more details see the help topic "Scan compensation in camming/gearing applications".

1.3 Networks and IO

1.3.1 Ethernet/IP detailed status information

The status of the Ethernet/IP device connections is now stored in a structure of type EIP_STATUS_REF. In addition to the connection state, this structure provides detailed information on the connection ids, error codes, and network communication status.

1.3.2 Improved SliceBus Synchronization

Enabling synchronization of SliceBus no longer causes a large CPU load.

1.3.3 Additional SLIO modules (SliceBus, EtherCAT, PROFINET)

The following SLIO module support has been added:

Added to SliceBus:

021-1BD80	DI 4xDC24V, µs-Timestamp, NPN
021-1BF51	DI 8xDC24V 0.5 ms, NPN
021-1DF50	DI 8xDC24V Diagnostic, NPN
022-1BH50	DO 16xDC24V, 0.5A, NPN
090-0VT00	Clock 1x32 Bit µs Timestamp

Added to EtherCAT

021-1BD80	DI 4xDC24V, µs-Timestamp, NPN
021-1BF51	DI 8xDC24V 0.5 ms, NPN
021-1DF50	DI 8xDC24V Diagnostic, NPN
022-1BH50	DO 16xDC24V, 0.5A, NPN
054-2BA10	1x Stepper Motor Controller, 48V, 5A
054-1CB00	2x DC Motor Controller, 24V, 1.5A
054-1DA00	1x Pulstrain Output for external Drive Control, RS422, 4xDIO
040-1BA00	CP040-ASCII
040-1BA00	CP040-Modbus
040-1CA00	CP040-ASCII
040-1CA00	CP040-Modbus
050-1BB40	Frequency 2x24Bit

031-1CD28	AI4x 16Bit +-20mA +-10V
042-1IO00	4xIO-Link Master
090-0VT00	Clock 1x32 Bit µs Timestamp

Added to Profinet:

021-1BD80	DI 4xDC24V, µs-Timestamp, NPN
021-1BF51	DI 8xDC24V 0.5 ms, NPN
021-1DF50	DI 8xDC24V Diagnostic, NPN
022-1BH50	DO 16xDC24V, 0.5A, NPN
054-2BA10	1x Stepper Motor Controller, 48V, 5A
031-1CD28	AI4x 16Bit +-20mA +-10V
042-1IO00	4xIO-Link Master
090-0VT00	Clock 1x32 Bit µs Timestamp

1.4 Application Tools

1.4.1 Support for Visual Studio C# and C++

The iCube Engineer Toolchain installer is available. The Toolchain is an add-on to Visual Studio that can be used to create functions and function blocks in C# or runtime applications in C++.

1.4.2 HMI Designer is integrated with iCube Engineer

iCube Engineer and HMI Designer can share variable name and data type information.

1.5 Libraries (2025_6)

The following function block support has been added.

1.5.1 Y_EtherCAT

- Y_EC_FoE_CopyFromSlave
- Y_EC_FoE_CopyToSlave

1.5.2 Y_Comm_Toolbox

- Y_CO_ExplicitMessage

1.5.3 Y_Axis_Toolbox

- Y_AX_Halt

1.5.4 Y_Group_Toolbox

- Y_GP_DetectPrimeAxes
- Y_GP_GroupReAlignPrimeAxes
- Y_GP_ReAlignPrimeAxes
- Y_GP_GroupToHome
- Y_GP_WritePointFile
- Y_GP_ReadPointFile
- Y_GP_GetPrimeAxesRef
- Y_GP_GetAxisAlarms

- Y_GP_VectorCompare
- Y_GP_GetJointIndex

1.5.5 Y_MSync_ToolBox

- Y_MS_GroupBrakeRelease
- Y_MS_GetSafetyCRC
- Y_MS_YrcPendantDriver
- Y_MS_MessageApps
- Y_MS_MSyncIO
- Y_MS_WriteIntExpMsg
- Y_MS_WriteStringExpMsg
- Y_MS_ReadIntExpMsg
- Y_MS_ReadStringExpMsg
- Y_MS_ReadPvarExpMsg
- Y_MS_WritePvarExpMsg

1.6 Platform

1.6.1 iC9226 firmware includes PLCnext runtime 2024.6

The following improvements are included from the PLCnext runtime 2024.6:

DataLogger

The recording of variables in the context of an IDLE task has been improved. Instead of recording each task cycle the recording timestamp is used to approximate the sample rate.

OpenSSL

The OpenSSL library has been updated to version 3.0. The iC9226 firmware uses this version only. For compatibility reasons the previous OpenSSL library (version 1.1.1) still exists in the file system. As this version is outdated, it will be removed in one of the next firmware releases. For applications (including iC9226 Apps) which use the OpenSSL library, an update is recommended as soon as an application version is available, which uses OpenSSL 3.0.

OPC UA

- The OPC UA client and server use the OpenSSL library to validate X.509 certificates using the OpenSSL flag X509_V_FLAG_X509_STRICT. As firmware 2025.6 is updated to OpenSSL 3.0, the X.509 certificate validation became more strict, especially for non self-signed certificates. This may cause the server to return the error “BadSecurityChecksFailed” on client connection attempts. Make sure that, according to OPC UA Part 6, client issuer as well as client application X.509 certificates are conform to RFC 5280, especially to the sections listed below. This applies to self-signed certificates as well as user-managed certificates.
  – 4.1.1.2 signatureAlgorithm
  – 4.1.2.6 Subject
  – 4.2.1.1 Authority Key Identifier
  – 4.2.1.2 Subject Key Identifier
  – 4.2.1.3 Key Usage
  – 4.2.1.6 Subject Alternative Name
  – 4.2.1.9 Basic Constraints

- In the NamespaceArray of the OPC UA server the index of namespace http://icubecontrol.com/OpcUa/PubSubConfiguration has changed from index 8 to index 2. This namespace is optional and it appears only if the feature “OPC UA PubSub” is activated on the WBM page “System Services”. Currently the firmware does not provide anything in that namespace, it is only a preparation for future extensions.

IEC 61131

- Download Changes (“Write and Start Project Changes” in PLCnext Engineer) while variables are forced, is now supported. In combination with iC9226 firmware 2025.6 (or newer), iCube Engineer 2025.6 no longer resets the force state implicitly before downloading changes. Now the forcing state is kept if variables, which are currently forced, do still exist as forcible variables in the changed project. Otherwise the firmware rejects the Download Changes command and emits a notification. In this case the user can check the list of forced variables in PLCnext Engineer and unforce variables that prevent downloading changes.
- “Download Changes” (“Write and Start Project Changes” in PLCnext Engineer) implicitly creates a backup of the current project. If “Download Changes” is not possible (for any reason), the current project is restored from this backup. If “Download All” (“Write and Start Project” in PLCnext Engineer) is performed immediately after a rejected or failed “Download Changes” attempt, the PLC is reset. Previously the reset operation conflicted with restoring and resulted in an I/O exception. The firmware now keeps the state flag “Running | DcgNotPossible” until the restoring process has been finished. Depending on the project size, the restoring process may take several seconds. Note that iCube Engineer 2024.3 (or newer) checks this state before it offers the “Download All” option.

- When breakpoints are set in the IEC 61131-3 program, the “PlcState::Debugging” flag was reset in the transition from “PLC STOP” to “PLC HOT START” and then set again when changing from “PLC Running” to “Debugging”. The fieldbus output values could be switched on again for a short time period when the PLC was in the state “Running”.
- In the function “MOVE” that is used with the function “EN/ENO”, a value of a multi-element-variable was assigned to a wrong address. To fix this bug, re-compile and download the project using iCube Engineer 2025.6.
- In a C# eCLR Library the runtime created a vectored exception when calling “File.Exists(null)”.

(Reference #7143)

1.6.2 Support for iC9200 hardware revision B

iC9226 hardware revision B is supported.

1.6.3 Use of Microsoft Data Access Engine 2016

iCube Engineer now includes the Microsoft Data Access Engine 2016 installer.

2. FIXES INCLUDED IN THIS RELEASE

2.1 Fixed in iCube Control Safety Related Issues with this Release

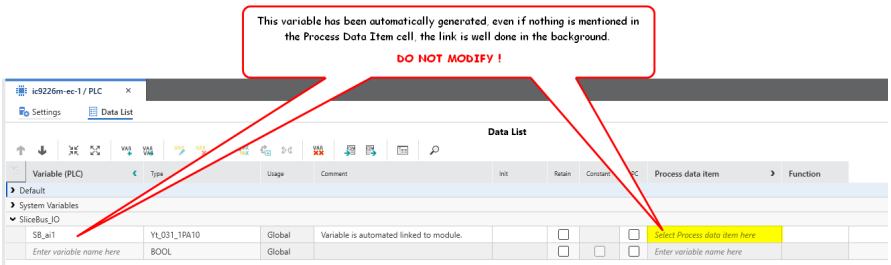
ID	Title	Description
46087	Safety PLC is stuck in STOP if no safety variable are linked to the safety device pdo.	When a safety component has a PDI (Process Data Item) linked to a normal PLC variable but not to a safety variable, there is no compilation error, but the Safety PLC remains in Stop state even on trying to run the safety PLC.
67937	Safety issue: S1 300678889 / Steuerungen "Download Change"	If download changes is used with a safety project, there are some cases where the new version of the safety project is not executed. Contact Yaskawa support for further details.

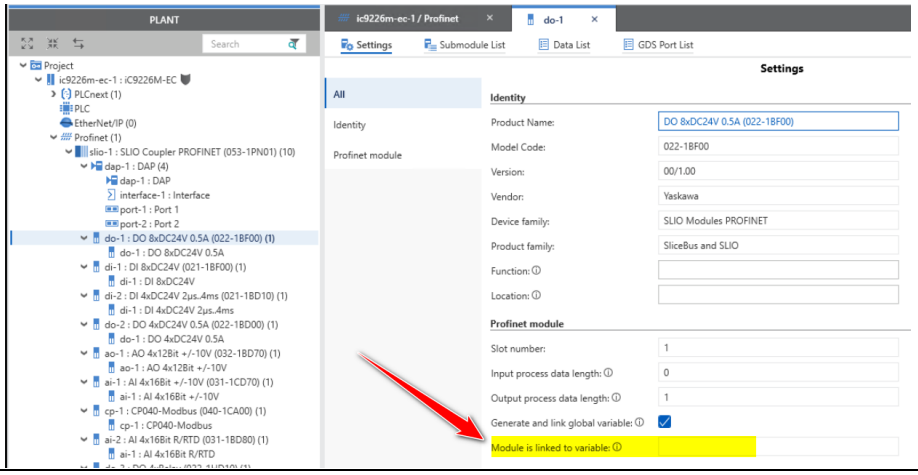
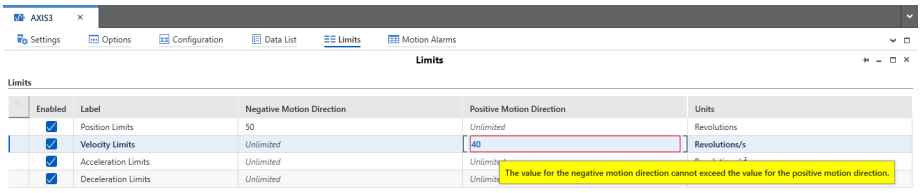
2.2 Fixed in iCube Engineer 2025.6.1 (Build 7.2.51337)

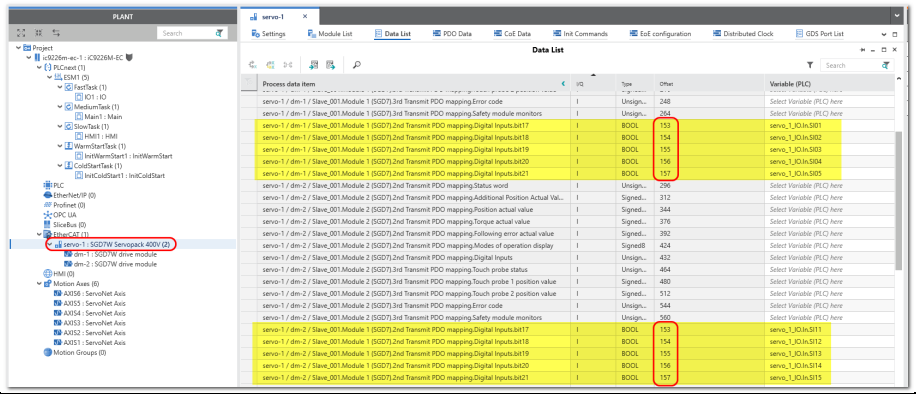
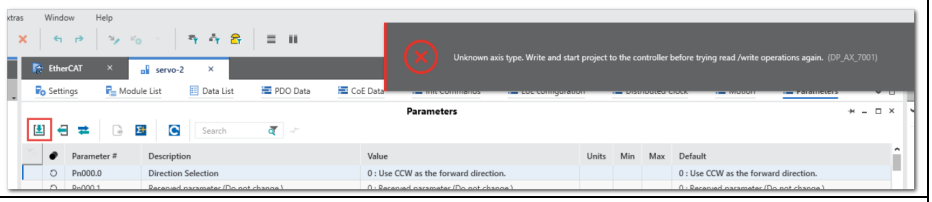
ID	Title	Description
74186, 79565	iCube Engineer Crash After PDO Mapping Changes are made to 2025.6 projects originally created in iCE 2024.9	If the PDO map for a EtheCAT device is edited in a project in iCube Engineer 2024.9, and that project is opened in iCube Engineer 2025.6.x, then iCube Engineer may crash while the PDO map is edited. Solution: This defect has been fixed for non-MDP EtherCAT devices when only one PDO mapping is deleted at a time. A crash will still occur in the case that an EtherCAT MDP device, like SGDXT, is edited or multiple PDO map entries for a single device are deleted prior to saving and re-opening the project. Yaskawa is continuing to review additional solutions as part of ID 80514. If PDO map editing is required on a project originally created in iCube Engineer 2024.9, it is best to delete the EtherCAT device entries from the Plant in 2024.9 and then open the project in 2025.6.1 and add the EtherCAT devices back to the Plant.
79566	Internal Error: The calling thread cannot access this object because a different thread owns it	Projects created in iCube Engineer version prior to 2025.6 did not have explicit mapping shown for PDIs in the device data lists even if the device settings page shows that there is an automatically generated variable linked to the device/module. If the user assigns user created variables to the PDI variables for the device, and opens the project in 2025.6 and newer versions of iCube Engineer, "Internal Error: The calling thread cannot access this object because a different thread owns it" is generated. Solution: There is a new message prompt in the case new links / variables to PDIs need to be created. If user selects Yes, the new variable is added and the user will have to refactor code. If No is selected, the old variables are mapped to the PDIs and code does not need to be changed.
79564	Auto-Compiler and Variable creation is slow in project converted from 2024.9 to 2025.6	Adding a variable in a large project takes over 30 seconds. Solution: Unnecessary processing during the addition of variables has been removed resulting in a reduction in the delay when adding variables.

79578	iCube Engineer incorrectly opens in restricted mode	Certain Anitvirus software packages like Webroot cause multiple instances of iCube Engineer to run. This can be seen in the task manager in Windows. If iCube Engineer is closed and reopened with any of the extra instances running, the new instance of iCube Engineer opens in restricted mode. Solution: The detection method for restricted mode has been improved.

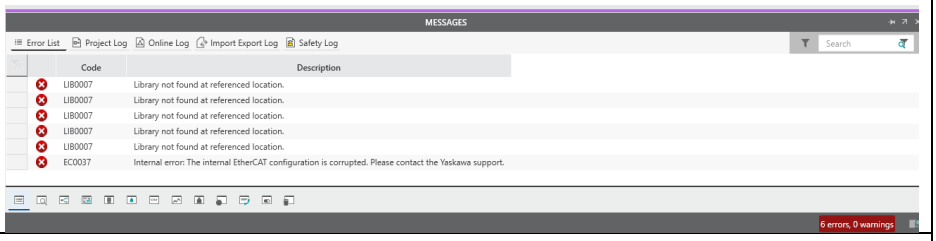
2.3 Fixed in iCube Engineer 2025.6.0 (Build 7.2.38936)

ID	Title	Description
30202	Project Rebuild is required on project open if Profinet VFD devices are in the configuration	Opening a project that contains a Yaskawa profinet(SI-EP3) VFD (GA500 or GA700) which was working before ends up in Y_MotionAxisDriver with an Error&errorID 13807 .
48061	User can't use 021-1BD70 & 022-1BD70 TimeStamp modules with the internal clock of the iCube	021-1BD70 & 022-1BD70 TimeStamp modules can NOT be synchronized with an absolute time. These 2 modules can only be used to read or defined a time relative to a previous rising/falling edge.
49241	Automatic IO Variable generation : PDIs links to PLC variables are not displayed in the data list	The automatically generated variable may not have a Process Data Item linked to it. The link is made automatically by iCube Engineer automatically in the background. If the user map a PDI, this will overwrite this automatic link done by iCube Engineer. 
50997	Execution of 'MC_Stop' returns Error with ID '14054' on 'Y_MotionAxisDriver' FB for ModbusRTU Drives	Sometimes the first execution of the 'MC_Stop' for a Drive controlled with ModbusRTU (040-1CA00) Function Block is not working properly. The axis will **not** stop in this case, the Driver Function Block will return an Error 14054.
52956	ECAT: Generated Process Data names too long for Fortress amGardPro and other devices	The Fortress amGardPro device can not be used due to the generated Process Data names being too long.
53885	crash of ICE 2024.3 SP5 after reading servopack Param + EoE activation and write and start project	
54418	Cannot rebuild project, Internal error: UTL0001	Internal error UTL 0001 can occur if one of the temporary output files is locked.
56229	Y_RW_Write_CSV_File: Appending doesn't work when executed with a task interval lower than 4ms	When using the "Append" input of Y_RW_Write_CSV_File in a program run with a task interval of < 4ms, the information is not appended to the file. The CSV file is overwritten as if "Append" was set to FALSE.

56328	Unable to determine cause of error when EIP status variable is set to 0x000E	Detailed status of EtherNet/IP scanner connection is not available.
56464	In a project created using iCE 2023.9, and opened in 2024.3 axes cannot be used in simulation mode	If a project was created in 2023.9 and opened in 2024.3, servo axes cannot be used in simulation mode
56985	Profinet device integrated via "Online-Devices" has no name for automatically integrated variables	Using the "Online-Device" option to scan Profinet coupelr with SLIO module and then use the button "Add to project" create a module with the "Generate link global variable" checkbox checked but no variable linked to it : 
57944	Motion Axes: ServoNet positive Velocity limits is compared to the wrong value	When using motion axes, if the values to be used for velocity, acceleration, and deceleration limits in the positive motion direction are lower than the position limit in the negative motion direction, the software will not allow the setting of said value (see reference image) 
58651	MSync: Buffering a MCS move when tracking with active PCS move results in robot controller alarm	If conveyor tracking is used, and tracking PCS moves are executed then MCS move is buffered to abort tracking, it results in robot controller alarm. If the PCS moves are still active until TrackState 4, it results in alarm 4414 (excessive segment alarm)
58851	Re-ordering EtherCAT devices by dragging and dropping in the plant tree results in a invalid EtherCAT configuration	IF HotConnect is disabled ("Create HC devices for slaves" is unchecked) and DeviceID is not being used, manually changing the order of devices in the EtherCAT node of the project's PLANT, will cause an incorrect position in the topology. This can affect the EtherCAT communication to devices.
59056	Unable to get Sigma-X CoE data from the EtherCAT/Online Functions page	Unable to get Sigma-X CoE data from the EtherCAT/Online Functions page

60264	Offset of EtherCAT slave process datum not updated	Some module devices have wrong Offset information display, for example Sigma7W: 
60362	"Unknown axis type" error message when writing parameters to Servopack if faulty network address	The message "*Unknown axis type. Write and start project to the controller before trying read /write operations again.*" will show up if the user tries to Read or Write from/to a SERVOPACK while there is a network identification issue: 
60367	Debug Mode: In certain situations, the debug values of variables are not available in iCube Engineer's debug view.	In certain situations, the debug values of variables are not available in iCube Engineer's debug view. The variables cannot be added to the watch window.
61204	Unable to delete EtherCAT device due to Hot Connect even when disabled with Beckhoff EK1100	Unable to delete Beckhoff EK1100 sub device and/or modules attached to the EK1100 sub device. The Hot Connect enabled warning is shown even though HotConnect is disabled.
61260	Regression: OPC UA Client creates monitored item with wrong NamespaceIndex	The OPC UA client creates tag entries with the wrong namespace index . This causes OPC UA communication to fail.
61685	Engineering tool generates motion related config after motion axis is deleted	The FMK does not relinquish control of an EtherCAT Yaskawa servo device even after the associated motion axis is disconnected from the servo.

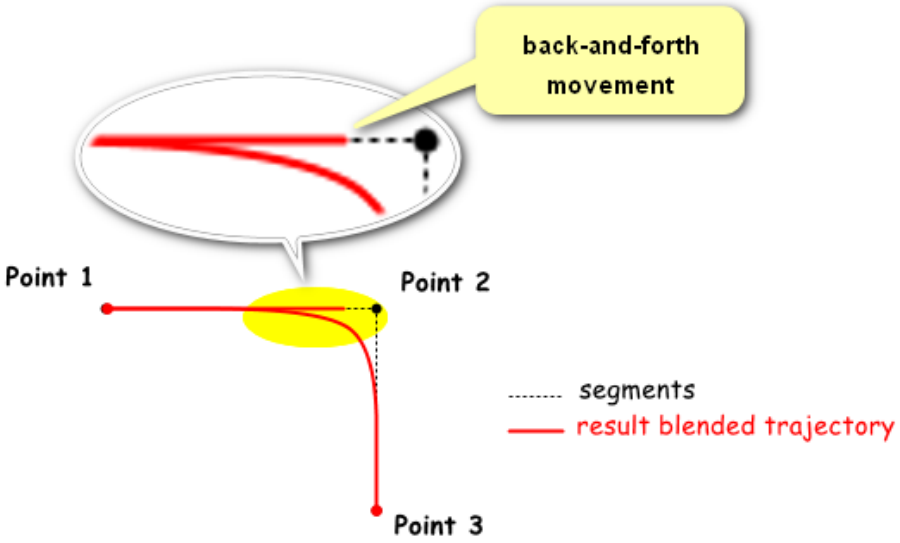
61984	Error: Port with name 'Arp.Io.Ecat/0.Reserved' already exists Schmersal SFB device	Schmersal Safety Field Box (SFB) is not currently supported by iC9226M-FSoE
62271	Motion Groups: MCS limits constructed incorrectly for Gantry groups with non-consecutive dimensionality (e.g. XYRz)	When using iCube Engineer to configure position/velocity/acceleration limits on the Limits page view, for a motion group as an nD gantry, and not using axes to represent all 6 dimensions (XYZRxRyRz), the limit values from the ACS (joint) frame may be incorrectly replicated to the MCS (machine/world) frame in the group configuration file.
62417	Unable to add devices if a project compare is performed.	Unable to add devices after a project compare is performed.
62436	Mounting 054-1DA00 SliceBus Module to EtherCAT SLIO Coupler Throws IO Error	Unable to use 054-1DA00 module with a CoE bus coupler.
62603	Incorrect message in snack bar "Unknown Axis Type....." when user tries to read, write or compare parameters	Incorrect message in snack bar "Unknown Axis Type....." when user tries to read, write or compare parameters.
63343	CoE Servo Axis Initial Value Configuration Not Updating in certain situations.	If a non servo motion axis is deleted and a servo motion axis is added in its place in the plant, the servo axis will not have initial configuration set. This will lead to an error 60910 on PLCopenPart1 function blocks.
63425	MSync: Interference Zone is still active after disabling Y_ActivateIZ when motion was aborted	Disabling Y_ActivateIZ doesn't remove the Interference Zone after a movement was aborted.
63588	Automatic variable generation: SLIO/SliceBus counter modules must not connect global variable SB_fm.Out fields when configured in combination with motion kernel axis	High speed pulse output (COIN) turns on at position 0 for the 1BA00 module even though the user configured comparison value is non zero.
63778	Ethernet/IP Scanner: connection error 0x315 when using config instance with zero length	When configuring an Ethernet/IP Scanner connection to a remote peer which requires a Configuration Instance as part of the Forward Open request, and the size of this configuration instance is zero, a malformed connection request is sent. The device responds with error 0x315.
64609	Unable to open existing HMI project from iCube Engineer	User cannot open an existing HMI project in a new iCube Engineer project unless the project is within a certain file path with a certain project name.
64741	iCube Engineer 2024.9 SP9 on fresh windows 11 gives error Microsoft.ACE.OLEDB.12.0' provider is not registered	Microsoft Access Database Engine (2010) is required for proper functioning of iCube Engineer. iCube Engineer does not install this database. Without this database, the user can expect an error mentioning "Null not allowed" or "Microsoft.ACE.OLEDB.12.0' provider is not registered on the machine".
64822	Unable to transfer structures over between HMI designer project and iC9226 OPC UA tags if the tags are synchronized automatically	If the HMI Designer project is launched from iCubeEngineer and OPC data is automatically synchronized from iCube Engineer, structure data elements will not work when the tags are applied in the HMI projects.

65086	EOE IP address error occurs when the controller IP address is changed, even though EOE is not active	If the IP address of the controller is changed, in the controller setting page, in a project where EtherCAT sub devices are present, EoE IP address errors can occur.
65133	The path of directory does not update in the iCube when installed by choosing a different destination for user data	If the default installation path has been changed during the installation process, the user will experience the following error when creating a project from template: 
66540	PDO Editor: PDI duplicated generated after modifying a PDO and reopening an ICE project	Editing the PDO map of an EtherCAT device to add an extra object may lead to PDI duplication in the Device Data List. This is generally seen when the user closes and reopens the project in which the PDO map was edited.
67673	Invalid offset of servo IO variables in the configuration files overwrites the control word of the servo	Add a combination of EtherCAT slaves that result in a non-sequential order of the slaves process data in the EtherCAT process image and the resulting servo IO variables will have incorrect offsets. This problem most often occurs with a combination of SIGMA-7 and SIGMA-X servo drives. Due to the incorrect offsets, the motion or IO may not be function as expected.

2.4 Fixed in iC9226 Runtime and Motion with this Release

ID	Title	Description
20033	Drift in position of slave for one way, relative cams that are executed while the master and slave are in motion	If a one way, slave relative mode Y_CamIn is executed repeatedly while the master is in motion, the slave experiences a loss of position of one scan at the start of the new Y_CamIn. This happens when repeated cam synchronization-desynchronization cycles are performed.
34460	Parameters 1305 and 1307 for scan compensation incorrect values or not settable for Ethercat external encoders	Parameter 1305 (feedback delay compensation value) and 1307 (enable command delay compensation) are now writable for all CoE and SliceBus axes, and have correct default values for the respective field bus.
34961	Unexpected behavior of 'Debugging' flag when a breakpoint exists in a project and the PLC is stopped and started	If a breakpoint is set in a project , and the project is stopped and warm started, the PLC should start with 'debugging' mode enabled. However, there is a short time period (2 ms) on startup where the PLC runs without the 'debugging' flag before the 'debugging' flag comes on. During this time period, all physical output states would change based on programmed logic before becoming FALSE because of the debugging flag.

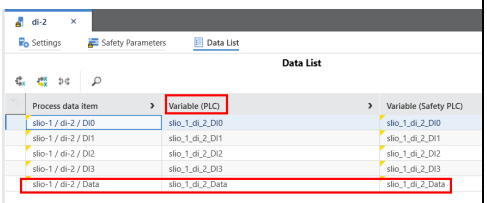
39236	Missing support for parameter 1832 machine cycle low	Axis parameter 1832 "Machine cycle low" is now readable by the user program.
47907	iC9226M-FSoE: PLC state changes to STOP with Watchdog under heavy network load with UDP broadcast frames	Under high network load with UDP broadcast frames, it could happen that the standard PLC state changed to STOP because the watchdog time of the SafetyProxyTask was exceeded.
49436	Y_CamIn: One scan loss of position when linked mode is used to engage a new cam from a running cam	Changing cam tables in linked mode should now always produce a smooth velocity profile. There should be no loss of position between the master and slave after switching tables.
50028	MC_MoveCircularAbsolute generates unexpected trajectories - start/end position matching tolerance for AuxPoint2 is too tight	MC_MoveCircular with MC_CircleMode#Border uses very tight tolerances to determine whether AuxPoint2 should be considered. When working in 3-dimensional XYZ space, this can lead to unintended circular move geometry, including being in the wrong plane (i.e. XZ vs XY) when the circle start-point and end-point are intended to be colocated, but do not match exactly.
50997	Execution of 'MC_Stop' returns Error with ID '14054' on 'Y_MotionAxisDriver' FB for ModbusRTU Drives	Sometimes the first execution of the 'MC_Stop' for a Drive controlled with ModbusRTU (040-1CA00) Function Block is not working properly. The axis will **not** stop in this case, the Driver Function Block will return an Error 14054.
56229	Y_RW_Write_CSV_File: Appending doesn't work when executed with a task interval lower than 4ms	When using the "Append" input of Y_RW_Write_CSV_File in a program run with a task interval of < 4ms, the information is not appended to the file. The CSV file is overwritten as if "Append" was set to FALSE.

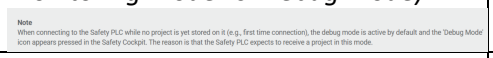
58494	Unexpected back-and-forth movement when blending with MC_MoveLinearAbsolute, when MC_BufferMode#Aborting is used in actually buffered scenarios	PLCopen Part 4 multi-axis motion (MC_MoveLinearRelative, MC_MoveLinearAbsolute) blending between two consecutive moves can follow an unexpected trajectory for the first part of the move, including a sudden change in velocity. This occurs only when the first move in a multi-move sequence is specified with MC_BufferMode#Aborting input (which is the default), followed by MC_BufferMode#BlendingXXXX. The motion produces a back-and-forth movement between the 2 first segments during the blending transition as follows:  Notes: • In this scenario, MC_BufferMode#Aborting is equivalent to MC_BufferMode#Buffered, because there is no in-progress move to abort. • In general, if a MC_MoveLinearXXX with MC_BufferMode#Aborting *does* cause an in-progress move to abort, a following move with MC_BufferMode#BlendingXXX is not supported (an error will result). A full stop is required before the next move is possible.
58651	MSync: Buffering a MCS move when tracking with active PCS move results in robot controller alarm	If conveyor tracking is used, and tracking PCS moves are executed then MCS move is buffered to abort tracking, it results in robot controller alarm. If the PCS moves are still active until TrackState 4, it results in alarm 4414 (excessive segment alarm)
62379	Troubleshooting EtherCAT: "ERROR: Line Crossed" - Unable to Download project after Reset type 1	When trying to download an empty project to the controller, where the hardware wiring is wrong, below shown error is thrown. 

62411	Unable to download changes if an output is in forced state	User is unable to download changes if a hardware output is in forced state.
63146	Local-SLIO synchronous mode consumes 75% of CPU0	In Slicebus settings, Synchronization Mode should be enabled for counter modules that support Slicebus External Axes. When synchronous mode is enabled for SliceBus with any local-SLIO module (such as a pulse counter), CPU0 load (core 1 load) is consistently 75%. If the cpu load is increased, then Profinet and Ethernet/IP performance will be reduced.
63182	FSOE controller fails to load config with 28+ aux axes in a group	If a gantry group is created with many (27+) auxiliary axes (with or without configured X Y Z Rx Ry Rz axes), downloading this project to the controller will cause a software crash. A type-1 reset is required to recover.
63425	MSync: Interference Zone is still active after disabling Y_ActivateIZ when motion was aborted	Disabling Y_ActivateIZ doesn't remove the Interference Zone after a movement was aborted.
64407	Executing MC_GroupStop while Group Synchronized motion state is active causes MC_GroupStop to error out	If MC_TrackConveyorBelt function block is used to synchronize a group with a conveyor and the group is 'in sync' with the conveyor, without any active or buffered MCS or PCS moves, and an MC_Stop is executed, MC_Stop generates and error and does not show done. Motion is aborted but the state is not changed correctly
66038	Hot Connect SubDevice ends up in SAFEOP after being reconnected to the network	If there is only one servo is on the EtherCAT network and it is rebooted, the iC9200 may not stay in OP state. It goes to safe OP state along with the servo.
67598	UDP communication issue of iC9226M with Release 6+	After abut 10 - 30 minutes of UDP data communication, the iC9226M is unable to transmit data for one cycle. Data transmission continues without a problem after this glitch.
69994	Changes to other Retain variables causes all retain variable values to be cleared	Prior to release 2025.6 retain variables were cleared by a cold start when new retain variables were added. In 2025.6 the retain variable implementation follows the standard PLCnext retain handling: https://www.plcnext.help/te/PLCnext_Runtime/Extended_retain_handling.htm

3. OPEN ISSUES

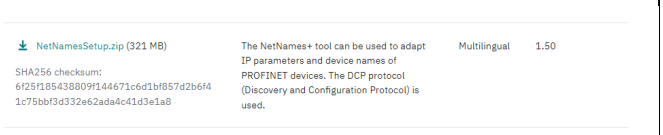
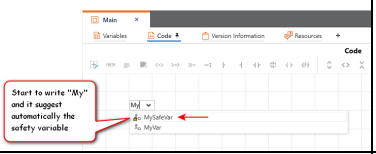
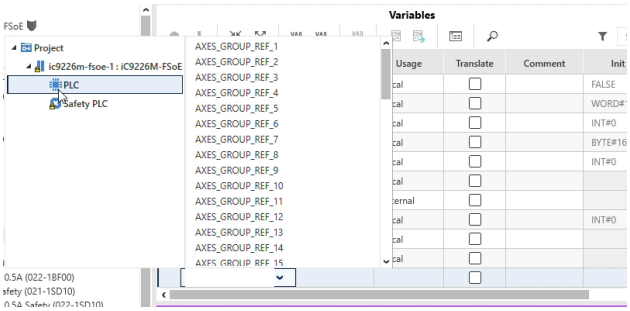
3.1 iCube Control Safety Process Related Issues

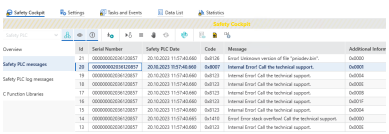
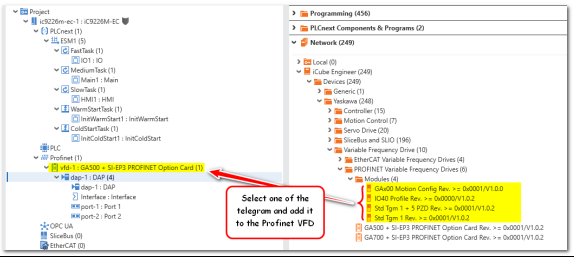
ID	Title	Description	Workaround
46400	GDS-Error, when connecting the data variable of an FSOE-module with a non-safety plc variable - this variable connection is not undo-able	If the 'Data' Process Data Item of a safety module is connected to a PLC variable as shown below, the project cannot be downloaded. The Data PDI should not be edited by the user. 	• Do not edit the Data PDIs for safety modules. • Contact your Yaskawa support and provide the reference #46400
49198	Safety PLC: Process data mapping offset is not updated, when a safety slave is deleted.	When a FSoE slave is deleted, the offset of the remaining slaves is not recalculated, so there are empty spaces in the mapping list.	Not available.
49597	Message "The safety message log has no valid data hash" on opening caused by safety project created in a different time zone	Message "The safety message log has no valid data hash" on project opeing will occur if the iC9226M-FSoE project is opened in a different time zone than the one it was saved in. The message is related to a hash used in the persistent safety log. This defect does not represent a safety-critical defect, as the safety log only has a logging function and has no influence on safety-related data that is used to generate the safety-related user program.	Once the project is saved again in the new time zone the error will no longer occur on opening the project.
52878	WBM Archive Project does not handle safety project	Project archive feature in the WBM cannot be used to manage (send to controller or receive from controller) safety projects.	Use iCubeEngineer to commission (download) safety applications.

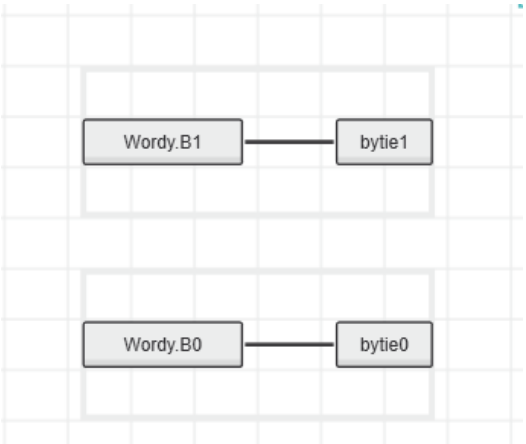
62023	iCube Engineer Incorrectly Reports Safety PLC Debug is Active	iCube Engineer reports Safety PLC Debug is active in cases where a Safety PLC project is not running. Examples include when the safety PLC is in Debug Stop state and also when a valid project has not been written to the Safety PLC.  From iCube Help (*Home -> Safety PLC Commissioning: From Compiling to Debugging -> Connecting vs. Monitoring Mode vs. Debug Mode)* 	Check the Safety PLC status in the Safety PLC cockpit while connected to the Safety PLC to determine if the Safety PLC is in Debug Run or Debug Stop state, and also whether or not a project is present on the Safety PLC.
62599	Phoenix Contact safety DO (AXL SE FSDO4/2) not working	When using an AXL SE FSDO4/2 safety digital output module in an AXL F BK EC EtherCAT coupler from Phoenix Contact on the EtherCAT node, the safety controller will not be able to go into Safe Run.	Do not use the AXL SE FSDO4/2 safety digital output module.

3.2 iCube Engineer Known Issues

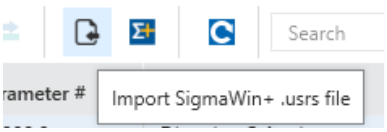
ID	Title	Description	Workaround
9546	'Create New Function Block Instance' option doesn't exist when editing in ST environment	A function block instance cannot be created by right clicking and choosing to create a new instance from the code editor of a Structured Text worksheet.	Drag and drop an instance of a function block from the components tree of the project.
21016	Error (division by zero) is displayed in the wrong line of code	Errors such as division by zero may not be traceable to the exact line where the error occurred. The error line could be wrongly shown on a line in the vicinity of the error occurrence.	The error could be displayed on a line near the line where the error occurred.

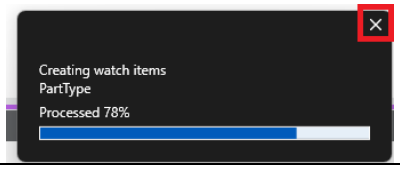
25444	Import csv file in the variable table does not retain mapped PDI variables	The import from CSV file functionality to import variable in the data list of the PLC table mention "Finished importing CSV", but doesn't import any PDI linked to the imported variable. 	The PDI mapping to the imported variable needs to be done manually. The imported variable that are duplicated needs also to be removed manually.
28153	Controller scan and Profinet scan don't detect devices all times	Controller scan and Profinet Scan does not detect profinet devices always	Multiple scans may be required to detect Profinet devices on the network. Or download NetNames+ : https://www.phoenixcontact.com/en-pc/products/data-interface-em-pnet-gateway-ifs-2904472 
32554	Safe variable aren't protected from the main PLC	Names of variables from the Safety PLC project will appear in a list of available variables when working in the standard PLC project. This occurs when typing a variable name - see the example below - as well as when browsing the variable names in the drop-down list. If a safety PLC variable is used within the standard PLC project this will cause an error when the project is rebuilt. 	When selecting a variable name, first open the variable list drop-down and then select "PLC" to filter only for standard PLC variables. 
42328	SliceBus safety module diagnostics not available	Diagnostics for the SLIO safety modules on the SliceBus are not available through iCube.	Visually review LED states present on the SLIO safety modules and refer to the meaning of the LED indicators in the technical manual for the SLIO module, 021-1SD10, 022-1SD10. https://www.yaskawa.eu.com/controls/plc-control-systems/seriesdetail/serie/slio_1447 See the section "status indication" as a starting point.

43610	In safety PLC messages further information to the error codes in Columns "Additional information" and "Extended information" are not available	In the Safety PLC cockpit messages, the errors point to internal errors that are hard to decipher. 	Contact Yaskawa for help on safety PLC errors.
43636	Drive scanned from the Profinet network doesn't automatically add the GAx00 Motion Config module	Executing a Profinet scan functionality on Yaskawa Profinet VFD doesn't add the Profinet telegram Part.	there are 2 solutions: • add the Profinet VFD from the catalog manually instead of automatically with the Profinet scan • add manually Profinet telegram to the Profinet VFD after the scan has been executed: 

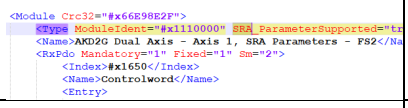
46312	non safety FB from "Safety IEC 61131-3" library aren't supported on iC922xM-EC	If a WORD_TO_BYTES FB is used in the application, a compile error is generated mentioning that the iC922x resource does not support the WORD_TO_BYTES function block because this FB is part of the Safety IEC 61131-3 library.	• Do not use any FB from Safety IEC 61131-3 in a nonsafe PLC.
			• Use implicit addressing as shown below:
			 
			`byte1 := wordy.B0;`
			`byte2 := wordy.B1;`

46399	Motion Axis generation fail to create the proper variable when Identity.Axis Number is changed from default	If a user modifies the axis number property of a motion axis and then adds additional motion axes to the project, then the automatic generation of the AXIS_REF variable in the PLC/global variable table is affected.	Do not change axis number property of a motion Axis if additional servopack need to be added to the project at a later stage.
49219	MSG_ONL0156 : Unable to download project and unable to find the reason for the download failure	If the error message "MSG_ONL0156: Unable to download the project changes to the device" is shown, the user will have to check the reason for the download failure in the output log of the controller.	The output log can be obtained by SSH-ing into the controller. The output log can be obtained at /opt/plcnext/logs.
49637	PDO : Pressing "load PDO information" results in warning messages about process data item creation	If user selects to 'load PDO information' from the ECAT sub device's PDO data tab, process data creation could fail because of a datatype mismatch.	Do not use the 'Load PDO information' button on the PDO tab of an EtherCAT sub device.
49821	OPC UA PubSub Subscriber can receive data from an incorrectly configured publisher	An incorrect configuration can lead to data inconsistencies that are easy to troubleshoot. For example, if there are two publishers, one publisher configured correctly and the second publisher configured incorrectly (with the same IDs as the first publisher), the subscriber will get data from both publishers. There is no mechanism to filter data from an inadvertent wrong configuration	The user should take care to configure and set up publishers correctly.
49949	Cannot Debug/Monitor Safety PLC Variables after Write and Start Standard PLC Project	After writing and starting a standard PLC project, done while debug and monitoring of both the Standard and Safety PLC projects are active, the values reported for Safety PLC variables will not match the actual values and a reintegration request is required.	Following the Write and Start of the Standard PLC project, it is necessary to set ACK_REI_FSOE_GLOBAL=True to provide a reintegration request. Once the reintegration request is provided, the variable values shown when debugging match the actual states. Set ACK_REI_FSOE_GLOBAL=FALSE to complete the process.

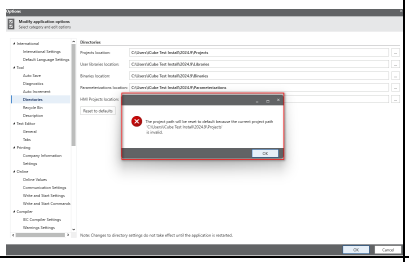
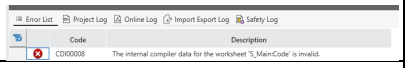
50179	Unable to use the same toolbox library with a different path than default library path: "The reference library could not be loaded because the library ..... "	If the user moves the library folder with libraries in it to a different location, projects which refer to the libraries in the original project will have compile errors when the old libraries are deleted and the libraries from the new location are added. The compile error is "The reference library could not be loaded because the library xxx with the same ID has already been loaded"	There are options: • Do not change the library location for an existing project. • Share a project as an archive. • Fix the library location as follows: 1. **In Window Explorer:** Copy all the libraries used in the project in a new folder location 2. **in iCube Engineer:** open: "Extras" --> "Options..." --> Tool/Directories 3. modify the path of "User libraries location" to the new path defined in step 1 4. save the project 5. close completely iCube engineer (not only the project) 6. re-open iCube Engineer and the project a. All the paths for each library should be modified and no error should occur.
52815	Sigma-XT: "Import SigmaWin+ .usrs file" always imports the parameters for the first axis regardless of axis selected	"Import SigmaWin+ .usrs file" always imports the parameters for the first axis regardless of axis selected. 	Do not use the Import SigmaWin+.usrs file functionality in iCube Engineer for multi-axis servos.
53540	Unexpected controller reboot when using PBCL_SysDeviceStatus_1	Depending on the data type used in the InOut variable "anyResult", the controller might unexpectedly trigger a power cycle (reboot).	When using PBCL_SysDeviceStatus_1, set the data type of the variable connected to "anyResult" to the one defined in the documentation for the status variable specified in "strIndent". For example, to read "Status.Memory.Usage.Percent" (defined as a BYTE in the documentation), define the variable connected to "anyResult" as a BYTE data type.
53699	Generated Safety Variables are not removed when Safety modules are deleted	Generated Safety Variables are not removed when Safety modules are deleted	Delete the safety variables after removing the safety modules

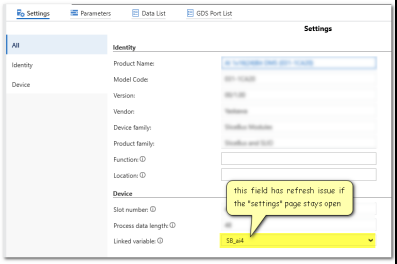
54483	ECAT Online : missmatch analyzer is showing Sigma7W servopack modules in red	In the EtherCAT online functions page, modules that are part of multi module devices, are sometimes shown in red.	Check the state of the EtherCAT device and ensure that the device is in state 8 (OP state).
54492	iCE Active window crashes when attempting to cancel the load of a variable into the watches tab	While loading a new variable (which is a large structure) into the watches tab, canceling the operation by clicking the X in the "Creating watch items" window currently crashes the active iCube Engineer window. 	Wait for variable to load into watches tab completely, and then remove it.
54882	Impossible to bring back undocked window from a disconnected monitor	If an iCube Engineer window was undocked and moved to a secondary monitor, and if the user disconnects the secondary monitor, it is not possible for the user to bring back the undocked window back to the original monitor. The click action to make the window visible seems to work, but the window does not appear on the original screen.	<u>Below 2 possible solutions:</u> 1. Right click on Windows desktop > Display settings > Select 1 monitor. OR 1. In iCubeEngineer press CTRL+Tab and select the missing window with the arrow keys (i.e. Logicanalyzer) 2. Press Windows+Shift+Arrow to move the selected window from monitor to monitor.
55375	Multiple bus scan proliferates Motion Axes instances	Performing an EtherCAT bus scan does not automatically delete existing Motion Axes from the plant. This leads to proliferation of Motion Axis objects which are not connected to an underlying servo object, which causes additional configuration-related motion alarms.	The following recipe produces a clean bus scan without extraneous objects or variables: 1. Delete all EtherCAT servo nodes in the plant 2. Delete all servo Motion Axes in the plant 3. Delete all related global variables for servo-# and AXIS# from the PLC global variables list 4. Perform bus scan
56341	ECAT Online : missmatch analyzer is showing SLIO Ecat module in red	The Mismatch Analyzer tab in the EtherCAT Online Functions page shows modules in EtherCAT devices in red.	None. This does not affect the functionality of the modules.

56946	EtherCAT Bus Scan: Unable to find modules of EtherCAT devices in certain conditions	EtherCAT Bus Scan: Unable to find modules on the CoE bus coupler in certain conditions. A first bus scan without an existing configuration on an iC9200 controller can result in modules not being discovered.	A configuration needs to be present in the ECAT master for a successful discovery of modules on a bus coupler. A write and download of the project with the bus coupler in the configuration will establish the required configuration. A secondary bus scan will result in the discovery of modules on the coupler. Safety modules will communicate over FSoE only if the bus coupler is set up in enhanced mode.
58211	IO variable generation: ComState structure elements display FALSE and are not linked to PDIs	ComState elements of autogenerated global variables for SLIO modules is not currently populated. It displays the value FALSE always	Do not use the elements of the ComState structure of autogenerated IO variables corresponding to SLIO modules.
58334	Importing csv file resulting in cryptic error message : Error during generating native code, internal meta-compiler	Importing a large csv file can cause a native code generation error.	Not available.
58548	Cannot rebuild or download uncompressed project (possibly because of a network drive interaction / antivirus interaction ?)	Saving a safety project as an uncompressed project (*.pcwef) renders the project not buildable and not downloadable.	2 Suggestions: • Saving a safety project on a network drive is not supported. • Disable Auto Save in Extra--> Option/AutoSave
61670	iCubeEngineer -Importing ASM7 and ASMX ESI fails because of a CRC checksum calculation error	If a user tries to import the ESI file for an ASM7 or ASMX device, it will result in a CRC checksum error.	User should import the ASM device from the device catalog in the COMPONENT section of iCube Engineer.

62024	iCE Pop Out Menus Cover Other Applications	In iCube Engineer, if a window is popped out (for example: Watch Window, Logic Analyzer Window, etc.) the popped window will cover other Windows applications even after the user tries to select the Windows application.	Not available.
62334	Forced Output value of digital output variable in the project is unable to hold the forced value state.	Forced Output value of digital output variable in the project is unable to hold the forced value state.	Do not rely on the forced value of a variable in a project for critical logic decisions.
62416	Write and Start Project (with Sources) does not occur on a new project and removes the option to write and start again	When creating a new project either from a template or from scratch, if the IP address of the controller or the project is changed then using ***Write and Start Project (with Sources),*** a "Save As..." window will appears but the write and start will not take place and all options to write and start are greyed out after this attempt.	If a new project is created and IP address of the project or the controller is changed, **Save** the project before executing ***Write and Start Project (with Sources)*** to download it to the controller. If you get stuck with "Write and Start" disabled, then restart iCube Engineer.
62470	ESI File import: Unable to import AKD2G-SPE ESI file into iCube Engineer	If the ESI file of an EtherCAT subdevice contains safety modules with SRA support (for example AKD2G-SPE ESI file), ICube Engineer will fail to import the ESI file successfully. SRA support can be checked by searching for 'SRA_ParameterSupported' field. 	Not available.
62737	PDO Editor: wrong data List if PDO name is modified	If the PDO name is edited in the PDO list for a device in iCubeEngineer, the name is not correctly refactored in the variables in the PDO data list.	Refrain from renaming the PDO name in the PDO list for EtherCAT devices in iCubeEngineer.

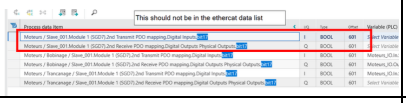
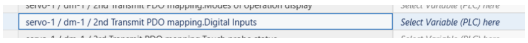
63179	Help about is a modal dialog, that gets hidden behind a logic analyzer trace which can not be moved or dismissed -> lockup	If you choose Help-About while a pop out window is displayed, the "About" window may be hidden.	Resize the screen to a higher resolution so that the "About" dialog is displayed and can be dismissed.
63215	Regression: PN282 error when setting Motor Type to linear with SGLFW2	If the user configures the motor connected to a servo as a linear motor, a compile error is generated prompting the user to set Pn282 for the servo in iCube Engineer's parameter. If the user has a serial converter on the motor (SigmaTrac: SGLFW), the user should set Pn282 to the value required for that particular converter. If the user does not have a serial converter on the motor (SigmaTrac2; SGLFW2), user should not have to set Pn282. A value of Pn282 set by the user is ignored if a serial converter is not used.	Set a value (any value will do) for Pn282 in the parameter page of iCube Engineer. The entry will suppress the compile error. This value is ignored by the servo when a serial converter is not used.
63583	E1001 Critical internal error, Error During Generation of Native Code	E1001 Critical internal error and Error During Generation of Native Code messages are generated when a large variable is passed through a MOVE block with EN/ENO connections.	Not available.
64039	More than 8 INPACT MotomanSync EtherCAT devices can be added to the PLANT in iCube Engineer	More than 8 MotomanSync connections can be added in iCubeEngineer.	Limit the maximum number of MotomanSync connections to 8. Please contact tech support or the online help for recommended settings for EtherCAT update rate and application task rates when MotomanSync groups are configured.

65124	iCubeEngineer - Crash after Moving Beckhoff EL6021 between EL6002/EL6001 in the EC Node in the PLANT	iCube Engineer becomes unresponsive if the a module is moved from one EBUS sub device to another under the EtherCAT node in the PLANT.	Do not move EBUS modules between sub devices in the EtherCAT node. If a move has to be performed, remove the sub device and re-add it.
65179	iCube Engineer Crash: when iCube Engineer folders (library, EtherCAT ...) are defined in a location that require Administrator rights	If a directory path that requires Administrator rights is selected during iCube Engineer installation, and the current user does not have Administrator rights, then while updating the paths using Options->Extra, the following dialog will display and then iCube Engineer will crash. 	During iCube Engineer installation and directory selection in Options->Extra, only choose a directory path with full access permissions for the logged in user.
65722	Safety PLC: Unclear error message when using a not supported object in SNOLD (CDI00008)	Contact and coil types are restricted in SNOLD (Safety Network Oriented Ladder). Transition-sensing contacts or coils are not supported. When using these, the user will be presented with the following error message after building the project: 'The internal compiler data for the worksheet 'S_Main:Code' is invalid.' 	Do **NOT** use Transition-sensing contacts or coils in SNOLD 
66470	CoE objects missing from CoE Data tab for multiaxis servos	In the EtherCAT Online Functions page, on the CoE data tab of multi axes servos, all CoE objects are not displayed for the user to monitor/edit.	NA

66544	No refresh of dynamic combobox in settings editor	After modifying the name of variable linked to a device in the "settings" page (either by changing the "function/location name and refactoring or just changing the variable name in the PLC table), the combo box in the setting page is not updated automatically. 	This is an update/refresh issue of the settings page. To solve this issue leave the Settings page of the device and come back again. Now the display of the linked variable should be corrected.

67564	EtherCAT Bus Scan Does Not Properly Populate Identification Value and HC ID	In iCube Engineer 2025.6, the EtherCAT bus scan will automatically recognize the identification value for devices that have the default identification "Station Alias (0x0012)" (e.g. Sigma7 servopacks) BUT will **not** recognize the identification value for devices that have the default identification "Explicit Device ID (0x0134)" (e.g. SigmaX servopack or EtherCAT bus coupler 053-1EC01), this will fill the identification value 0 and generate the following compilation error : • If there is **only one** device that use Explicit Device ID (0x0134) : "EC0004 - The identification value '0' of the EtherCAT slave '<name> is out of the valid range"  • If there is **several** devices that use Explicit Device ID (0x0134) : "EC0002 - The unique identifier of '0' of EtherCAT slave '<name>' is assigned to more than one EtherCAT slave 	Enter manually the correct identification value of the devices with the compile error.
67638	Data List: The Offset Column on EtherCAT device is shown as "Bit" address instead of "Byte.X" address	In the "DataList" tab for EtherCAT devices the "Offset" column shows the bit number of the offset instead of the "Byte.bit" as is shown for Slicebus and Profinet devices but shows correctly the format for safety variable in the same table.	To determine the byte number of the offset for EtherCAT devices, divide the "Offset" value by 8. The remainder of the division by 8 is the bit offset within the byte. The offset value for the safety variables shown in the datalist represent the memory offset of the safety PLC and is then different that the one of the standard Controller.

67974	Servopack stuck in A.A12 - Arp.Io.EtherCAT.Internal.StackLogging - ERROR - Notify EC_NOTIFY_FRAME_RESPONSE_ERROR(No response error for cyclic frame	In some scenarios, the EtherCAT devices can show an EtherCAT communication issue, but EC_Topology = TRUE and each EtherCAT slave are in Op state.	The error can be resolved with changing EtherCAT cycle time, rebuilding project and changing cycle time back to original value.
68587	Ethernet/IP generic adapter device : EthernetIPScanner configuration: incorrect handling of Input-Only/Listen-Only O2T fields	When adding an Ethernet/IP Generic Adapter device to the plant, if the Application Type is selected as "Input-Only" or "Listen-Only", then the handling of the O2T (originator to target) connection fields is incorrect. • The O2T size field is incorrectly required to be non-zero (it is in fact always zero for this application type) • The O2T Instance ID field is not actually used to build the configuration. The commonly-used standard values of 198/199 are always used instead. The setting of this field is ignored, even though it enforces a non-zero requirement as a build precondition.	1. Enter a dummy value such as 1 for the O2T size and Instance ID. This value will be ignored. 2. Non-standard O2T heartbeat Instance IDs are supported in the controller config file, but there is no method to set these fields via iCube Engineer. Contact Yaskawa support for details on how to manually edit this file.

68861	Exception occurred:'Insert variable:'Arp.Io.Ecat/... already exists" at component Arp.Io.FbIo.Ecat on SetupPlc	Exception occurred: 'Insert variable:'Arp.Io.Ecat/... already exists" at component Arp.Io.FbIo.Ecat on SetupPlc error can happen if there are two PDI variables with the same address. This could have happened because of a device being renamed. The symptom is shown below. 	Remove the EtherCAT device that is causing this. Re-add the device and check the data list to make sure that there are no duplicate entries.
69501	The referenced library could not be loaded because the library with the same ID has already been loaded	On replacing libraries the user gets a message "The referenced library could not be loaded because the library with the same ID has already been loaded".	Save the project. Close iCube Engineer and reopen it. Open the project again.
69853	OPCUA: Controller Service Activation breaks OPC UA via Namespace Index Changes	If OPC UA services activation are modified (e.g. enable OPC UA client, PubSub, Profinet services...) on the controller using WBM, then OPC UA communication that was configured using auto synchronization of tags between HMI Designer[OPC UA client] and iCube Controller[OPC UA server] will get affected.	**Solution 1**: Don't use the Auto synchronization of the variable, but use the manual import of OPC UA tag from the controller, by following the Application note : How to establish OPC UA communication between HMI Designer(Client) and iC9200 Controller(Server) **Solution 2**: Keep the services of the controller with the default value.
69953	Motion Axis: Negative position scale does not also set negative torque scale - axis alarm results	Defining a negative position scale in the configuration tab of a motion axis, will end up with the following motion alarm : 	• Do not define a negative position scale for a motion axis. ○ If there is a need to invert the forward direction of a motor, change it with its related parameter in the drive. Example with a SERVOPACK, modify parameter Pn000.0.
70173	Bit 16 of the digital input ethercat PDO on a Sigma7W is not mapped to the autogenerated variable in iCE	The automatically generated variables for the digital input bank on a Sigma7W are shifted in position by one bit. The first pin status (pin 7) is missing. Pins 8 to 11 are shifted by one.	Use the bit mapping from the digital input word Process Data Item. 

70397	Motion Groups: Labelless Axis disappears from Mechanism tab when tabbing away and back	If the user has incomplete axes configuration rows in the group mechanism tab, and the user switches tabs, on coming back to the mechanism tab, the user will be unable to continue with the axes configuration process. The Add Axis button will be greyed out.	Change the mechanism type to another mechanism and change it again back to the original desired mechanism.
70738	Delta-3 and Delta-5: group.xml not updated when rmin/rmax are set to number then back to Unlimited	The r(min) and r(max) values define the minimum and maximum distances of travel for the platform of a Delta or Delta-5 mechanism. These numbers are set by default to *Unlimited* meaning that there are no restrictions on platform distance. If the user sets one of the values to a number and then sets it back to *Unlimited*, the change is not properly saved to the controller and the previous number will still be used. Note that changing from a numerical value to another numerical value works properly; only changing back to *Unlimited* causes the issue.	If Unlimited values are needed, set rmin to a very small number and/or the rmax to a very large number that is beyond the physical limits of the mechanism. This will have the same effect as setting the value to *Unlimited*.
70871	Opening previous projects in ICE 2025.6RC3 automatically sets Motion Axes Level of Detail to "low" instead of "high"	Projects created in iCube Engineer version 2024.9 or earlier, and then opened in iCube Engineer version 2025.6, will have the Motion Axes "level of detail" setting set to "low" by default. This is different from the new project template which sets this value to "high" by default. Side-effect: level-of-detail setting "low" causes the online Axis Grid WBM page, as well as certain function blocks, to display or return empty-data for some parameters. This is expected behavior and is intended to reduce startup time for large axis count systems.	After opening the project in iCube Engineer, explicitly set the Motion Axes level of detail setting to an appropriate value (i.e. "high").

70874	MotionGroups: Switching tabs yields MG0002 compiler error on unassigned joints.	If an axis of a motion group is incompletely configured (i.e. the "Axis Label" is selected but no corresponding Axis is assigned) when a new tab is selected, an error MG0002 "Motion Groups cannot contain joints without assigned axes" can occur in the Error List.	It's the group's Mechanism tab, click the "Add Axis" button and select an unassigned Label, then assign an axis to that row under the Axis Name column. If the axis is not needed, you can then delete it. If the error persists, continue the process for each unassigned axis until the problem is resolved.
71035	Older FDCML versions of devices do not trigger refactor on Function/Location.	Older EtherCAT device versions do not work with name refactoring based on Function or Location fields.	User will have to manually perform a refactor.
71070	Opening iCube Engineer 2024.9 project with configured H-Bot or T-Bot in iCubeEngineer 2025.6 will result in invalid configuration	A project created in 2024.9 that uses a coupled gantry mechanism (Hbot, Tbot, CoreXY) does not get converted correctly when opened in iCube Engineer 2025.5	Delete the group and readd the group configuration
71076	Deleting Controller and restoring from recycle bin gives unrecoverable errors: Internal error Object reference not set to an instance of an object.	Internal Errors arise if a controller is deleted and restored from the recycle bin.	When restoring the controller in the project from the recycle bin, when prompted with the question of overwriting the linked variables, select NO.
71092	Export to csv from the PLC data list does not work	Export to csv from the PLC data list does not export all items present in the PLC data list.	Use export as IEC 61131-10 file and select the PLC data list. Note that this will export the data list in the form of an xml file.

71193	Delta5: Z_2 is interpreted as an offset when it should be interpreted as a distance	The Z_2 parameter of the Delta-5 'Mechanism Customization' section is interpreted as a signed number and it's treated as an offset following the positive direction of the Z axis. So, if the user sets '+Z direction of MCS' to 'From Platform towards Base' and this parameter is positive, then the TCP position will be off by $2 \cdot Z_2$ in the Z axis.	If '+Z direction of MCS' is set to 'From Platform towards Base', input Z_2 as a negative value.
71211	Replacing Servopack messes up the station address and makes EC_TOPOLOGY_OK false	Replacing a device in the EtherCAT node of the PLANT can cause an issue with the station address of the device. This will cause an invalid topology. The invalid state in topology can be seen in the system variable EC_TOPOLOGY_OK = FALSE.	If a device needs to be replaced, delete the device and add the new one in the place of the old device.
71278	Web HMI App permanently crashes a project file in HMI Designer	It is not advised to change the project resource from the target HMI panel to the Web HMI App (iC9200 controller). If the resource is changed back to the HMI panel the project will be unable to download and run on the intended target.	Do not change the project target resource to the Web HMI App (iC9200 controller) and back.
71389	iCube Toolchain: Error installing SDK when the user's home directory (TEMP/TMP) path has spaces	When using iCube Engineer Toolchain to install a target SDK (such as iC9226), if the user's TMP and/or TEMP environment variable path contains spaces, the SDK installation fails. This happens by default when the user HOME directory has spaces.	In a command prompt: 1. Change the TMP and TEMP environment variable to a path which doesn't contain spaces (e.g. C:\tmp) a. set TMP=C:\tmp b. set TEMP=C:\tmp 2. Use the CLI to install the SDK directly a. See: https://icubecontrol.com/HELP-latest/en/Help/_index.htm?iframe=https://icubecontrol.com/HELP-latest/en/Help/YiCE_managing_sdks.htm b. plcncli.exe install sdk --path archive.xz --destination \path\to\install\dir The changes to TMP/TEMP are only in effect for the specific command prompt window, and are automatically discarded when the command window is closed.

71426	Deleting two single axis servos and adding a dual axis servo does not result in a new variable for the dual axis servo.	If a servo is deleted and another servo of a different type is added in its place, no automatic IO variable generation happens for the new servo.	The user can create a new variable for the device and assign it the appropriate data type. The user will have to link the newly created variable to the servo from the servo's settings page.
71659	Updating FDCML files / Copy and replace devices in PLANT nodes resets configuration of the device to default.	Using the "Copy" function on a device from the catalog in COMPONENT and using the "Replace" function in an existing device in the PLANT tree will result in a "delete previous device and a new one", meaning the user configuration of the device is reset to the default value. Any configuration done on the older device will be lost.	• Use Copy/Replace functionality for Controller Device **ONLY** (to update the FW version of the iC9226) ○ note: replacement of an FSoE controller by an EC controller is forbidden • Do **NOT** use Copy/Replace for any other device, it is advised to manually delete the previous device and add a new one.
71779	EtherNet/IP Adapter: Too many configured instances does not report an error in iCE	When the iC9226 is configured as an adapter to a scanner only 24 connections (one connection = T2O and O2T pair), seem to communicate with the scanner.	When the iC9226 is an adapter, configure only 20 connections for communication
71951	Cam Editor: Variables defined as external does not create a GlobalVars		Create a Local variable to use in the cam POUs Segment Table, setting it's Initial Value to the value to be used in the graph. At the beginning of the Code worksheet of the POU, set the value of that local variable equal to the desired global variable or structure element Example: localVar_1 := globalVar_1 localVar_2 "= globalVar_2.LREALSubElement //CamSegment info follows Note that performing an "Export to ST Program" will erase the entire code worksheet and the variable assignments will need to be re-added.

73443	iCE CamEditor: Global variables and structure elements do not work for variablization of Cam Segment Table		Create a Local variable to use in the cam POUs Segment Table, setting it's Initial Value to the value to be used in the graph. At the beginning of the Code worksheet of the POU, set the value of that local variable equal to the desired global variable or structure element Example: localVar_1 := globalVar_1 localVar_2 "= globalVar_2.LREALSubElement //CamSegment info follows Note that performing an "Export to ST Program" will erase the entire code worksheet and the variable assignments will need to be re-added.
73977	ASM7 Name in Catalog for Module Ident. 0x2200802 is Incorrect	The name of the ASM7 device in the catalog is incorrectly shows "Rev. >= 0x09" where this should be "Rev. = 0x08".	This issue is not expected to affect functionality and so using this device with the current catalog name for an ASM7 v8 card should cause no functional issues.
77061	Project converted from 2024.3 to 2025.6 has compile error: Exchange variable has unsupported type.	Project converted from 2024.3 to 2025.6 has compile error: Exchange variable has unsupported type.	Double click on the error in the messages window and go to the data list which opens up. If there is a PDI of the same data type mapped to a variable, unmap the variable and map the erroneous variable to the PDI. Then unmap the erroneous variable and map the original variable. For example, if the error message is for exchange variable 'sdo_1_Data' being unsupported, and 'sdo_1_Data' is a SAFEBYTE of direction I, check to see if there is a PDI variable of type SAFEBYTE. If there is, disconnect the linked variable and link 'sdo_1_Data' to the PDI variable. Then unlink 'sdo_1_Data' from the PDI and link the original variable to the PDI variable.

77063	Automatic variable generation: SLIO/SliceBus counter modules must not connect global variable SB_fm.Out fields when configured in combination with motion kernel axis (part 2)	When using certain SLIO counter module models, the automatic variable generation incorrectly creates PLC global variables linked to IN/OUT ports for the module, even when the module is configured for motion kernel integration. The motion kernel requires exclusive access to these IN/OUT ports when configured to integrate with these modules, and unexpected errors or incorrect operation will result.	Manually remove the related global variables after adding the modules to the plant.
78544	Duplication of EtherCAT device PDO entries in 2024.9 remain after converting to 2025.6	Duplicate PDO Mapping entries are shown in the data list in 2024.9 projects. When brought into 2025.6.1, the duplicate entries are still shown.	This is an issue with the data list display, and not the generated code. There is no workaround for the display issue in 2025.6.1.
79778	PDO Editor: Edit button is blocked when a PDO line is correctly selected	In the PDO Data tab of any EtherCAT subDevice following the step below, the edit button becomes grey out: • select a PDO • click the Edit button to open the PDO editor • Modify if needed and close the PDO editor • select the same PDO line ==> The edit button is now not clickable to open the PDO Editor again	Click on another PDO line and then click the PDO row to be edited.

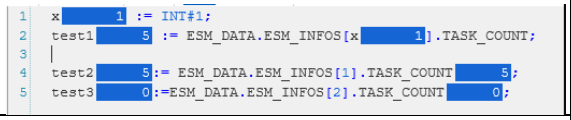
79851	Auto-generation variable: iCE Silently changes the auto generated variable while re-ordering modules	Re-ordering SLIO module into the module list will generate a new linked variable and change the PDI link to this new variable which can be executed silently (whithout pop up warnign to the user depending of the scenario). This will have for consequence to break the link between the variable used in the code and the one linked in the PDI list of the module	If using the auto-generated variable, modify the "linked variable" field into settings tab of the SLIO module to the expected variable.
80514	iCube Engineer Crash After PDO Mapping Changes are made to MDP devices in projects originally created in iCube Engineer 2024.9	If the PDO map for a EtheCAT MDP device is edited in a project in iCube Engineer 2024.9, and that project is opened in iCube Engineer 2025.6.x, then iCube Engineer may crash while the PDO map is edited.	Before opening the project in 2025.6: Open the project in 2024.9 and remove the EtherCAT devices from the Plant and save the project. Open the project in 2025.6 and add the EtherCAT devices, and then edit the PDO map. Note the crash does not occur if non-MDP devices have their PDO map edited and PDO map entries for a device are deleted one at a time, with a save and re-open of the project in between.

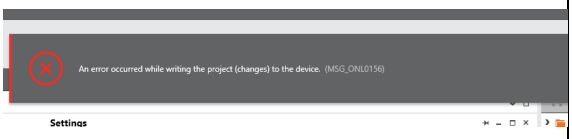
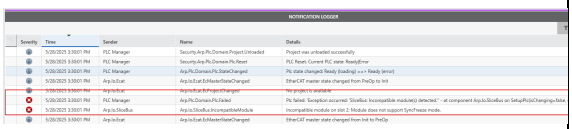
3.3 iC9226 Firmware Known Issues

ID	Title	Description	Workaround
16544	DHCP causes Profinet to exit the PLCnext application	When DHCP is enabled, the PROFINET functionality is not supported and is automatically disabled in the configuration.	Not available.

31468	Data memory limits on the iC922x (verification is blocked by #58878)	The maximum data memory is 32MB for optimal operation of the iCube Engineer project on the iC9200 controller. • If the data memory size of the project is between 32 MB and 64 MB, the user may encounter failure executing 'Write and Start Project Changes' to the controller. There will be no compile error. • If the data memory size of the project is between 64 MB and 128 MB, the user may encounter failure executing 'Write and Start Project' to the controller. There will be no compile error. • If the data memory size of the project is greater than 128 MB, the user will get a compile error and will not be able to 'write and start' the project.	Keep data memory usage to less than 32MB.
33996	FSoE CPU is not working without FSoE module	Safety PLC will not run without a configured FSoE module. The SF ER will be lit all the time.	Add a FSoE slave in the project configuration and map at least (1) safety process data item to a safety PLC variable. If the safety module is not actually present, a topology error will be reported, which can be ignored. The communication to the existing modules is running. If the user doesn't want to see any Red LED on the controller front panel, define a (virtual) EtherCAT coupler (enhanced mode) with a safety SLIO module and keep HC (Hot connect) activated.
34872	SliceBus network shutdown when a breakpoint is reached	If a breakpoint is activated for the first time (logic halts at the breakpoint), the PLC enters debugging state. In this state the various fieldbuses (EtherCAT, Slicebus) stop running and all outputs are set to state FALSE. The PLC leaves the debugging state only when all breakpoints in the project are removed.	It is not possible to keep the fieldbusses running when the PLC enters the debugging state. The PLC State can be monitored using the notifications tray in iCube Engineer. Do not use breakpoints if the application requires fieldbus activity while in the debugging state.
39022	Logic Analyzer inconsistent in picking the trigger for short duration pulses on local and remote modules	Logic analyzer cannot trigger a plot based on a rising or falling signal if the trigger variable (not a port variable) is tied to a process data item (like a digital input or output) and the signal has a small pulse width (1 or 2 ms).	Map the process data item to a port variable and use the port variable to trigger the logic analyzer.

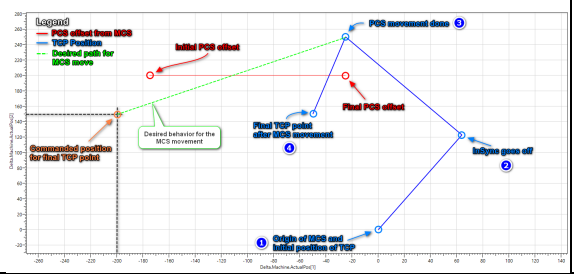
40832	Non safe exchange variable has unstable state when the safe module is passivated	When the FSoE device communication state is not in "ProcessData" (regular operation), then the non-safe PLC exchange variable value is not valid.	Verify that that FSoE device is in "ProcessData" state before using the exchange variable value. Contact Yaskawa support for more information on how to use FSOE_MSTR_ADDR_0000x_PASS_OUT to check for the status of the device.
40870	No error generated when bypassing the 32 Mebibytes data Memory limit	User is able to add variables that consume data memory greater than 64 MB.	Make sure that the total memory used in a project is less than 32 MB.
41020	Limits for Safety PLC number of variables and process data mapping are not checked at compile time	There is no error message in iCube Engineer if the limits for Safety PLC variable assignments mapped to process data is exceeded until an attempt is made to download the project to the safety PLC.	Use the following limits for variables which are mapped to safety process data in the Safety PLC: - The total of all variables which are mapped to the safety process data must not exceed 19980 bytes. - Each safety variable which is mapped to process data occupies 16 bytes. - Each standard variable which is mapped to process data occupies 8 bytes.
44020	SPLC1000 board with under/over temperature shutdown can not be diagnosed usefully	If an overtemperature/under temperature error occurs on the safety PLC, it goes into a Hard Fail-safe state: the safety CPU will set the red ERR LED and and stop all communication; all connected FSoE devices will enter fail-safe state after FSoE communication watchdog time. Once the heartbeat between the standard PLC and the safety PLC detects that communication between the safety PLC and standard PLC has stopped, the data from the safety PLC will no longer be valid.	Include heartbeat logic in the code on the standard PLC to detect that the safety PLC is unresponsive and to determine if the data from the safety PLC is valid.
49233	EOE: Virtual MAC causes switching issue	If multiple EtherCAT devices are configured with the same virtual MAC address, Ethernet over EtherCAT (EoE) communication may become unstable or unreliable. Ensure each device has a unique virtual MAC address to maintain consistent communication.	To avoid communication issues, assign a unique virtual MAC address to each EtherCAT device. Alternatively, isolate the devices on a dedicated local switch to prevent MAC address conflicts.
49270	In a continuous power cycle test in rare cases the IO DIAG LED is lit	It can happen sporadically that the IO DIAG LED is lit at start up without the log mentioning the issue. This means no issue is present.	If the IO DIAG is lit without log information, perform a power cycle or write and start a project.

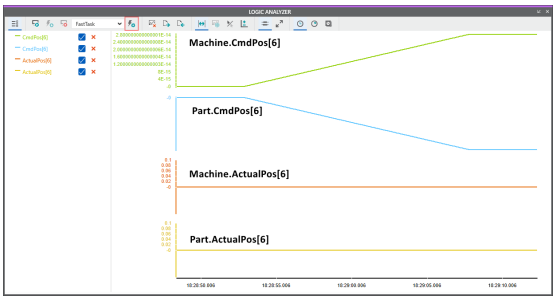
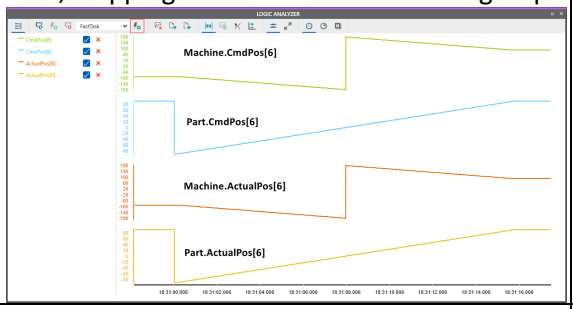
51216	LLDP duplication between PROFINET Device/Controller and Ethernet/IP Adapter	Ethernet/IP and Profinet Device have different specifications and implementations for LLDP frame emission. Thus, multiple frames are emitted, with different content, if both components are enabled. This can cause some automatic device configuration issues with the Profinet network.	It is recommended to disable the Ethernet/IP component when using the Profinet Device/Controller component, and vice versa. This can be configured using the WBM System Services view. If both Ethernet/IP and Profinet are required in the application, please contact Yaskawa support for assistance to defeat the Ethernet/IP LLDP feature.
53415	Wrong online values in execution mode are displayed	The value of an expression will not be shown if the expression contains variables in it. For example, On line 2, the value of the right side of the equation is **not** shown. On lines 4 and 5, the value of the right side of the equations of the two lines are evaluated and displayed correctly. 	Not available.
54297	WBM: Diagnostics EtherCAT Page in the Web Management shows detected slaves when no slaves are configured in project, but there are slaves on the EtherCAT network	The EtherCAT diagnostics page in the WBM can show the detected slaves on the EtherCAT network, when no slaves are defined in the project configuration.	Do not use the EtherCAT diagnostics page to verify the number of sub devices (slaves) configured in a project. Use the project configuration in the PLANT tree of iCube Engineer.
56171	Unable to download to iC9226 if Profinet Controller is enabled and Profinet license doesn't exist.	Activating the Profinet Controller services without the Profinet license will unload the project in the controller and forbid any new project download.	Do no activate the Profinet Controller functionality if the controller doesn't have prior a Profinet license.
56683	Ethernet/IP: IO connection RPI/API not checked against actual maximum update rate	The Ethernet/IP Scanner and Adapter components share a single cyclic update rate, which is configured in iCube Engineer on the Assemblies tab, Schedule Interval field. Neither outgoing scanner IO connections nor incoming adapter IO connections correctly advertise the RPI / API on the wire, if lower than this configured limit. This can lead to unexpected timeouts or connection errors.	Set the Schedule Interval to the minimum expected production interval for all scanner and adapter connections expected in the system.

69262	040-1BA00 and 040-1CA00 with Hardware Revision 1 and 2 don't support slicebus synchronization mode	040-1BA00 and 040-1CA00 with Hardware Revision 1 and 2 can't be configured on the slicebus with Synchronization mode ON. The following Error will be thrown:  When notification logger is checked, the following error can be found: 	Do not use the devices that need synchronization mode and 040-1BA00 or 040-1CA00 (HW 1 or 2) together on the slicebus. Use a 040-1BA00 and 040-1CA00 with Hardware revision 3. A change of hardware version from version 1 or 2 to 3, needs to be discussed with the sales or after-sales representative. The other option is to change the configuration and separate the module that needs synchronization and the 040-1BA00 or 040-1CA00 (HW1 or 2) on a different bus (Profinet coupler, or EtherCAT bus coupler). **Note:** with Hardware Version 3, the module doesn't support synchronization mode either, like many other devices, but there is no more incompatibility with the other module. The full list of modules that support synchronization mode is available here: https://www.yaskawa.eu.com/Global%20Assets/Downloads/Technical_Documentation/Controls/Slio/others/HB300E_CompList_24-25.pdf
70769	Cold start when a project name is changed does not automatically back up a retain data file	If a cold start is automatically performed by the controller, because of a project name change, the controller does not back up the retain data in a back up file. The user will lose any retained data.	Ensure that project name is not changed between "Write and Start Project" commands if the user wishes to maintain retained data.
71246	Writing "SAVE" to register 16#1010 on a SigmaX amplifier while MC_Power is enabled does not notify the user that the save command did not work.	On a Sigma-X servo, if the SAVE function is executed by writing to Index 1010 when the servo is not in a writeable state, there is no indication on the Y_EC_COE_SdoWrite FB that lets the user know that the SAVE was not successful. The Done output becomes TRUE , which gives the user the wrong impression that the save took place.	Read back the parameter to ensure that it was successfully written. Do not rely on the Done output of the Y_EC_COE_DdoWrite FB only.
71446	"SOFTWARE UPDATE" Feature No Longer Available in WBM System Services	"SOFTWARE UPDATE" Feature is not Available in WBM System Services	NA

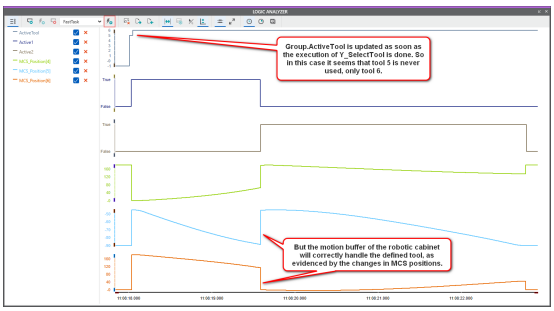
71527	Ethernet/IP Scanner and Adapter component do not properly prohibit download changes on changed plant config	Changes made to the PLANT configuration under Ethernet/IP do NOT restrict "Write and Start Project changes", but the hardware configuration changes aren't taking effect until the next Controller Reboot or "Write and Start Project".	Use "Write and Start Project" every time a modification on the Hardware configuration is done (= any modification in the PLANT tree, "write and Start Project changes" should be used only for modification of code in the COMPONENT tree).
71779	EtherNet/IP Adapter: Only 24 connections on the adapter seem to be working when communicating with an EIP scanner	When the iC9226 is configured as an adapter to a scanner only 24 connections (one connection = T2O and O2T pair), seem to communicate with the scanner.	When the iC9226 is an adapter, configure only 20 connections for communication

3.4 iC9226 Motion Known Issues

ID	Title	Description	Workaround
18996	Spike in commanded velocity and Torque at the end of MC_StepRefPulse implementation - missing decel input	There can be a jerk in motor position when the c pulse is detected using the MC_StepRefPulse using a high velocity.	Use a low value for velocity for detecting the c pulse when the MC_StepRefPulse function block is used.
26625	Y_AX_Home_LS_Pulse CreepDistanceLimit not enforced on Re-Trigger	The CreepDistanceLimit is not enforced when the Home _LS_Pulse function block is re-triggered because the MC_StepRefPulse function block is ignoring the distance limit during this case.	Not available.
33337	MC_TrackConveyorBelt: Wrong final position calculation for MCS move after PCS move that finishes after tracking	When using MC_TrackConveyorBelt, sending a PCS move to the motion buffer that finishes after the tracking has concluded, followed by an MCS move, will result in an incorrect final MCS position (provided that the MCS move is sent to the motion buffer while the PCS is not done). See reference graph below. 	• Send the MCS move to the motion buffer only when the PCS move has been finished. • Make sure that the PCS move finished before the MC_TrackConveyorBelt.InSync goes false.

40843	MC_GearInPos: PositionTracker can cause slave motion in opposite direction	In some situations, MC_GearInPos can cause temporary reverse motion during synchronization phase. This may be unexpected for some applications.	Verify the starting conditions when the block will be executed to check if there can be backward motion on the slave axis during the synchronization attempt. Use with caution if backward motion on the slave axis can cause damage.
46472	Large cam out disengage window causes an instantaneous jump in position when the slave is disengaged	A larger Y_CamOut disengage window can lead to an instantaneous jump in position on camming out.	The window should be calculated such that it is larger than the position travelled by the master in one motion network scan.
50808	Problems with PCS handling for group's rotational axis defined as a linear load type	If a group's rotational axis is defined as "Linear (finite)" in its configuration, the group will not handle said axis correctly when commanding trajectories using a PCS coordinate system. In such a case, multiturn rotations are not handled. For example, a rotation of 720° was commanded in the following image.  Also, PCS movements where the rotational axis' position crosses 0 might cause a jump in the MCS position, as seen in the following image. The servo will throw an alarm in such a case, stopping the motion of the whole group. 	Some possible workarounds are: • Do not use a PCS coordinate system • Select target positions that avoid conflicting trajectories • Add middle positions commanded in MCS to avoid conflicting trajectories
53109	SI-EP3 PROFINET Option Card for VFD: No information about STO inside Status Word available	In the Statusword of SI-EP3 PROFINET option card there is no information about STO (Safe Torque Off) inside the Status Word. Therefore there is no reaction possible with the MC Function blocks (e.g. MC_MoveVelocity, MC_ReadStatus) in case of STO	Using the Multiprotocol Card JOHB-SMP3 (PROFINET mode) there is the STO information in Status Word Bit 14. Control/Status has to be set on 1: Yaskawa P-Drive

58528	PLCopen Part4 group moves: MC_BufferMode#Aborting moves with MC_TransitionMode#TMNone does not produce stop / sharp-corner	The TransitionMode input to MC_MoveLinear***/MC_MoveCircular*** is ignored when the BufferMode is set to MC_BufferMode#Aborting. In particular, MC_TransitionMode#TMNone does not produce a full stop.	Use MC_GroupStop when a full stop is required.
61095	Y_WriteDriveParameter truncates input values which are out of range for the datatype	Y_WriteDriveParameter does not check that the input DINT value is within the range for a 16-bit signed or unsigned value, if the actual datatype of the parameter is a 16-bit size. The data is instead masked to include only the lower 16 bits. This can cause unexpected parameter write values without function block errors, if the input data is outside the datatype range for 16-bit parameters.	Check that the input value is inside the range [-32768, 32767] or [0, 65535] for signed or unsigned 16-bit parameters. Verify written parameters with Y_ReadDriveParameter.
61487	MSync: MC_MoveLinearRelative while tracking does not behave properly if IOP is non zero and PCS moves are commanded	Using MC_MoveLinearRelative with coordinate system PCS with MotomanSync group while tracking a part with a non-zero IOP leads the robot to move to an un-expected position.	Define the IOP input of the MC_TrackConveyorBelt to zero.
62038	PLCopen Part 4: MC_GroupSetPosition stuck in Busy when group is enabled but powered off and the group moves or has vibration	MC_GroupSetPosition will get stuck in Busy state if the user tries to set the group's position while the axis is moving/vibrating. This can also happen if there is no commanded motion but there is jitter on any one of the axes.	Make sure that there is no motion on the groups axes while its position is being defined using MC_GroupSetPosition. Hint: Execute a Y_GroupPower before the MC_GroupSetPosition can help to resolve this issue.

63990	Axis permanently remains stuck in the stopping state if MC_Stop is executed while MC_GearInPos is still waiting to be engaged.	If MC_Stop is executed while MC_GearInPos is busy, MC_Stop stays stuck busy. The axis stays stuck in Stopping state.	Do not execute MC_Stop while MC_GearInPos is busy.
66002	MotomanSync: Group.ActiveTool is not representative of the tool the group is using in all cases	For MotomanSync groups, queuing several moves in the motion queue in advance using a BufferMode different than Aborting with different tools *(using Y_SelectTool in between moves)* will perform correctly, but the signal Group.ActiveTool will be updated when Y_SelectTool's execution is done and not when the move tool is active. 	The tool handling is correctly handled for the motion part, but to get the correct ActiveTool information, the user has to write their own logic using the "Active" output signal of each move function block and update a customized "ActiveTool" variable accordingly.

69803	Delta3/Delta5 unable to recover via MC_GroupReset after exceeding rMin/rMax limits	For a Delta-3 or Delta-5 axes group, if the central shaft limits rMin/rMax are exceeded (usually by means of an ACS move), then when an MCS move is attempted, the axes group will enter an alarm state which cannot be recovered using MC_GroupReset.	1. Disable the group via MC_GroupDisable 2. Use individual AXIS_REF moves via MC_MoveAbsolute to home the axes to a known good state 3. Enable the group via MC_GroupEnable 4. Clear the error condition via MC_GroupReset
69846	Delta3 - changing Z direction selection does not change rotation direction of Rz axis	When changing the direction sense of +Z axis on Delta-3 mechanism, the direction of the optional T axis does not change accordingly to satisfy right-hand-rule of the X and Z axes of the mechanism.	1. Change the positive direction of the T axis via servopack parameter Pn000.0. OR 2. Select a negative feed constant postion scale in the T axis configuration.
69941	Delta5: Changing Z direction does not change rotation direction of Ry nor Rz axis	When changing the direction sense of +Z axis on Delta-5 mechanism, the direction of the T and B axes does not change accordingly to satisfy the right-hand rule of the X and Z axes of the mechanism.	Change the positive direction of the T and B axes via SERVOPACK parameter Pn000.0.
70525	MC_GroupSetPositi ton not setting position of a Scara and Coupled Gantry mechansim correctly	MC_GroupSetPosition does not set the ACS position of Groups correctly. For local groups like an SRB Scara (without a Z axis) where the indices are non continuous, MC_GroupSetPosition does not work correctly.	Use single axis MC_SetPosition for the axes that make up the group.
70526	Synchronized Motion state remains high on group that is tracking after using MC_GroupStop and transitioning to Stopping State.	When a robot is performing conveyor belt tracking and is in Synchronized motion state, if an MC_GroupStop is executed the robot goes into Stopping State, followed by Group Standby, Standstill, and InPosition. Synchronized motion state goes FALSE only after the robot reaches Standstill and InPosition.	Use Stopping, Standby, Standstill and InPosition states to supersede Synchronized state in code logic.
70864	Y_AX_BrakeRelease Does Not Allow Brake disengagement on multiaxis servos (SGDXW, SGDXT, SGD7W)	The Y_AxisRefToNodeID function block used inside Y_AX_BrakeRelease does not work correctly.	Use the PLC variable assigned to the SERVOPACK to change the status of the brake output (for example, "servo_6_IO.Out.SO1")

71273	Commanded Motion on a Scara that causes a switch in pose results in motion alarm in the middle of the move	When the 'Wrist/B pose constraint' is set to something other than 'Unbounded', a jump will occur on the position of the B axis when crossing the 0° position. For example, when using 'Wrist/B pose constraint' as 'Right-Handed', if the current position of B is 30°, and a move results in this value going to -20°, motion will execute without problems until the B position reaches 0°, and then it will stop due to the jump in position.	Set 'Wrist/B pose constraint' to 'Unbounded'
71496	Alarm '0x33170008 misconfigured servonet.xml' if a simulated axis is added to the project configuration	Simulated axes used along with real axes can cause Alarm 0x33170008 Misconfigured servonet.xml.	This alarm does not prevent the user from using the axes (real and simulated).
71526	FMK component does not properly prohibit download changes on changed plant config	Changes made to the PLANT configuration under Motion Axis and Motion Groups do NOT restrict "Write and Start Project changes", but the hardware configuration changes aren't taking effect until the next Controller Reboot or "Write and Start Project".	Use "Write and Start Project" every time a modification on the Hardware configuration is done (= any modification in the PLANT tree, "write and Start Project changes" should be used only for modification of code in the COMPONENT tree).
71542	JOHB-SMP3 PN Version 5003: Statusword Bit 10 Speed Agree while ramping up / PZD Data do not match with Memobus Registers on GA700		
71566	MSync: Y_MS_WriteDigital Outputs should give error for OutputNumber 32 to 47, not 15 to 47	OutputNumber 15 - 47 will return error, while documentation specifies 32 - 47 reserved. This affects the physical general purpose output 16 (OutputNumber 15) of YRC1000. Physical general purpose output of YRC1000micro is unaffected.	Use network IO or slice IO.
71668	Scara: Jumps on positions when doing buffered moves in ACS and MCS	Buffering ACS and MCS movements may create unexpected jumps in position that will stop active motion.	If this situation occurs, do not buffer motion, wait for the Done signal of the first function block before executing the second one. Changing the path can also help if the first solution is not desired.

71717	Scara: Some MCS movements report 4681 even when position is within limits	Sometimes, when using a Scara group, executing the MC_MoveLinearAbsolute function block with something other than ACS as the coordinate system might result in ErrorID 4681 (Position value exceeded configured limits), even when the move is within the specified limits.	Remove the position limits for the second axis (R axis). The user needs to implement code to prevent this axis from going outside the allowed limits of the machine.
71894	Servo identification error when lingering in INIT state on warm start: invalid encoder resolution and position without alarm	In certain scenarios, when the motion kernel fails to identify a servo axis correctly, the axis may incorrectly be in a non-error state without any motion alarms. This is especially a problem when the encoder resolution is not detected correctly: the axis position will be incorrect without warning. To activate this scenario, the following must all occur: 1. The EtherCAT network must NOT be configured for hot-connect, AND 2. The servopack must linger in an INIT state for significantly longer than expected during PLC-start This can occur if the servopack is power cycled while the PLC is in the STOP state, and then the PLC is started again. The cause of lingering in INIT state can be either: 1. The user explicitly requested the INIT state for the servopack via EtherCAT Online Functions, OR 2. The servopack or controller remained in the INIT state for significantly longer than expected. The potential cause of this is not yet known.	Several possible mitigations exist: 1. Configure the EtherCAT network to enable HotConnect groups to avoid the situation entirely. 2. OR: Avoid power cycling the servopack while the PLC is in the STOP state. If power cycling the servos, also power cycle the controller. 3. OR: when power cycling the servopack while the PLC is in the STOP state: start the PLC, then immediately stop and start the PLC again. a. CAUTION: Take care that the machine cannot run automatically without user intervention in this case!