Version #	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.60 (10/31)	PEP0523289R		Improvement of cyber security protection
	PEP0544422R		
	PEP0532539R		
	PEP0544420R		
	PEP0510525R		
	PEP0544416R		
	PEP0544417R		
	PEP0544418R		

Version #	Enhancement		
	OPR/PCR #	**bFO Case #**	**Description**
V3.53 (05/19)	PEP0533044R	52433757	Fixes the disable of the Time Stamping of BMXERT when there are more than 16 ERTs on the whole system.

Version #	Enhancement		
	OPR/PCR #	**bFO Case #**	**Description**
V3.52 (11/18)	PEP0432697R	42543071	Fixes the fail to initial the action variable of SFC after the upgrade of CPU from SV < 3.50 to SV3.50. Note that this issue only appears with SV3.50.
	PEP0439147R	44108698	Fixes the Quantum CPUs crashed due to HMI Vijeo Designer write to located variables.
	PEP0439440R		Improves cybersecurity features regarding Run/Stop input and reservation mechanism management.
	PEP0447659R		Improves cybersecurity regarding CPU memory robustness

Version #	Enhancement		
	OPR/PCR #	**bFO Case #**	**Description**
V3.50 (05/17)	PEP0314683R	23707243	Fixes a situation where some variables are staying at 0 value and this not possible to modify them by application. This situation might appear if those variables are set in a SFC step and when an initialization of this SFC is done by " INITCHAR" FB .
	PEP0363240R	32447233	Improvement: in the LCD menu, "PLC" term (Programmable Logic Controller) is now replaced by "PAC" (Programmable Automation Controller)

Version #	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.42 (08/16)	PEP0328304R		Robustness improvement versus random communication requests cyber security stress tests.

Version #	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.41	PEP0294163R	18824515	Fixes the exception controlled state ("EC02") that might result if a fragmented application (more than 15%) is packed in the Standby PLC memory.
	PEP0309130R	22735165	Using a Unity Pro V7.0 or lower with "forced bit" table (not in animation table), the exception controlled state ("EC02") that could appear after a CPU power cycle is now fixed.
	PEP0319151R	22520641	Robustness enhancement in regards with corrupted packet received
	PEP0318698R	23324931	Fixes the fact that some data of the Ethernet MBP_MSTR function bloc buffer might appear invalid if several are used consecutively.
	PEP0329060R	26986997	Fixes the connection issue with UPV7.0 on a SV3.40 PLC Quantum .

- Note that the version SV3.40 is no more available in "Schneider Electric - Shopping Kiosk" and on "Schneider-electric.com" due to the fact that it is not usable with Unity Pro version 7 (impossible to connect)

Version #	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.30	PEP0138835R	03281341	Fixes the failure of the application download when PCMCIA flash memory card configured
	PEP0258046R	07192522	Fixes the "EC0E"error code during MOL (online modification) in a very specific complex application from a customer
	PEP0286815R		Quantum CPU support for local specific module dedicated to Chinese market (140NOP)
	PEP0283873R	Internal	Implement the ANYBOOL function supported by Unity V10
	PEP0292401R	17004912	Fixes the abort function of MBP_MSTR that did not work as expected.
	PEP0294104R	18712784	Fixes the wrong running of the Unity Pro DFB icon .

Version #	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.22	PEP0264587R	08027628	New system bit %S84 in help of %S83 for RIO management on HSBY with S908 or /and QEIO .Have a look either on FA234890 or on the attached document , this, waiting for documentation implementation in Unity Pro help.

Version #	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.21	PEP0265389R	09498729 07859551	Fixes a problem of Ethernet explicit communication frozen through module **140NOE771x1**

V3.20 version is no more available because of troubles on a Hotstandby system (*), Primary and Secondary PLCs in Run, we observe that MBP_MSTR, and other communication blocks (read_reg, write reg, cread_reg, cwrite reg _ ….), get stuck when used with Quantum HSBY via 140NOE771X1

	Enhancement		
	OPR/PCR #	bFO Case #	Description
V3.20	PEP0203953R	04842069	Avoid a "reserved by empty" message due to legacy concept request before a connection with UPro.
	PEP0173584R		Fixes the V0.00 wrong Quantum HSBY copro display .
	PEP0062131R	V-1430851	Fixes the Update Init values with current ones not reported in the secondary CPU of a Quantum HSBY.
	PEP0057845R	00695885	Fixes the problem of Connection reserved by empty because of too much access requested .
	PEP0177547R	04319197	Avoid the multiple retries on primary to standby application transfer.
	PEP0228786R PEP0167264R	04050983	Implementation of the %S83 allowing the Quantum Hot Standby to remain primary on ERIO loss . Please have a look on addendum in section "Description of System Bits %S80 to %S97"
	PEP0171422R	0418801	Fixes a dead code using MBP_MSTR with a lenght of 125.

Version #	Enhancement		
	OPR/PCR #	**bFO Case #**	**Description**
V3.13	PEP0199427R	05192315	Fixes a regression in the HotStandby data transfer introduced in V3.12.

V3.12 version is no more available and should not be used anymore on hot standby system due to unexpected behaviour of the application after a switch over, on a specific case. This regression is fixed by V3.13.

Version #	Enhancement		
	OPR/PCR #	**Vantive Case #**	**Description**
V3.12	PEP0103677R	1469159	Fixes the ERR65 that randomly happens during transfer of application from Primary to Stdby.
	PEP0106342R	1480762	Allows the Modification On Line with a EPROM PCMCIA on board.
	PEP0084889R		Add of run/stop protection mode on HE CPU Quantum, no run/stop command allowed while key switch is locked (memory protection is ON).
	PEP0131286R	1508221	Fixes a problem of HALT happening on synchronous starts.
	PEP0136431R	1511026	Fixes a problem of address switching for the NOM21200.
	PEP0106590R	1481524	Fixes the problem of IO system word in case of S800 used, %S118 is correctly managed.
	PEP0089135R	1463382	Slightly Improves the Hot Standby scan time comparing to V3.10 in case of massive use of unlocated data.
	PEP0122880R	bFO 02973973	Fixes the application transferring from Primary to Stdby even if OS versions are different.

Version #	Enhancement		
	OPR/PCR #	Vantive Case #	Description
V3.10	20048372/PEP0047851R	Vantive 1326796	Fix DiagViewer that does not display messages and symbols for instances bigger than 254 in a single section
	PEP0048301R	None	Fixes the problem of display of copro version : 00.00 instead of actual version number .
	PEP0065713R	bFO 00918452	Fixes the ERR65 seen on the Standby PLC after a swap by stopping the Primary PLC.
	PEP0068930R	bFO 01307949	Fixes the problem of the management of the four words dedicated to the MBP_MSTR function block diagnostic using the function code 9 .
	PEP0071600R	bFO 01223706	Fixes the lost of IO during switchover while disconnecting the coax on CRP.
	PEP0073093R	Vantive 1451850	Fixes the lost of digital input of RIO drop during several cycles after a stop/run of the Primary CPU.
		06972745	Fixes a CPU stop with "EC0X" error code linked to the use of the list of forced bits !

Version #	Enhancement		
	OPR/PCR #	Vantive Case #	Description
V3.00	None	-	Increases the data exchanges up to 1.5 Mbytes for 140 CPU 67261 HSBY PLC.
	None	-	Status of the remote PLC is displayed on the LCD screen.
	None	-	New features and improvements for Data Dictionary.
	None	-	Integration of the Quantum Ethernet IO offer
	20047829	1295210	Fixes error code "EC0E" when build changes is done after refining a DFB.
	PEP0023023R	-	Adds new operation code 15 (Modbus request) in the use of MSTR bloc function.
	PEP0023785R	1158549.	Allows A/B assignment using Keypad.
	PEP0029147R	-	Improves the capacity for Modbus client messaging up to 125 registers.
	PEP0029275R	1208026	Fixes MAC address display issue on the LCD screen.
	PEP0033350R	1239056	Fixes the impact of CCOTF option on TMAST duration.
	PEP0035044R	1247495	Fixes NOE reboot issue on stop/run transition.
	PEP0035176R	1253065	New option in Unity Pro V6.0 to reset %M after a warm start and a stop/run transition.
	PEP0036399R	-	Fixes a refresh problem in Data Dictionary for variable names starting by a number e.g.: 1_XX.
	PEP0036615R	1267934	Fixes an issue on DDO outputs after a switchover.
	PEP0037384R	1274986	Fixes the Standby to Offline mode transition issue when the watchdog is reached.
	PEP0038276R	1250784	Fixes a CPU error following a on line modification of a DDT variables.
	PEP0038570R	1283576	Fixes flickering leds on DDO36400 configured on main rack.
	PEP0036196R	1262855	Fixes a temporary loss of RIO drops after a switchover following a CPU primary issue.
	PEP0041011R	1307217	Fixes a Standby CPU HALT issue because of overruns.
	00053358	-	Fixes a file generation issue when uploading Quantum Copro Hot Standby firmware via OSLoader.
	00055304	-	Fixes an issue on DDO Fallback mode after a CCOTF modification.

Version #	Enhancement		
	OPR/PCR #	Vantive Case #	Description
V2.80	PEP0014257R	-	Fixes a display of coprocessor version 00.00 on power on.
	PEP0019824R	1127963	Fixes the problem of duplicate IP address on NOE (and also on MB and MB+) in case of some separate power cycle between Primary and Standby when Optic Fiber is disconnected
	PEP0023525R	-	Add bit status register %SW61.6 to improve HSBY diagnostic
	PEP0026068R	1181411	Improves the CPU robustness in case of wrong OFS requests (bad size of the requests)
	20045638	-	Improves NOE's performances with OFS Server (up to 12 messages of 1024 bytes per PLC scan) (needs synchronization with Unity Pro V 5.0 and NOE V4.60)
	PEP0027709R	1191284	Fixes a random error (code 04FE) after an application transfer from Primary to Standby
	PEP0014175R	1094809	Fixes the %SW61.4 toggles once a build change is downloaded to the CPU
	PEP0024446R	1164695	Improves the CPU robustness in case of a corrupted Unity Application
	PEP0026311R	1179797	Fixes a randomly non update of %SW50 to %SW53 time and date words via %S50
	PEP0012604R	1082663	Improves the Init command to allow the CPU to run on line after a CRP error

Version #	Enhancement		
	OPR/PCR #	**Vantive Case #**	**Description**
V2.70	None	-	Allows configuration changes on the fly (CCOTF) on Quantum Hot Standby PLC (needs synchronization with Unity Pro V4.1, CRP firmware version 2.0 and CRA firmware version 2.0)
	PEP0017168R	1113564	Improves the operating mode of XXMIT block, especially after XXMIT block parameter changes
	PEP0015872R	-	Prevents the application transfer from Primary to Standby CPUs, when the Standby CPU is reserved by Unity Pro
	PEP0015874R	1106879	Avoids a temporary offline state of the Standby PLC after an application transfer from Primary to Standby PLCs
	PEP0015691R	-	Fixes a random bad display of the Mac Address on Quantum LCD display after a power on in No Conf state
	PEP0015477R	1046800	Fixes a CPU issue due to the use of a memory size of structured type instances higher than 1Mbytes
	PEP0014985R	1097690	Enables MBP_MSTR with Function Code 23 for TCP/IP on NOE modules
	PEP0013040R	-	Improvement of the application transfer from Primary to Standby PLCs in presence of more than two communication modules
	PEP0011826R	1070110	Displays the correct status bytes of the local IO modules in a Standby Rack, under Unity Pro
	20044842	1072807	Improves signal management (RTS/CTS) when XXMIT is used with modems
	20044469	-	Fixes an unexpected disconnection of Unity Pro when a lot of sections are open (in synchronization with Unity Pro 4.1)
	20040480	994155	Possibility to perform a cold start instead of a warm start through a new option in Unity Pro V4.1
	20043798	-	Solves an issue where after a cold start, warm starts behave as cold starts, when the "automatic start in Run" option is checked
	20043371	-	Fixes a bad display of the data in the PLC Screen under Unity Pro after the creation of a Fast or Aux task in online mode
	00045413	-	Fixes a bug in the change of a 140HLI34000 configuration parameter after a Build Changes in stop mode
	00046537	-	Fixes a bug of erasing the forced bits table when user unforces an input
	00044114	-	Improves the robustness of XXMIT block during switchover

Version #	Enhancement		
	OPR #	Vantive Case #	Description
V2.61	20043797	1081706 1055139	Improves the robustness of the CPU against Scada wrong requests through OFS.
	20043584	-	Solves an issue of LCD freeze in initializing phase at start up.
V2.60	20043584	-	Enhancement of the LCD Display behaviour during the initializing phase of the CPU
	20043452	1047309	Stabilizes the Primary CPU state in case of a Standby CPU defect
	00040858	-	Copro Version displayed in %SW150 of the Standby Processor
	20043283	1046165	Avoids Halt state of the Standby Processor after power on
	20043322	1047786	Improve the data exchange between Primary and Standby CPUs
	00024503	-	Improve the behaviour of Application Mismatch System word (%SW61.4)
	20043400	1050503	Improve the behaviour of the %S16 bit to detect a failure of an IO Module
	20043384	1049610	Improve the forcing of 140DDI35300 inputs
	20042778	-	Improve the behaviour of the ERT_854_10 function block in case of HSBY switchovers
	20042555	-	Improvement of remote IO management while the PLC is in offline mode
	20043016	1044682	Improvement of the application transfer in a HSBY System
	00039401	-	Improves the fallback management when "Maintain Value" is chosen in a MB+ Peercop configuration
	20037280	-	Fix duplicate IP addresses issue on NOE modules in a HSBY System (requires also synchronisation with NOE firmware V4.30)
	20037814	1044908 959450	Improvement of the HSBY system IO management after a switchover
	20042220	1022853	Avoids an Offline State of the Standby CPU when both CPU are powered on at the same time.
	00038547 00039226	-	Improve the monitoring of RIO communication through System Words in case of Hot Standby System without Rio Drop
	20040961	1002625	Improves the behaviour of the CPU if drop address above 65 is used on the 140NOG11100
	20041806	-	Implementation of Data Management (requires also synchronisation with Unity Pro V4.0 and application level 2.6)
	20041892	-	Improvement of the behaviour of the CPU when PCMCIA is inserted

Version #	Enhancement		
	OPR #	**Vantive Case #**	**Description**
V2.50	00039336	-	Memory management improvement when duplication of instance of EFB during change on line
	20034692	1020418 914874	Displays correctly the Copro version on LCD display
	20037920	960780	New %S79 system bit: enables/disables to change value of forced bits through Modbus SCADA requests
	20039015	975816	New message displayed on LCD to wait for the complete HSBY application transfer: "Retry - please wait"
	00037660	-	Creation of two new system words %SW64 and %SW65 automatically transferred from Standby to Primary at each scan for diagnostic purpose.
	20039855	999812 984355	Allows to configure a HSBY system without RIO drop (requires also synchronisation with Unity Pro V3.1 application level)
	20040555	997002	Corrects the behaviour of TON Function Block after a cold start
	20040552	996429	Avoids PLC to HALT in case of particular combination of SFC steps (MSTEP, Pjoint, OutStep)
	20039885	984839	Stabilises application when executing imbrication of XOR logic
	20036685	939744	RTS/CTS control available by setting bit 5 in XXMIT command word using new RTS/CTS cables

Version #	Enhancement		
	OPR/PCR #	Vantive Case #	Description
V2.42	20041525	1011099	Fixes an issue when upgrading a Hot Standby firmware (without stopping the process) to v2.40 or v2.41 and using forced bits and timers
V2.41	20040658	993991	Keypad and LCD driver synchronisation
V2.40	20034798	910764 935452	%SW50 updated every 200ms rather than every 1s
	00034773	-	Corrects Force/Unforce behaviour in Unity Pro monitoring application mode
	20036312	925187	Avoid double alarm display in the Magelis alarm viewer
	20034622	926593 906907	Synchronize NTP time and PLC RTC clock
	20032373	941265 851738	Modbus function codes 05 and 15 guarantee responses and avoid communication issues
	20034692	914874	HSBYCopro version displayed on LCD
	00032767	-	%SW48 counts the events generated by counting modules
	20037348	958360 952198	Allows the refreshment of Unity Pro animation table when deploy ComNS DDT
	00033354	-	RUN/STOP input is checked even when a RUN command is issued from Unity Pro PLC Screen
	20036432	-	%S21 set to 1 after power restart when Autostart option is configured

Version #	Enhancement		
	OPR #	Vantive Case #	Description
V2.32	20024171	-	Firmware change according to new kind of RAMs
V2.31	20036980	945578	Increase robustness if on line modification is intensively used
	20036868	943932	DFB / EFB diagnostic messages enhancement for special logic in edges
	20037460	954868	Corrects behaviour of "TON" function block during switchover
V2.30	20024362	-	Xmit function available on Quantum Unity CPU
	20026019 20033593 20033607	894657 906522	Stabilizes CPU during the first scan cycle after PLC is powered on.
	20026097	-	Improves downloading project via Modbus+ through NOM module
	20030123	939780 878810	Avoids PLC to HALT in case of use of SFC when MACRO combining parallel branches and simultaneous conditions (stop code SW125 = 0x93F4).
	20030402	881604	Temperature value provided by 140ARI03010 in a RIO rack is expressed according to the selected resolution.
	20031058	-	The MAC address returned by MBP_MSTR with code request 3 (read local statistic) is the right one.
	20032027	893240	Avoids untimely loss of I/O Interrupts when using 140HLI34000 module
	20032618	898878	Improves on-line modification in Primary CPU in HSBY configuration
	20032767	901322	Correct Watchdog overrun of the standby CPU during application transfer in HSBY configuration.
	20033358	904997	Allows to insert modules in a random order in the backplane
	20033647	903545	'Update Init Values with Current Values' reduces the scan time increase.
V2.23	20033892	911081 912272	Corrects a diagnostic function issue causing bits forced
	20033974	911810	Correction of wrong memory area initialization issue

Version #	Enhancement		
	OPR #	Vantive Case #	Description
V2.11	20026103	-	HSBY Copro version accessible from Keypad display
	20029657	885109 874027	CPU Modbus plus port accepts more than 12 modules in a DIO drop.
	20028238	858833	OS loader allows to upload exec (OS) from Quantum PLC to PC
	20030379	883390 882652	Improves robustness of CPU when many variables are added on EF in very complex logic and just after a the build change
V2.10	20023502	-	Improve application change in Standby CPU in a HSBY configuration
	20023521	-	CPU now restarts after sending the init command from the keypad
	20026039	-	Limits the possibility of writing according to the configured size (Data storage)
	20026212	839732	Correct display value for MODBUS serial address (bridge mode) in Standby PLC
	20026692	-	Allows many viewers to be connected to PLC Diag Buffer
V2.03	20026957	847627	Corrects Health status for 140CPS12420 redundant power supply (that was staying in state 1 when the module was unpowered or has failed)
V2.02	20026602	844139	Corrects Modbus write function (code 05d)
V2.01	20026055	-	Allows connexion to a RS485 MODBUS network including other PLCs
	20026077	811510	Corrects bad behaviour of Standby RIO disconnection.
	20026104	-	Corrects reset of %SW60.1 and %SW60.2 (cause the CPU to go standby rather than Off-line)
V2.0			**Initial version**