

# XPS-Q8 controller firmware

## XPS-Q8 Controller Standard Installer #30035 (Released Oct. 2016)

**Firmware** (Version: XPS-Q8 Firmware Standard Installer #30035, Build version: XPS Unified V1.0.8)

- ✓ Optimize SGamma profile generator.
- ✓ Fix problem of spindle move (*FatalFollowingError* at *SpindlePeriod* position) for Spindle group.

**Web site** (Web Ajax V2.0.7 + MakeAjaxData V1.0.8)

- ✓ TERMINAL : Fix display of all gathering variables.
- ✓ FRONT PANEL : Extension of pages to 16-axes controllers.
- ✓ TUNING / Gathering display page : fix display of positioner parameters.
- ✓ Fix problem of Error.log file overwritten by Web errors.
- ✓ Fix problem of section detection in SYSTEM / Modification page.

**Initializelp** (V2.0.3)

- ✓ No change.

**RC module** (V1.0.7)

- ✓ No change.

**QNX kernel** (V2.2.3)

- ✓ No change.

**Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0.
- ✓ Software driver TCL API driver V1.0.x
- ✓ Software driver ".NET" assembly for Windows x86 and x64.
- ✓ Stage data base revision V3.0.6.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Installer #30034 (Released July 2016)

**Firmware** (Version : XPS-Q8 Firmware Standard V1.5.0, Build version : XPS Unified V1.0.7)

- ✓ Modify maximum number of driver plugs to 16 axes.
- ✓ Modify the maximum number of groups :
  - SingleAxis = 16
  - SingleAxisWithClamping = 16
  - SingleAxisTheta = 5
  - Spindle = 16
  - XY = 8
  - MultipleAxes = 16 (*Maximum number of axes for each MultipleAxes group is 8*)
  - XYZ = 5
  - TZ = 5
- ✓ Improve socket closing when using API *CloseAllOtherSockets()*.

**Web site** (Web Ajax V2.0.4 + MakeAjaxData V1.0.7)

- ✓ Modify to new prototype of API *PositionerDriverStatusGet (... , unsigned long \*)* for XPS Unified firmware.
- ✓ Modify to support 16-axes controllers.

**Initializelp** (V2.0.3)

- ✓ No change.

**RC module** (V1.0.7)

- ✓ Save RC module errors in Error.log (*same Error.log for XPS firmware*).
- ✓ Modify to support 16-axes controllers.

**QNX kernel** (V2.2.3)

- ✓ Remove “MainControllerOK” file before loading and executing the modules.
- ✓ Add option to select to run or not DHCP server on Remote plug.
- ✓ Add support for PCE-3028 CPU board reference.

**Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0.
- ✓ Software drivers : “.NET” assembly for Windows x86 and x64.
- ✓ Stage data base revision V3.0.5.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30033 (Released June 2016)

#### **Firmware** (Unified Standard V1.0.4.18)

- ✓ No change.

#### **Web site** (Ajax V2.0.1)

- ✓ No change.

#### **Initializelp** (V2.0.3)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ Fix issue of running the RC module.

#### **QNX kernel** (V2.2.1)

- ✓ No change

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.0.4.18 (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V3.0.5

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30032 (Released June 2016)

### **Firmware** (Unified Standard V1.0.4.18)

- ✓ Improve PVT trajectory events management.
- ✓ Fix issue of reverse XYZ mapping.
- ✓ Modify prototype of PositionerDriverStatusGet() :
  - Old: PositionerDriverStatusGet(char PositionerName[250], int \*DriverStatus)
  - New: PositionerDriverStatusGet(char PositionerName[250], unsigned long \*DriverStatus)
- ✓ Add new gathering variables:
  - RawThetaEncoderPosition1
  - RawThetaEncoderPosition2
  - RawThetaEncoderPosition3
  - RawCorrectedThetaEncoderPosition1
  - RawCorrectedThetaEncoderPosition2
  - RawCorrectedThetaEncoderPosition3

### **Web site** (Ajax V2.0.1)

- ✓ Improve web pages display with AJAX technology
- ✓ Add a check box in Terminal web page to sort API list in alphabetical order.
- ✓ Improve gathering graph display.

### **Initializelp** (V2.0.3)

- ✓ Fix IP Management web page error in case controller can not get a dynamic IP address for the Host plug.

### **RC module** (V1.0.3)

- ✓ No change.

### **QNX kernel** (V2.2.1)

- ✓ No change

### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.0.4.18 (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V3.0.5

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30031 (Released May 2016)

#### **Firmware** (V1.4.7)

- ✓ Improve multiple sockets synchronization.
- ✓ Add *DebugTraceCommunicationReset()* and *DebugTraceCommunicationSave()* APIs for the Debug Trace Communication Feature.
- ✓ Add *DebugTraceCommunicationBufferSize* parameter in *system.ref* configuration file.

#### **Web site** (V1.1.2)

- ✓ No change.

#### **Initializelp** (V2.0.2)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.2.1)

- ✓ No change

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.12.

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30028 (Released April 2016)

### **Firmware** (V1.4.6)

- ✓ Add a High Availability Management feature.
- ✓ Add CleanCoreDumpFolder() API to remove core dump files from '/Admin/Public/CoreDump' folder.
- ✓ Fix issue when executing a TCL script at the controller boot.
- ✓ Fix API PositionerDriverStatusGet() execution when group is not initialized.

### **Web site** (V1.1.2)

- ✓ Add DHCP server feature and its management into IP Management web page.

### **Initialelp** (V2.0.2)

- ✓ Fix the gateway error when this is not set.

### **RC module** (V1.0.3)

- ✓ No change.

### **QNX kernel** (V2.2.1)

- ✓ Improve user accounts management.
- ✓ Configure High Availability Management feature.
- ✓ Add DHCP server feature.
- ✓ Add login when connecting keyboard and screen to the controller.

### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.12.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30027 (Released Feb. 2016)

#### **Firmware** (V1.4.5)

- ✓ No change.

#### **Web site** (V1.1.1)

- ✓ No change.

#### **Initializeip** (V2.0.1)

- ✓ Fix issue of XPS Web site connection with REMOTE Ethernet port when HOST Ethernet port dynamic IP address assignment failed.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.3)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.12.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30026 (Released July 2015)

#### **Firmware** (V1.4.5)

- ✓ No change.

#### **Web site** (V1.1.1)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.3)

- ✓ Remove qconn service in order to avoid system vulnerability issue.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30025 (Released July 2015)

#### **Firmware** (V1.4.5)

- ✓ Fix memory access issue for PositionerDriverStatusGet() API.

#### **Web site** (V1.1.1)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.2)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

## XPS-Q8 controller firmware

**XPS-Q8 Standard Controller Installer Pack Number 30024 with activated debug mode  
(Released June 2015)**

**Firmware** (V1.4.4 plus debug mode)

- ✓ Activate debug mode.

**Web site** (V1.1.1)

- ✓ No change.

**RC module** (V1.0.3)

- ✓ No change.

**QNX kernel** (V2.1.2)

- ✓ No change.

**Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30024 (Released June 2015)

#### **Firmware** (V1.4.4)

- ✓ Activate Gantry feature for groups: SingleAxis, XY, MultipleAxes.

#### **Web site** (V1.1.1)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.2)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30023 (Released April 2015)

#### **Firmware** (V1.4.3)

- ✓ No change.

#### **Web site** (V1.1.1)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.2)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
  - Update TCL module to fix TCLScriptKill() and TCLScriptKillAll() APIs.
- ✓ Stage data base revision V2.8.7.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30022 (Released April 2015)

#### **Firmware** (V1.4.3)

- ✓ Fix synchronization issue between group status update and GroupHomeSearch() API response.
- ✓ Fix issue with following error calculation for AquadBEncoder and AquadBThetaEncoder encoders.

#### **Web site** (V1.1.1)

- ✓ No change.

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.2)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30021 (Released March 2015)

### **Firmware** (V1.4.2)

- ✓ Fix collision of initialization messages exchange in group state machines.
- ✓ Fix TCLScriptKill() and TCLScriptKillAll() APIs.
- ✓ Add timeout error message for clamping.

### **Web site** (V1.1.1)

- ✓ Fix problem of setting gateway value for dynamic IP address.

### **RC module** (V1.0.3)

- ✓ No change.

### **QNX kernel** (V2.1.2)

- ✓ No change.

### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30020 (Released March 2015)

### **Firmware** (V1.4.1)

- ✓ Improve threads scheduling for multiple TCL programs running in parallel.
- ✓ Display IP address of Host Ethernet plug on screen at boot.
- ✓ Add API PositionerJogMaximumVelocityAndAccelerationGet(char PositionerName[], double \*MaxVel, double \*MaxAcc).
- ✓ Fix problem of data due to memory error in data gathering.
- ✓ Fix problem of soft travel limits when jogging.
- ✓ Fix problem of API TCLScriptExecuteAndWait() returns 0 when the TCL file doesn't exist.
- ✓ Fix problem of EventExtendedRemove() return -38 when the action is TCLEExecuteScript.
- ✓ Fix "ClampingTimeout" message.

### **Web site** (V1.1.0)

- ✓ No change.

### **RC module** (V1.0.3)

- ✓ No change.

### **QNX kernel** (V2.1.2)

- ✓ No change.

### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.7.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30019 (Released Nov. 2014)

#### Firmware (V1.4.0)

- ✓ Add API *InstallerVersionGet()* to get the installer version number.
- ✓ Add capability to include comments (text starting with a “#” character) in trajectory files PVT, Line-Arc and Spline.
- ✓ Add support for “Z1938x” CIE08 board.
- ✓ Fix problem system resources release when creating/deleting QNX threads while *executing the APIs “GroupInitialize”, “TCLScriptExecuteAndWait”, “GatheringStopAndSave”, “GatheringExternalStopAndSave”, “...(trajectory)...Execution”, “...(trajectory)...Verification” or actions “MoveAbort”, “ExecuteCommand”, “ExecuteTCLScript”, “TCPResponse”.*
- ✓ Fix problem of reading a PVT trajectory file with an empty line inside.
- ✓ Improve ISR corrector period stability.

#### Web site (V1.1.0)

- ✓ Add CONTROLLER CONFIGURATION > General > *Installer version:* displays version of the firmware installer used to install the controller..

#### RC module (V1.0.3)

- ✓ No change.

#### QNX kernel (V2.1.2)

- ✓ No change.

#### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Software driver with executables and source codes: V1.4.x (TCL, Matlab, C, Basic, Python), V1.3.x (LabView).
- ✓ Stage data base revision V2.8.4.

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30016 (Released Jul. 2014)

#### **Firmware** (V1.3.2)

- ✓ Fix problem of communication random lost between controller and PC when Event&Action is in use.
- ✓ Fix problem of Spindle group when using *GroupMoveAbsolute()* to move to *SpindlePeriod* value.

#### **Web site** (V1.0.9)

- ✓ TERMINAL > TCL Generator: Fix problem of *history.tcl* file generation with some commands like *EventExtendedConfigurationTriggerSet()* used without adding parameter default value ("0").

#### **RC module** (V1.0.3)

- ✓ No change.

#### **QNX kernel** (V2.1.2)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.3.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.8.2.

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30015 (Released May 2014)

### Firmware (V1.3.1)

- ✓ Improve programmable driver initialization during *GroupInitialize()*.
- ✓ Fix problem of FatalFollowingError when using *GroupMotionEnable()* for XPS-EDBL driver.
- ✓ Fix problem of XY and XYZ mapping when using *GroupPositionPCORawEncoderGet()*
- ✓ Fix problem of saving parameter value when using *PositionerStageParameterSet()*
- ✓ Fix problem of execution of "ExecuteTCLScript" action and optimize Event&Action source code.
- ✓ Fix problem of *MultipleAxesPVTVerification()* fails if exists an empty line in the PVT trajectory file.

### Web site (V1.0.8)

- ✓ TUNING > Corrector parameters: Add "OK" button to acknowledge error message when Auto-tuning button is pressed but the group is not in Ready state.
- ✓ TUNING > Tuning applet: Add display of corrector, filters and motion parameters in the gathering result page.
- ✓ STAGE > Modify: "Stage configuration edition" text is changed to "Stage configuration editor".
- ✓ IP management: Fix problem of accessing to "IP management" page in case of error of getting dynamic IP address.

### RC module (V1.0.3)

- ✓ Fix problem of boot of XPS-RC in the case of more than two axes configured with XPS.

### QNX kernel (V2.1.2)

- ✓ No change.

### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.3.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.8.1.

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30014 (Released Nov 2013)

### Firmware (V1.3.0)

- ✓ Improve spindle group moving to a position close to the spindle period edge (less than two encoder counts from edge).
- ✓ Add support for "XPS-D3PD6U-15" external motor driver
- ✓ Add parameter data types of API functions for software drivers: "short", "long", "unsigned short", "unsigned long", "float", "long long" and "unsigned long long"
- ✓ Add new error messages:
  - Wrong parameter type in the command string : short or short \* expected (-126)
  - Wrong parameter type in the command string : long or long \* expected (-127)
  - Wrong parameter type in the command string : unsigned short or unsigned short \* expected (-128)
  - Wrong parameter type in the command string : unsigned long or unsigned long \* expected (-129)
  - Wrong parameter type in the command string : float or float \* expected (-130)
  - Wrong parameter type in the command string : long long or long long \* expected (-131)
  - Wrong parameter type in the command string : unsigned long long or unsigned long long \* expected (-132)
- ✓ Add new actions:
  - ExecuteCommand
  - EventRemove
- ✓ Change PIDFFAcceleration corrector : during constant velocity the acceleration was limited to MaximumAcceleration and is now limited to AccelerationLimit
- ✓ Fix problem of memory page fault with PositionerDriverStatusGet() when this function is called in a group that is in the "NOTINIT" state
- ✓ Fix problem of DigitalStepperPosition motor driver interface when motor moves in negative direction.
- ✓ Fix problem of referencing mode execution when HomePreset position is different from 0.

### Web site (V1.0.7)

- ✓ FRONT PANEL (Move, Jog, Spindle, I/O view, Positioner errors, Hardware status, Driver status) and TUNING pages: "Refresh rate (frames/sec.)" changed to "Refresh delay (milliseconds)" (*delay before refreshing the page to avoid errors when the communication with controller is too slow*).
- ✓ Optimize source code of FRONT PANEL pages to reduce pages refreshing time.

### RC module (V1.0.2)

- ✓ No change.

### QNX kernel (V2.1.2)

- ✓ Add option -B to pci-bios server to support pci devices listing.

### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.3.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.8.1

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30013 (Released June 2013)

#### **Firmware** (V1.2.6)

- ✓ Improve Events/Actions feature to execute many TCL files.
- ✓ Fix problem of glitches of CorrectorOutput at motor on.
- ✓ Fix problem of controller's boot with StandardLimitAndLimitServitudes type.
- ✓ Fix problem of XMotorForce secondary positioner initialization in case of XY gantry.

#### **Web site** (V1.0.6)

- ✓ Improve "General" web page to display host IP address.
- ✓ Fix problem of GPIO list on "Terminal" web page.

#### **RC module** (V1.0.2)

- ✓ No change.

#### **QNX kernel** (V2.1.0)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.6

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30012 (Released May 2013)

#### **Firmware** (V1.2.5)

- ✓ No change.

#### **Web site** (V1.0.5)

- ✓ No change.

#### **RC module** (V1.0.2)

- ✓ No change.

#### **QNX kernel** (V2.1.0)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.6

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30011 (Released March 2013)

#### **Firmware** (V1.2.5)

- ✓ Modify fault condition when a positioner has “CurrentPositionAsHome” and is asked to move when leaving end of run.
- ✓ Improve “XYLineArcExecution” function when more than one execution of a trajectory is requested.
- ✓ Improve error detection of PVT trajectory files.
- ✓ Improve TCL script execution return the error text generated by the TCL interpreter.
- ✓ Improve Gantry feature for groups: “SingleAxis”, “XY” and “MultipleAxes”.
- ✓ Improve motion done for groups: “SingleAxis”, “XY” and “MultipleAxes”.

#### **Web site** (V1.0.5)

- ✓ Improve TCL script execution.
- ✓ Fix labels’ name issue for “Add custom stage” web page.

#### **RC module** (V1.0.2)

- ✓ No change.

#### **QNX kernel** (V2.1.0)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.5

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30010 (Released Jan. 2013)

#### **Firmware** (V1.2.4)

- ✓ Improve driver initialization, a delay of 1s is added to leave enough time to all motor drivers to finish their initialization that can take up to 0.8s. In some configuration, when this time is not long enough, error -116 is generated.

#### **Web site** (V1.0.4)

- ✓ No change.

#### **RC module** (V1.0.2)

- ✓ No change.

#### **QNX kernel** (V2.1.0)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.4

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30009 (Released Jan. 2013)

### **Firmware** (V1.2.3)

- ✓ Fix problem of ClampingTimeout error with SingleAxisWithClamping group.
- ✓ Fix problem of not to be able to initialize the group after a ClampingTimeout error.
- ✓ Fix problem of DriverFault error for standard firmware version.
- ✓ Reduce motor driver initialization delay to improve controller boot time.
- ✓ Modify -116 error string from
  - “Error during external driver initialization, read error.log file for more details”
- to
  - “Error during driver initialization, read error.log file for more details”

### **Web site** (V1.0.4)

- ✓ Remove debugging log messages to improve Web site execution.

### **RC module** (V1.0.2)

- ✓ Fix problem of communication with XPS controller.

### **QNX kernel** (V2.1.0)

- ✓ No change.

### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.4

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30008 (Released Nov. 2012)

#### Firmware (V1.2.2)

- ✓ Improve *MotionDone* and *MotionDoneTimeout* processes in all groups.
- ✓ Add new group status :
  - DISABLE\_FROM\_MOTION\_DONE\_TIMEOUT\_JOGGING (94)
  - DISABLE\_FROM\_MOTION\_DONE\_TIMEOUT\_SPINNING (95)
  - DISABLE\_FROM\_MOTION\_DONE\_TIMEOUT\_SLAVE (96)
- ✓ Add new command errors :
  - ERR\_ADMINISTRATOR\_LOGGED\_IN (-123)
  - ERR\_MOVE\_SECONDARY\_POSITIONER (-124)
- ✓ Fix problem of compensated PCO pulses generation at low speed in negative direction.
- ✓ Update Programmer's Manual.

#### Web site (V1.0.3)

- ✓ No change.

#### RC module (V1.0.1)

- ✓ No change.

#### QNX kernel (V2.1.0)

- ✓ No change.

#### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.4

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30007 (Released Oct. 2012)

### Firmware (V1.2.1)

- ✓ Fix problem of group re-enabling from “DISABLE” state after a *MotionDoneTimeout* error.
- ✓ Fix problem of login as administrator with Login( ) function.
- ✓ Fix problem of driver initialization when executing GroupInitialize().

### Web site (V1.0.3)

- ✓ Add “External Gathering Display” button in Terminal web page.
- ✓ Add “Restart Application” button in “STAGE/Modify” web page.
- ✓ Fix problem of saving configuration in “Manual configuration” web page.
- ✓ Fix problem of saving configuration in “Auto configuration” web page.
- ✓ Fix problem of configuring IP address in “IP management” web page.
- ✓ Fix problem of Modify button in “STAGE/Modify” web page.
- ✓ Fix problem of commands order in history list, displayed on “Terminal” web page.

### RC module (V1.0.1)

- ✓ No change.

### QNX kernel (V2.1.0)

- ✓ No change.

### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.4

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30006 (Released Oct. 2012)

#### Note:

For controllers running Installer Pack Number 30005 or previous, please delete files listed below before running this installer:

- ✓ /Admin/Config/stages.ini
- ✓ /Admin/Config/system.ini

#### Firmware (V1.2.0)

- ✓ Add new function *GroupInitializeNoEncoderReset()*
- ✓ Add new function *TCLScriptKillAll()*
- ✓ Add implicit socket release for FocusSocket in case the connection channel is closed.
- ✓ Update *RestartApplication()* function.
- ✓ Fix problem of Auto configuration web page.

#### Configuration files

- ✓ System.ref :
  - CorrectorISRPeriod = 125e-6 ; seconds
  - DACUpdateDelay = 110e-6 ; seconds

#### Web site (V1.0.2)

- ✓ Add Installer version line in General web page.
- ✓ Fix problem of empty arguments of TCL functions used from Terminal web page.
- ✓ Fix problem of Add from database web page.
- ✓ Fix problem of Terminal web page.
- ✓ Fix problem of Auto configuration web page.

#### RC module (V1.0.1)

- ✓ No change.

#### QNX kernel (V2.1.0)

- ✓ Update file attributes for ftp transfers.
- ✓ Add PCA6011G2 board in the supported CPU boards list (previous versions support FS-97D only).

#### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.2.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.4

## XPS-Q8 controller firmware

### XPS-Q8 Standard Controller Installer Pack Number 30005 (Released July 2012)

#### **Firmware** (V1.1.0)

- ✓ No change.

#### *Configuration files:*

- ✓ System.ref :
  - CorrectorISRPeriod = 125e-6 ; seconds
  - DACUpdateDelay = 110e-6 ; seconds

#### **Web site** (V1.0.1)

- ✓ No change.

#### **RC module** (V1.0.1)

- ✓ No change.

#### **QNX kernel** (V2.0.1)

- ✓ No change.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.1.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.4

# XPS-Q8 controller firmware

## XPS-Q8 Standard Controller Installer Pack Number 30003 (Released May 2012)

### Firmware (V1.1.0)

- ✓ Add CIE08 compensated PCO feature with the following user functions :
  - PositionerCompensatedPCOAbort()
  - PositionerCompensatedPCOCurrentStatusGet()
  - PositionerCompensatedPCOEnable()
  - PositionerCompensatedPCOFromFile()
  - PositionerCompensatedPCOLoadToMemory()
  - PositionerCompensatedPCOMemoryReset()
  - PositionerCompensatedPCOPrepare()
  - PositionerCompensatedPCOSet()
- ✓ Add support for DRVP1 driver in SingleAxisTheta group.
- ✓ Add new function: ControllerStatusRead( )
- ✓ Fix problem of DRVP1 parameters update.

### Configuration files:

- ✓ System.ini : (*in Positioner section*) :
  - CIE08CompensatedPCOMode = *; Value is Enabled or Disabled*
  - CIE08CompensatedPCOMaximumDataNumber = *; If Mode=Enabled, value <= 1000000*

### Web site (V1.0.1)

- ✓ Fix problem of Terminal page.
- ✓ Fix problem of Front Panel I/O page.
- ✓ Fix problem of FunctionelTests page.
- ✓ Fix problem of gateway configuration.

### RC module (V1.0.1)

- ✓ No change.

### QNX kernel (V2.0.1)

- ✓ Update file attributes for ftp transfers.
- ✓ Improve tasks scheduling.

### Module versions

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.1.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.2

# XPS-Q8 controller firmware

## XPS-Q8 Controller Installer Pack Number 30002 (released Mar. 2012)

### **Firmware** (V1.0.1)

- ✓ Adaptation to XPS Remote Control.

### *Configuration files*

- ✓ No change.

### **Web site** (V1.0.0)

- ✓ No change.

### **RC module** (V1.0.1)

- ✓ Firmware adaptations for 12-axes controller compatibility.

### **QNX kernel** (V2.0.0)

- ✓ No change.

### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.0.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.1

## XPS-Q8 controller firmware

### XPS-Q8 Controller Installer Pack Number 30001 (released Mar. 2012)

**Note:** Refer to *Release Note* manual for XPS-Q8 new features.

#### **Firmware** (V1.0.0)

- ✓ Initial version

#### **Configuration files**

- ✓ Initial version

#### **Web site** (V1.0.0)

- ✓ Initial version

#### **RC module** (V1.0.0)

- ✓ Initial version

#### **QNX kernel** (V2.0.0)

- ✓ Configured for the FS97D CPU board.
- ✓ Updated for the web site and external modules.

#### **Module versions**

- ✓ Remote Control revision XPS-RC-V2.0.0
- ✓ Driver revision V1.0.x (TCL, LabView, Matlab, C, Basic, Python, executables and source codes).
- ✓ Stage data base revision V2.7.0