

## Version history for RTU32 500Mhz LX800B flash CE60 images (USB and P51)

Date	NK.BIN	RTU32.exe	Init	Description
20151116	1.16.14	1.60.0.5	BO	<b>WWW</b> - Version 20151116 with updated SNMP pages to support Brodersen SNMP agent v2.10.
20151005	1.16.14	1.60.0.5	BO	<b>Released RTU32.exe</b> - NV RAM detection was disabled in version 1.60.0.3 <b>WWW</b> - Version 20151005 update for an old IE version 8.0 running on XP.
20150909	1.16.14	1.60.0.4	BO/NDS	<b>Released for test RTU32.exe</b> - Redundancy protocol has been optimized to reduce transfer time of the database.
20150922	1.16.14	1.60.0.3	BO	<b>Firmware release to production. WWW</b> - Version 20150917 were UCM-94 and VPN network adapters are displayed in network overview.
20150803	1.16.14	1.60.0.3	BO/NDS	<b>Release Candidate RTU32.exe</b> - VM upgraded to V8.6 - LREAL fix in XML and ANY_TO_STRING - Memory leak detected in IEC60870-5-104 Server and System Event Log Server when closing inactive connections. - StatMemory does no longer risk using long CPU time. - New function blocks: o NtpSync for forcing SNTP client to sync to timeserver. o StatFirmware returns information regarding the firmware. o StatProject returns information regarding the running Worksuite project. <b>NK.BIN/NK256.BIN</b> - Microsoft CE updates until and inclusive 2015/06 applied. - Disabling routing between LAN adapters by setting IpEnableRouter and ForwardBroadcast to zero. <b>WWW</b> - Netlog, Backup and CustomUI pages added.
20150414	1.16.13	1.56.3.0	BO	<b>RTU32.exe</b> - Now online change is updating STRATON application (t5.cod) file. - LanAdapter function block is running in its own low priority thread. <b>WWW and LocalbusP51.dll/LocalbusUSB.dll</b> - 08AIC can now be configured on the webpage. - The webpage editing for 08AIC and 26IO I/O boards is disabled if the boards are configured with an I/O board driver in STRATON.
20141210	1.16.13	1.56.2.6	BO	<b>NK.BIN/NK256.BIN</b> - HD 1920x1080 is now supported. Can be configured using the file Options\HD1920x1080.txt. BIOS "Video Memory Size" configuration must be increased from 8M to 16M if HD resolution is enabled.
20141124	1.16.12	1.56.2.6	BO	<b>RTU32.exe</b> - Storage/Program memory division can be adjusted in RTU32.MAN.ini.
20141121	1.16.12	1.56.2.5	NDS/BO	<b>RTU32.exe</b> - Binding protocol updated to VM8.6 + implementing max retries. <b>RunRnaAp.mod</b> - Implementing software watchdog for VPN/GPRS.
20141014	1.16.12	1.56.2.3	BO	<b>WTOOL32.dll</b> - SNMP and Hardware Overview on HTTP used together made WTOOL32.dll pop up with an exception on the screen. <b>NK.BIN/NK256.BIN</b> - Microsoft CE updates until and inclusive 2014/07 applied. <b>WWW</b> - Time zones are now sorted and displayed consecutively.

				- Small adjustments in drivers display (Ethernet/IP).
20141009	1.16.11	1.56.2.2	BO	<b>RTU32.exe</b> - Update to 101 slave driver when using 1200 baud.
20141007	1.16.11	1.56.2.1	BO	<b>RTU32.exe</b> - Number of 60870-5-104 redundancy groups is increased from 6 to 10. - Ethernet/IP available as an option. <b>NK.BIN/NK256.BIN</b> - Autoexec decides during boot which NK dot BIN should be loaded depending on the RAM size installed. - Timeserver: "trustlocalclock=1" - VGA power off time is now changed to 5 minutes.
20140917	1.16.10	1.56.2.0	BO	<b>RTU32.exe</b> - PING function block implemented. <b>WWW</b> - RemoteAdmin.dll and Sntp pages that supports multiple Sntp servers. <b>HWDEF</b> - Brodersen group updated with PING function block. <b>LocalbusUSB.DLL</b> - Runtime exceptions now written to Except.log.
20140811	1.16.10	1.56.0.1	BO	For <b>RTU32E</b> the Option folder must also be copied for setting registry options for COM3/COM4. <b>RTU32.exe</b> - Project Information on for web page is written to registry before WM is started, smother startup. - WorkSuite <Save to target> is now working again (was broken since 1.54B6). <b>LocalbusP51.DLL</b> - Supports new UCL-08AIC 16 bit analog input module. <b>LocalbusUSB.DLL</b> - Supports new UCL-08AIC 16 bit analog input module. - Supports I/O baseboard FW update.
20140925!	1.16.10	1.55.0.9	BO	<b>RTU32.exe</b> - Exception 0x4CFEF in SerialTunnel when Reboot function was called. This is also fixed in v1.56.2.1.
20140613	1.16.10	1.55.0.8	BO	Released to production. Added Netlog folder with Netlog.dll, NetlogCtl.exe Netlog.txt <b>WWW</b> - RGUI_SetTime.htm, RGUI_DNP3S.htm adjusted.
20140410	1.16.10	1.55.0.8	BO	Beta release for <b>RTU32, RTU32E, RTU32R</b> (with <b>P51</b> or <b>USB</b> localbus types)  For <b>RTU32E</b> the Option folder must also be used for setting registry options for COM3/COM4. <b>NK.BIN</b> - SYSGEN_CERTS_PFX added for SSL. - RNAAPP could reset VPN user and password during authentication failure.
20140401	1.16.09	1.55.0.8	BO	Beta release for <b>RTU32, RTU32E, RTU32R</b> (with <b>P51</b> or <b>USB</b> localbus types)  For <b>RTU32E</b> the Option folder must also be used for setting registry options for COM3/COM4. <b>RTU32.exe</b> - Version number change. <b>SerialComm.dll</b> - Allow using COM9 to COM16 from STRATON. This allows controlling UCM94 from within STRATON, e.g. to send and receive SMS messages.
20140319	1.16.09	1.55.0.7	BO	Beta release for <b>RTU32, RTU32E, RTU32R</b> (with <b>P51</b> or <b>USB</b> localbus types)  For <b>RTU32E</b> the Option folder must also be used for setting registry options for COM3/COM4. <b>RTU32.exe</b> - Redundancy fix VM8.5

				<ul style="list-style-type: none"> <li>- RTU32_MAN.INI contains new option to set watchdog timeout for passive redundant partner.</li> <li>- Mutex enabled on Event server for multiple clients.</li> <li>- Available Windows CE memory is written into System Log at boot time.</li> </ul> <p><b>RegEdit.exe</b> New version 1.10</p> <p><b>CdProtDrv.dll</b> New version 1.7.0.0 (2013/09/12)</p>
20140214	1.16.09	1.55.0.6	BO	<p>Beta release for <b>RTU32, RTU32E, RTU32R</b> (with <b>P51</b> or <b>USB</b> localbus types)</p> <p>For <b>RTU32E</b> the Option folder must also be used for setting registry options for COM3/COM4.</p> <p><b>NK.BIN</b></p> <ul style="list-style-type: none"> <li>- Now all date/time parameters read from the RTC are tested if they are in allowed range. If not, last known good RTC values are returned to calling application.</li> </ul> <p><b>WWW</b></p> <ul style="list-style-type: none"> <li>- RGUI_SetTime.htm, RGUI_gen_snmp.htm and RGUI_snmp_sz.htm changed as Apply button did not work.</li> </ul>
20140123	1.16.07	1.55.0.6	BO	<p>Beta release for <b>RTU32, RTU32E, RTU32R</b> (with <b>P51</b> or <b>USB</b> localbus types)</p> <p>For <b>RTU32E</b> the Option folder must also be used for setting registry options for COM3/COM4.</p> <p><b>RTU32.exe</b></p> <ul style="list-style-type: none"> <li>- Redundancy fix for Profibus driver</li> <li>- 104 server fix when using ActiveSwitchOver=FALSE option</li> <li>- LocalbusUSB.dll thread priority changed to 160.</li> <li>- System log is now using time as specified on the VM webpage.</li> </ul> <p><b>RunRnaAp.mod</b></p> <ul style="list-style-type: none"> <li>- Runtime logs enabled written to Shares folder instead of to console.</li> </ul> <p><b>NK.BIN</b></p> <ul style="list-style-type: none"> <li>- SYSGEN_TCPIP6 disabled. Only ip4 stack supported.</li> <li>- PostReadSize changed to 96KB for SNMP webpage.</li> <li>- RNAAPP does no longer remove VPN username and password during authentication errors.</li> </ul> <p><b>WWW</b></p> <ul style="list-style-type: none"> <li>- Small adjustment to HardwareOverview page</li> <li>- SNMP webpage can now define 512 DI</li> <li>- RemoteAdmin support for CSV parameter for WTool32 and Connection Manager pages.</li> <li>- 3G/GPRS webpage disable debugging output to console.</li> </ul>
20131105	1.16.05B0	1.55.0.3	BO	<p>Beta release for RTU32E with 64IOE board and RTU32 Standard with (P51) IO board types, 26IO, 60IO and no IO.</p> <p>For <b>RTU32E</b> the Option folder must also be used for setting registry options for COM3/COM4.</p> <p><b>RTU32.exe</b></p> <ul style="list-style-type: none"> <li>- VM updated to from version 8.1 to 8.5.</li> <li>- Automatic test for kind of I/O board and loads automatically loads LocalbusP51.dll or LocalbusUSB.dll accordingly.</li> <li>- Version and copyright info applied into Exe file and Dlls which can be viewed in properties information of the file.</li> <li>- Following function blocks have been added since last beta: <ul style="list-style-type: none"> <li>In group RTU32Status: <ul style="list-style-type: none"> <li>StatBoardInfo, StatIntBattery, StatIntTemp, StatLocalbus, StatMemory, StatSupplyVolt.</li> </ul> </li> <li>In group RTU32Clock: <ul style="list-style-type: none"> <li>NotifyTimeChg, ToDateTime.</li> </ul> </li> </ul> </li> <li>- Small adjustment in the 60870-5-104 protocol when</li> </ul>

				<p>using the option ActiveSwitchOver=FALSE.</p> <ul style="list-style-type: none"> <li>- The main communication task (Modbus, WB) is now added to the watchdog supervision with 120 seconds timeout.</li> </ul> <p>NOTE: SOE are not supported in RTU32E.</p> <p><b>WWW</b></p> <p>New color layout of webpages with Brodersen Logo. Hardware Overview webpage added. WITS and DNP3S webpages automatically displayed if drivers are installed.</p> <p><b>NK.BIN</b></p> <p>Microsoft Windows CE updates until 2013/M09 applied. UPnP server protocol (port 5120) removed. Added registry settings for new webpages.</p>
20130920	1.16.04B10	1.54B17	BO	<p>Beta release for test.</p> <p><b>RTU32.exe</b></p> <p>Retain RAM size increase from 4000 to 20000 bytes. Size can be adjusted using RTU32_MAN.ini file. VPN function block added. New Modbus function 43/14 added. New function block MBSLAVEIDENT(...) added. Diverse variable for Binding protocol: QueueSystem, QueueAlarm, QueueEvent, QueueInfo and MaxEventQuantity can now be adjusted in RTU32_MAN.ini file. Serial buffers write function adjusted for WITS driver. Bit 2 in Localbus STATUS word is set now high if STRATON profile variable is accessing UCL input module that is not available on the bus. This was only true for output modules in prior versions.</p> <p><b>NK.BIN</b></p> <p>Microsoft Windows CE updates until 2013/M01 applied. Added registry settings for USB-LAN adapter. Small adjustment for FTP server for FTP log file.</p> <p><b>WWW/RemoteAdmin</b></p> <p>VPN PPTP/L2TP tunnel support added. User administration added: Groups: ADMINISTRATORS, SUPERUSERS and GUESTS. WTOOL32 read is supported by RemoteAdmin. WITS pages are available and shown if the WITS driver is on the flash.</p>
20130208	1.16.04B5	1.54B8	BO	<p>Beta release for test.</p> <p><b>RTU32.exe</b></p> <p>New functions blocks (Connect3G and Get3GMmodemStat) to control the UCM-94 modem. New function block to bind / unbind LAN adapters. Adjustment to STRATON BusDriver interface to be able to run multiple bus drivers.</p> <p><b>NK.BIN</b></p> <p>UCM-94 modem driver added together with registry settings. HTTPD and FTPD will now log activity to \Hard Disk\Logs folder.</p> <p><b>RunRnaAp.mod</b></p> <p>A new program to control the UCM-94 dialing and connection status.</p> <p><b>WWW</b></p> <p>HTTPD and FTPD logs can be viewed on the web page. User administration extended to support user and usergroups to control access to the HTTPD, FTPD and TELNETD servers. UCM-94 modem configuration page added.</p> <p><b>HWDEF</b></p> <p>New functions blocks (Connect3G and Get3GMmodemStat)</p>
20120927	1.16.04B3	1.54B6	BO	<p>Beta release for test.</p> <p><b>RTU32.exe</b></p> <p>RTU32 and RTU32S now share same code base.</p> <p><b>Localbus.dll</b></p> <p>Current Localbus settings file is now written to \RTU32 folder instead of flash. Thread priority is changed to normal during write.</p>

				<p>NK.BIN  Paging pools adjusted so zenOn is able to load faster.  Webserver adjusted so RTU32s and RTU32 can share same html pages.  VBScripts enabled but VBScripts with message box are not working.  RAM disk size decreased from 50% to 30% of total RAM.</p>
20120717	1.16.03	1.53B2 EI	BO	<p>Released for DEMO as 1.53B2 EI / 1.16.03  RTU32.exe  Contains the Ethernet/IP driver in DEMO version. Not for distribution.  SerialComm.dll  New DLL driver now needed by the firmware.  LocalBus.dll and WWW  If the IO configuration is locked then the IOBoard webpage is now able to show difference between expected UCL modules and what is currently connected.</p>
20130211	1.16.03	1.52-1	BO	<p>Released as version 1.52-1 / 1.16.03  RTU32.exe  Retain RAM size increased from 4KB to 10KB.</p>
20120607	1.16.03	1.52	BO	<p>Released as version <b>1.52 / 1.16.03</b>  RTU32.exe  Version info updated.</p>
20120529 20120516	1.16.03	1.52B3	BO	<p>HWDEF  New function block and adjustments for the 103 Master protocol  RTU32.exe  New function block and adjustments for the 103 Master protocol</p>
20120509	1.16.03	1.52B2	BO	<p>This update is made for the RTU32R with 60IO 0-20V range.  Localbus.dll  IOBoard support for 60IO 0-20V range.  Localbus.hex  IOBoard support for 60IO 0-20V range.  WWW  IOBoard support for 60IO 0-20V range. WWW is now also compatible with the RSC-W910 board.  RTU32.exe  Version info updated.</p>
20120307	1.16.03	1.52B0	BO	<p>RTU32.exe  101 Slave in multi drop did not recognize 0xE5 answers from the other slaves. Causing the next request to the slave to fail.</p>
20120206	1.16.03	1.51	BO	<p>Released as version <b>1.51 / 1.16.03</b>  RTU32.exe  - IEC60870 handle storage increased from 60 to 120 handles.  NK.BIN  zenOn is able to start and run on this image.</p>
20120116	1.16.03B7	1.51B5	BO	<p>NK.BIN  - USB_RTUIO driver added in BETA version with beta test output on COM1 output signals.  - SYSGEN_PRINTING and SYSGEN_PCL added to enable printers so zenOn SCADA can run on the image.</p>
20111212	1.16.03B3	1.51B5	BO	<p>RTU32.exe  The IEC60870-5-103 master protocol enabled.  HWDEF  Contains function blocks required for the IEC60870-5-103 protocol.  HWDEF version 1.51B5</p>
		1.51B4	BO	<p>RTU32.exe  IEC60870 handle storage increased from 32 to 64 handles.</p>
20111024	1.16.03B3	1.51B3	BO	<p>WTOOL32.DLL  SNMP driver crashed if no SRAM board was installed. Now SNMP and System Log works no matter whether SRAM board is installed or not.  RTU32.exe  Version info updated.</p>
20111012	1.16.03B3	1.51B2	BO	<p>RTU32.exe and DLLs  If the STRATON compiler option "Allocate status flags for variables with embedded properties" was enabled some RTU32 profile I/O were not detected by the I/O driver. This is now corrected.  SNMP agent driver and battery backed SRAM when use together could cause an exception error in the RTU32.exe. This is now corrected.</p>

				<p>Exceptions errors that cause the RTU32.exe to crash are now written to "\\Hard Disk\Except.log" file.</p> <p>UserReg.info file is now renamed to Registry.txt file. The registry loader function will now look for *.reg files in "\\Hard Disk\Options" and "\\Hard Disk" folders.</p> <p>Watchdog timer for timer task changed from 1 to 5 seconds.</p> <p>NK.BIN</p> <p>SOE driver did not update all internal I/O depending on configuration.</p> <p>SRAM driver for battery backed ram updated.</p> <p>SYSGEN_DCOM_STG added for zenOn support. Needs to be tested.</p>
20110907	1.16.02	1.50	BO	<p>Renamed existing CERDISP.exe to CERDISP50.exe.</p> <p>Added CERDISP.exe from Windows CE 6.0</p>
20110708	1.16.02	1.50	BO	<p>RTU32.exe</p> <p>The function block IEC101SlvState contains new options. During file transfer the IEC61850 SCL files are copied to places where the IEC61850 driver can find them.</p> <p>UserReg.reg registry import function contains now more options.</p> <p>Firmware ID for RTU32 1.50 and CE6 is now 92722. Can be viewed on the web page.</p> <p>HWDEF</p> <p>Help adjusted for the function. Is now in version 1.50</p> <p>20110708</p> <p>WWW</p> <p>Highest accept SNTP refresh value is now 35000 minutes (appr 24 days)</p> <p>RTU32loader.exe</p> <p>During BOOT ensure that the IEC61850 SCL files are copied to places where the IEC61850 driver can find them.</p>
20110519	1.16.02B5	1.50B7	BO	<p>RTU32.exe</p> <p>New STRATON function added, ClearFifoQueue. Can be used to clear IEC60870 fifo buffer from inside STRATON.</p> <p>HWDEF</p> <p>Is now updated to version 1.50. Contains the new STRATON function plus some more explanation to some IEC60870 functions.</p>
20110406	1.16.02B5	1.50B6	BO	<p>RTU32.exe</p> <p>The windows function GetHostByName could potentially block the STRATON scan for some seconds. In rare cases it could trigger the watchdog to boot the RTU. This function is used by the binding protocol, redundancy and ModbusTCP master.</p> <p>WWW</p> <p>SNMP page. Negative limit values were not displayed negative. This now corrected.</p>
20110330	1.16.02B5	1.50B5	BO	<p>SOE enabled on 60IO board.</p> <p>Changes made in Localbus.dll, T5CEIOS.dll, NK.BIN (SOE device driver) and Localbus.hex v1.15.</p> <p>WWW</p> <p>Version info display changed.</p> <p>HWDEF</p> <p>More description added in the analog profile.</p> <p>Localbus.hex</p> <p>SOE 60IO board support.</p> <p>System LED: In case RTU32.exe stops working the system LED will blink until the watchdog boots the RTU. The system LED blinking can also be activated while the RTU is starting until the localbus is running correctly.</p>
20110214	1.16.02B4	1.50B4	BO	<p>RTU32.Exe updated. T5.COD was not always loaded correctly.</p>
20110209	1.16.02B4	1.50B3	BO	<p>CE 6.0 R3 Core version</p> <p>STRATON VM8.1 implemented.</p> <p>SetCsvOption function implemented and tested.</p> <p>RTU32R board implemented in localbus driver, P51 and web page.</p> <p>Power LED is not flashed unless a UPS is detected.</p> <p>Possible to enable debug logging for power supply status.</p>
20101209	1.16.02B3	1.50B0	BO	<p>Platform manager 6.00 R3</p> <p>Realtime clock with milliseconds adjustment and reading.</p> <p>BB SRAM board implemented</p> <p>COM1 and COM2 implemented were RS485 is optional on COM2. RS485 indication is found on web page and system log.</p> <p>XTREME/104 drivers implemented, COM3..COM6.</p> <p>128MB RAM support (IMGRAM112)</p> <p>Alle MS QFE added inclusive 2010M09</p>

				Number of included CE components on same level as RTU32 CE5.0 image from 2009/09.
20091104	1.16.02B0	1.45B0	BO	STRATON VM7.4 Platform manager 6.00 R2 Visual Studio 2008 used for RTU32.exe Milliseconds can be set but are not read. Ms 0 is always returned.