

## **R702      Software Release Content**

Starting from this release, Xtender inverters and VarioTrack or VarioString solar chargers can also be switched OFF during the update process.

### **Xtender (1.6.42)**

- Improvements:
  - Smartboost (battery priority) management in case of low amount of battery was improved. It was also improved in the case of limited grid source.
  - Modification in the behavior of periodical absorption. The phase timer will be started when the phase voltage is reached. The delay indicates now the duration at cycle phase target.

### **VarioTrack (1.6.52)**

- Improvements:
  - Add check version to avoid update with older version (new PCB).
  - Increase ramp time to charge the condo.
  - Add debug information in user info.
  - Improve fan handling by removing the ramp.
  - Add filters on fast measures.
- Fix bug related to the fast loop execution

### **Xcom-CAN (1.6.76)**

- Added functionalities:
  - Add Minigrid
- Improvements:
  - Updated parameters list.
  - Add parameter for end of periodical full charge
  - Change force grid-feeding voltage offset for overcharge
  - Improve transition between battery priority and grid-feeding
  - Stop BMS during update

### **Xcom-485i (1.6.94)**

- Adaptation of the converter table.
- Fix bug related to RTS release too early (RS485).

### **BSP (1.6.42)**

- Adaptation of parameters to match with Xcom-CAN.

### **RCC and Xcom232i (1.6.104)**

- Improvements:
  - Updated parameters list.

- Addition to the datalog csv file of 4 new data tracks for recording the following Xcom-CAN BMS information:
  - {7061} Charge voltage limit [Vdc].
  - {7062} Discharge voltage limit [Vdc].
  - {7063} Charge current limit [Adc].
  - {7064} Discharge current limit [Adc].

### **Communication protocol Xcom-CAN (1.6.38)**

- Improvements:
  - Updated parameters list.

### **Communication protocol Xcom-485i (1.6.20)**

- Improvements:
  - Updated parameters list.

### **Communication protocol Xcom-232i (1.6.40)**

- Improvements:
  - Updated parameters list.

### **Xtender Settings Manager (1.6.50)**

- Improvements:
  - Updated parameters list.

### **Xtender Data Analysis Tool (1.6.48)**

- Added 4 new Xcom-CAN BMS data curves to battery voltage and current graphs.

### **VarioString VS-70 (1.6.32)**

- No change.

### **VarioString VS-120 (1.6.32)**

- No change.

## **R688      Software Release Content**

### **Xtender (1.6.40)**

- Improvements:
  - The stability of your device has been improved.

### **RCC and Xcom232i (1.6.96)**

- Improvements:
  - Change to the "expert" level of the 12 parameters which allow you to modify the R&D tracks of the datalog.

### **Communication protocol Xcom-232i (1.6.38)**

- Improvements:
  - Updated parameters list.

### **Xtender Settings Manager (1.6.48)**

- Improvements:
  - Updated parameters list.

### **VarioTrack (1.6.46)**

- No change.

### **VarioString VS-70 (1.6.32)**

- No change.

### **VarioString VS-120 (1.6.32)**

- No change.

### **Xcom-CAN (1.6.72)**

- No change.

### **Xcom-485i (1.6.90)**

- No change.

### **BSP (1.6.40)**

- No change.

### **Xtender Data Analysis Tool (1.6.46)**

- No change.

### **Communication protocol Xcom-CAN (1.6.36)**

- No change.

### **Communication protocol Xcom-485i (1.6.18)**

- No change.

## **R686      Software Release Content**

### **Xtender (1.6.40)**

- Improvements:
  - Add security when losing Xcom-CAN communication.

### **VarioTrack (1.6.46)**

- Bug fix:
  - Fix bug for VT-40 diode usage.
- Improvements:
  - Add security when losing Xcom-CAN communication.

### **VarioString VS-70 (1.6.32)**

- Improvements:
  - Add security when losing Xcom-CAN communication.

### **VarioString VS-120 (1.6.32)**

- Bug fix:
  - Fix bug charging current when PV connected in serial.
- Improvements:
  - Add security when losing Xcom-CAN communication.

### **Xcom-CAN (1.6.72)**

- Added functionalities:
  - Adaptative Soc for backup.
  - Parameter for end of charge ramp.
- Bug fix:
  - Fix bug with a boost factor lower than 100%.
  - Fix Weco battery name detection after last battery firmware update.
- Improvements:
  - Send a syslow info to detect Xcom-CAN communication lose.
  - Add a discharge current factor parameter similar to the charge current factor.
  - Add state OVER\_END\_OF\_CHARGE when using in inverter mode.
  - Improve behavior with Pylontech.

### **Xcom-485i (1.6.90)**

- Adaptation of the converter table.

### **BSP (1.6.40)**

- Adaptation of parameters to match with Xcom-CAN.

## **RCC and Xcom232i (1.6.94)**

- Improvements:
  - Updated parameters list.

## **Communication protocol Xcom-232i (1.6.36)**

- Improvements:
  - Updated parameters list.

## **Communication protocol Xcom-CAN (1.6.36)**

- Improvements:
  - Updated the Xcom-CAN manual.
  - Updated parameters list.

## **Communication protocol Xcom-485i (1.6.18)**

- Improvements:
  - Updated parameters list.

## **Xtender Settings Manager (1.6.48)**

- Improvements:
  - Updated parameters list.

## **Xtender Data Analysis Tool (1.6.46)**

- No change.

## **R684      Software Release Content**

### **VarioTrack (1.6.44)**

- Bug fix:
  - Added security for Version C and D of VT-40 (over-temperature).
  - Improved fan detection for identification of VT-65 and VT-80.
  - Reduced the fast-loop duration to prevent overrun.

### **Xcom-CAN (1.6.70)**

- Added functionalities:
  - Periodical 100% (BETA).
  - Parameter to handle the current regulator Ki.
  - Parameter to prioritize the AC-Coupling.
  - New submenu for Xcom-CAN.
- Bug fix:
  - Blocked at SoC for Backup in AC-Coupling only.
- Improvements:
  - Added security for over-voltage.
  - Improved behavior at SoC for end of charge.

### **BSP (1.6.38)**

- Adaptation of parameters to match with Xcom-CAN.

### **Xcom-485i (1.6.88)**

- Updated parameters list.

### **RCC and Xcom232i (1.6.92)**

- Updated parameters list.
- New parameters in "XCOM AND SCOM" menu:
  - {5105} Test of the modem's GPRS signal level (Xcom-GSM).
  - {5102} Disable saving of LAN/GSM connection messages (89/90).

### **Communication protocol Xcom-232i (1.6.32a)**

- Improvements:
  - Updated parameters list.

### **Communication protocol Xcom-CAN (1.6.34)**

- Improvements:
  - Updated the Xcom-CAN manual.
  - Updated parameters list.

## **Communication protocol Xcom-485i (1.6.16)**

- Improvements:
  - Updated parameters list.

## **Xtender Settings Manager (1.6.46)**

- Improvements:
  - Updated parameters list.

## **Xtender Data Analysis Tool (1.6.46)**

- Display of the 4 debug tracks.
- Battery info display with Xcom-CAN BMS.

## **Xtender (1.6.38)**

- No change.

## **VarioString VS-70 (1.6.30)**

- No change.

## **VarioString VS-120 (1.6.30)**

- No change.



## R682      Software Release Content

### VarioString VS-70 (1.6.30)

- Improved temperature control.

### VarioString VS-120 (1.6.30)

- Improved temperature and ventilation control.

### Xcom-CAN (1.6.68)

- Added functionalities:
  - Added parameter for max charge current percentage.
  - Added parameter to limit the discharge current.
- Bug fix:
  - Fix Ac-Coupling frequency issue at 45Hz
  - Improved overshoot on end of charge.
- Improvements:
  - Major improvement of the different states of the SoC.
  - Different implementation for Pylontech batteries.
  - Tracked implementation of recommended 100% charging current.
  - Changed default value of SoC parameters (backup, gridfeeding, end of charge).
  - Implementation to force "save in flash memory" parameters on XCOM-CAN startup.
  - Studer public: added possibility to change the max load currents in QSP (XCOM-CAN BMS).

### Xcom-485i (1.6.86)

- Fixed Write Single Coil bug (response with "Illegal Function" with no studer address).
- Added possibility to modify the maximum charging current of devices in QSP (BMS setting).
- Added date and time setting by Modbus.

### BSP (1.6.36)

- Adaptation of parameters to match with XCOM-CAN.

### RCC and Xcom232i (1.6.88)

- Bug fix:
  - Fixed nominal battery capacity value {6001} in datalog csv files.
  - Fixed datalog backup issue (error 127) that appears every 128 days, especially on Xcom-LAN and Xcom-GSM.
  - On the VarioTrack user info display in multi, if one of the VarioTracks is in charger mode, then a sun is displayed.
  - Fixed the display duration of ephemeral messages when several are present simultaneously.

- Improvements:
  - Added messages to the bottom of datalog files.
  - Xcom-LAN and Xcom-GSM: Parameter modifications made with screen "Remote access" of the portal are stored in the messages (idem RCC).
  - Modification of the processing of messages 89 and 90:
    - Message "89 No Xcom server access" changes to "not displayed+saved".
    - Message "90 Xcom server connected" changes to "ephemeral+saved".
    - After an 89 message is displayed, 89 messages are no longer displayed or saved until a 90 message is sent.

### **Communication protocol Xcom-232i (1.6.32)**

- Improvements:
  - Added multi infos object documentation.
  - Updated parameter lists.

### **Communication protocol Xcom-CAN (1.6.32)**

- Improvements:
  - Update of the Xcom-CAN manual.
  - Updated parameter lists.

### **Communication protocol Xcom-485i (1.6.14)**

- Improvements:
  - Updated parameter lists.

### **Xtender Settings Manager (1.6.44)**

- Improvements:
  - Updated parameter lists.

### **Xtender Data Analysis Tool (1.6.44)**

- Bug fix:
  - The nominal battery capacity is no longer displayed in the excel sheet with csv v7.2 files (the value is not correct).

### **Xtender (1.6.38)**

- No change.

### **VarioTrack (1.6.40)**

- No change.

## **R680      Software Release Content**

### **Xtender (1.6.38)**

- Charger function, limitation stage adapted.

### **Xcom-CAN (1.6.66)**

- Added functionalities:
  - Addition of a maximum SOC to stop charging defined by the user.
- Improvements:
  - End of charge improved with VT and VS.
  - Limit charge current of individual devices (VT, VS, XT).
  - AC-coupling management with lithium batteries.
  - Solar priority around the SOC for backup and SOC for grid feeding.
  - Change messages 202 and 203 from warning to information messages.

### **VarioTrack (1.6.40)**

- Bug Fix related to message "066: Sys-warning".

### **VarioString VS-70 (1.6.28)**

- Bug Fix:
  - Add Status byte corresponding to the StuCan2 specifications

### **BSP (1.6.34)**

- Improvements:
  - Updated parameter list.

### **RCC and Xcom232i (1.6.84)**

- With Xcom-CAN-BMS, battery charging current parameters {1138}, {10002}, {14001} et {14217} are configurable in installer user level. They indicate to Xcom-CAN the max charging current for every device.
- Add of 3 new messages that specify the error « 127 SD card, file(s) corrupted » :
  - 232 SD card, unable to access file.
  - 233 SD card, file header corruption.
  - 234 SD card, file checksum error.
- Size optimization of datalog.csv files.

### **Xtender Settings Manager (1.6.40)**

- Improvements:
  - Updated parameter list.

### **Communication protocol Xcom-232i (1.6.30l)**

- Improvements:
  - Updated parameter list.

### **Xcom-485i (1.6.84)**

- No change).

### **VarioString VS-120 (1.6.26)**

- No change.

### **Xcom-SMS (1.6.50)**

- No change.

### **Communication protocol Xcom-CAN (1.6.28)**

- No change.

### **Communication protocol Xcom-485i (1.6.12)**

- No change.

### **Xtender Data Analysis Tool (1.6.40)**

- No change.

## **R676      Software Release Content**

### **Xtender (1.6.36)**

- Correction of the electronic command of {1486} « Continuous neutral ».
- The default value of the Xtender parameters {1589} and {1598} « Deactivate if battery in floating phase » changes to No.

### **VarioTrack (1.6.38)**

- Improvement of PV fast undervoltage security management.

### **Xtender Settings Manager (1.6.40)**

- The default value of the Xtender parameters {1589} and {1598} « Deactivate if battery in floating phase » changes to No.

### **Communication protocol Xcom-232i (1.6.30k)**

- The default value of the Xtender parameters {1589} and {1598} « Deactivate if battery in floating phase » changes to No.

### **Communication protocol Xcom-CAN (1.6.28)**

- The default value of the Xtender parameters {1589} and {1598} « Deactivate if battery in floating phase » changes to No.

### **Communication protocol Xcom-485i (1.6.12)**

- The default value of the Xtender parameters {1589} and {1598} « Deactivate if battery in floating phase » changes to No.

### **Xcom-CAN (1.6.64)**

- No change.

### **Xcom-485i (1.6.84)**

- No change).

### **RCC and Xcom232i (1.6.80)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.26)**

- No change.

### **BSP (1.6.32)**

- No change.

### **Xcom-SMS (1.6.50)**

- No change.

## **Xtender Data Analysis Tool (1.6.40)**

- No change.

## R674 Software Release Content

### Xtender (1.6.34)

- Smart boost:
  - Current limitation enhanced.
- Limitation of the number of messages sent for the same error.

### VarioTrack (1.6.36)

- Battery current vt-40:
  - Measurement accuracy enhanced.

### Xcom-CAN (1.6.64)

- BMS Mode:
  - Battery priority management enhancement when Soc > SocForGridFeeding.
  - Maximal charging voltage is limited by the value given by the battery.

### Xcom-485i (1.6.84)

- Internal registers:
  - Registers added on the gateway to be able to know how many Studer devices are present, and to be able to read the FID of the Studer devices (software & hardware versions, FID).

### Communication protocol Xcom-485i (1.6.10)

- Improvements:
  - Updated gateway register lists.
  - Updated parameter lists.

### RCC and Xcom232i (1.6.80)

- Improvements:
  - The parameter "{5105} Test of the modem's GPRS signal level" can only be seen on Xcom-GSM.
  - ACin current processing enhancement in RCC Configuration Assistant.
  - When inserting a SD card containing a Masterfile folder (and no updating folder 02), a new question is asked-: « Do you want to apply configuration files (masterfile) ? ».

### Communication protocol Xcom-232i (1.6.30j)

- Improvements:
  - Updated parameter lists.

### Communication protocol Xcom-CAN (1.6.26)

- Improvements:
  - Updated parameter lists.

### **VarioString VS-120 and VS-70 (1.6.26)**

- No change.

### **BSP (1.6.32)**

- No change.

### **Xcom-SMS (1.6.50)**

- No change.

### **Xtender Data Analysis Tool (1.6.40)**

- No change.

### **Xtender Settings Manager (1.6.38)**

- No change.



## **R672a Software Release Content**

### **VarioTrack (1.6.36)**

- Measure Ibat VT-40:
  - Accuracy enhanced.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.26)**

- No change.

### **BSP (1.6.32)**

- No change.

### **Xcom-CAN (1.6.62)**

- No change.

### **Xcom-485i (1.6.82)**

- No change.

### **RCC and Xcom232i (1.6.78)**

- No change.

### **Xcom-SMS (1.6.50)**

- No change.

### **Xtender Data Analysis Tool (1.6.40)**

- No change.

### **Xtender Settings Manager (1.6.38)**

- No change.

### **Communication protocol Xcom-232i (1.6.30i)**

- No change.

### **Communication protocol Xcom-CAN (1.6.24)**

- No change.

### **Communication protocol Xcom-485i (1.6.8)**

No change.

## **R672      Software Release Content**

### **Xcom-CAN (1.6.62)**

- BMS Mode:
  - Add of frequency control for PV-inverters connected to AC-Out (Micro-Grid).
  - Improvement of communication continuity
- Studer Public Mode :
  - Add of multicast access to L1, L2 and L3.
- WECO battery :
  - Add of WECO battery communication compatibility.
- Improvements:
  - Updated parameter list.

### **VarioTrack (1.6.34)**

- Improvements:
  - Add of new model VT-40.

### **BSP (1.6.32)**

- Improvements:
  - Updated parameter list.

### **Xcom-485i (1.6.82)**

- Improvement of communication continuity
  - Updated parameter list.

### **RCC and Xcom232i (1.6.78)**

- Improvements:
  - Compatibility with new model VT-40.
  - Updated parameter list.

### **Xcom-SMS (1.6.50)**

- Improvements:
  - Synchronisation with RCC software.

### **Xtender Data Analysis Tool (1.6.40)**

- Improvements:
  - Displacement of the Battery voltage and Battery current graphs of the VarioTrack and VarioString.
  - Modification of the max and min in the VarioTrack and VarioString tables.

### **Xtender Settings Manager (1.6.38)**

- Improvements:
  - Updated parameter lists.

### **Communication protocol Xcom-232i (1.6.30i)**

- Improvements:
  - Updated parameter lists.

### **Communication protocol Xcom-CAN (1.6.24)**

- Improvements:
  - Add of multicast access to L1, L2 and L3
  - Updated parameter lists.

### **Communication protocol Xcom-485i (1.6.8)**

- Improvements:
  - Updated parameter lists.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.26)**

- No change.

## **R670      Software Release Content**

### **Xcom-485i (1.6.6)**

- Modbus :
  - Add of multicast access to L1, L2 and L3.

### **RCC and Xcom232i (1.6.76)**

- Improvements:
  - Compatibility with new HPS firmware.

### **Xcom-SMS (1.6.48)**

- Improvements:
  - Synchronisation with RCC software.

### **Xtender Data Analysis Tool (1.6.38)**

- Improvement of solar power processing

### **Xtender Settings Manager (1.6.36)**

- Improvements:
  - Updated parameter lists.

### **Communication protocol Xcom-232i (1.6.30h)**

- Improvements:
  - Updated parameter lists.

### **Communication protocol Xcom-CAN (1.6.22b)**

- Improvements:
  - Updated parameter lists.

### **Communication protocol Xcom-485i (1.6.6)**

- Improvements:
  - Add of multicast access to L1, L2 and L3
  - Updated parameter lists.

### **Xtender (1.6.30)**

- No change.

### **VarioTrack (1.6.30)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.26)**

- No change.

## **Xcom-CAN (1.6.58)**

- No change.

## **BSP (1.6.28)**

- No change.

## **R664      Software Release Content**

### **Xcom-CAN (1.6.58)**

- BMS Mode:
  - Secure the end of charge even if the limit charging current never reaches 0 A.
  - Add Commeo battery support.

### **Xcom-485i (1.6.4)**

- System upgrade for production test, no change in user version.

### **RCC and Xcom232i (1.6.74)**

- Improvements:
  - New multi info service to speed up the display on the Studer web Portal and the Easy Monitoring App.
  - Xcom-LAN and GSM maintain connection with Studer web portal during installation update.
  - Enhancement of datalogs treatment for installations without Xtenders.
  - The message "91 Update finished. Update software of other RCC/Xcom-232i" is now displayed first after an update in order to warn the installer to update the others RCC/Xcom-232i if any.

### **Xcom-SMS (1.6.46)**

- Improvements:
  - Synchronisation with RCC software.

### **Communication protocol Xcom-232i (1.6.30g)**

- No change.

### **Communication protocol Xcom-CAN (1.6.22a)**

- No change.

### **Communication protocol Xcom-485i (1.6.2)**

- No change.

### **Xtender Settings Manager (1.6.36)**

- No change.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.26)**

- No change.

### **VarioTrack (1.6.30)**

- No change.

## **BSP (1.6.28)**

- No change.

## **Xtender Data Analysis Tool (1.6.34)**

- No change.

## R662 Software Release Content

### VarioString VS-120 and VS-70 (1.6.26)

- Improvement :
  - Extension of the working PV voltage range, the lower limit is reduced from 200V to 100V. The VS starts working with a PV voltage of 110 V (10 V hysteresis to leave night mode) and stops working with a PV voltage of 95 V (5 V hysteresis to go to night mode) in independent or parallel wiring. In serial wiring, it starts at 220 V and stops at 190 V. Therefore, the extended PV voltage working range is adjusted in the following parameters {14198}, {14044}, {14179}, {14177} and {14047}.
  - The new extended voltage range is available for all VS-70 and for VS-120 with a hardware version larger or equal to 2.0 (produced after September 2014). A software update is safe for all versions, the incompatible models (before 09.2014) will simply keep the old 200V lower limit.

### Xcom-CAN (1.6.56)

- Improvement :
  - Add user info {7009} "Ah charged yesterday" and {7010} "Ah discharged yesterday".

### Xcom-485i (1.6.2)

- Improvement :
  - New product in Beta version.

### RCC and Xcom232i (1.6.72)

- Improvement:
  - Hide access to parameter {1296} "Battery priority as energy source" with the Xcom-CAN as parameter {6071} "Battery priority as energy source when SOC  $\geq$  SOC for backup" replace it.
  - Review and improvement of Italian labels and text.
- Bug fix :
  - The user info {3136} is again available in the info display for 3-phase multi-Xtender system.

### Xcom-SMS (1.6.44)

- Improvement:
  - Synchronisation with RCC software.

### Communication protocol Xcom-232i (1.6.30g)

- Improvements:
  - Updated parameter lists.

### Communication protocol Xcom-CAN (1.6.22a)

- Improvements:
  - Updated parameter lists.



## **Communication protocol Xcom-485i (1.6.2)**

- Improvement :
  - New product in Beta version.

## **Xtender Settings Manager (1.6.36)**

- Improvement :
  - Adapt parameters limit of VarioString according to the new PV voltage working range.

## **Xtender (1.6.30)**

- No change.

## **VarioTrack (1.6.30)**

- No change.

## **BSP (1.6.28)**

- No change.

## **Xtender Data Analysis Tool (1.6.34)**

- No change.

## **R660a Software Release Content**

### **RCC and Xcom232i (1.6.64)**

- Improvement:
  - Fix ON/OFF functionality from the clock screen.

### **Xcom-CAN (1.6.54)**

- BMS Mode:
  - Fix compatibility issue with TesVolt.
- Public Mode:
  - No change.

### **Xcom-485i (1.6.0)**

- New product in Beta version.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.24)**

- No change.

### **VarioTrack (1.6.30)**

- No change.

### **BSP (1.6.28)**

- No change.

### **Xcom-SMS (1.6.42)**

- No change.

### **Xtender Data Analysis Tool (1.6.34)**

- No change.

### **Xtender Settings Manager (1.6.34)**

- No change.

### **Communication protocol Xcom-232i (1.6.30f)**

- No change.

## **R660      Software Release Content**

### **Xcom-485i (1.6.0)**

- New product in Beta version

### **Xcom-CAN (1.6.52)**

- BMS Mode:
  - Change default value for parameter {6070} "SOC level under which battery discharge is stopped" to 5%.
- Public Mode:
  - No change.

### **RCC and Xcom232i (1.6.62)**

- Added functionalities:
  - Management of Xcom-485i.
- Improvement:
  - Bug fix for the update of Xcom-CAN when working in Studer Public mode.

### **Xcom-SMS (1.6.42)**

- Improvement:
  - Synchronisation with RCC software.

### **Xtender Data Analysis Tool (1.6.34)**

- Fix load of datalog file into the Excel tool by changing the file format.

### **Xtender Settings Manager (1.6.34)**

- Improvement:
  - Updated parameter lists.

### **Communication protocol Xcom-232i (1.6.30f)**

- Improvements:
  - Updated parameter lists.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 and VS-70 (1.6.24)**

- No change.

### **VarioTrack (1.6.30)**

- No change.

## **BSP (1.6.28)**

- No change.

## **R658      Software Release Content**

### **Xcom-CAN (1.6.50)**

- BMS Mode
  - Improvement of stability near "SOC for grid feeding" when grid feeding is enabled
  - Better management of the solar energy when grid feeding.
- Public Mode
  - No change.

### **VarioTrack (1.6.30)**

- Framework upgrade, no change for the user.

### **RCC and Xcom232i (1.6.56)**

- Framework upgrade, no change for the user.

### **Xcom-SMS (1.6.40)**

- Improvement:
  - Synchronisation with RCC software.

### **Xtender Settings Manager (1.6.32)**

- No change.

### **Communication protocol Xcom-232i (1.6.30e)**

- No change.

### **BSP (1.6.28)**

- No change.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.24)**

- No change.

### **Xtender Data Analysis Tool (1.6.28)**

- No change.

## **R656      Software Release Content**

### **Xcom-CAN (1.6.48)**

- BMS Mode
  - Add the control of the battery discharging current when the Xtender is connected to the grid and working in boost or grid feeding.
- Public Mode
  - No change.

### **Xtender Settings Manager (1.6.32)**

- Improvement:
  - Updated parameter lists.

### **Communication protocol Xcom-232i (1.6.30e)**

- Improvements:
  - Updated parameter lists.

### **BSP (1.6.28)**

- No change.

### **RCC and Xcom232i (1.6.54)**

- No change.

### **Xcom-SMS (1.6.38)**

- No change.

### **Xtender (1.6.30)**

- No change.

### **VarioTrack (1.6.28)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.24)**

- No change.

### **Xtender Data Analysis Tool (1.6.28)**

- No change.

## **R654      Software Release Content**

### **Xcom-CAN (1.6.46)**

- BMS Mode
  - Improvement of system's stability around "SOC for backup" {6062}.
  - Specific adaptation for BYD's batteries asked by the manufacturer.
  - Add a parameter {6071} to specify whether the "Battery Priority" is used or not when SOC is greater than or equal to "SOC for backup" {6062}. This parameter can be set to "yes" only if there is no Xtender in parallel on the same phase, otherwise it should be set to "no".
- Public Mode
  - No change.

### **BSP (1.6.28)**

- Improvement:
  - Compatibility with Xcom-CAN parameters.

### **RCC and Xcom232i (1.6.54)**

- Improvement:
  - Fix datalog treatment on big installations without Xtenders.
  - Support 4 (instead of 3) RCC/Xcom-232i on the same Studer bus.
  - Reduce the number of records into the flash of the message "Error (089) : No Xcom server access" to prevent using the full message memory space for the same event.

### **Xcom-SMS (1.6.38)**

- Improvement:
  - Synchronisation with RCC software.

### **Xtender Settings Manager (1.6.30)**

- No change.

### **Communication protocol Xcom-232i (1.6.30d)**

- No change.

### **Xtender (1.6.30)**

- No change.

### **VarioTrack (1.6.28)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.24)**

- No change.

### **Xtender Data Analysis Tool (1.6.28)**

- No change



## R652      Software Release Content

### Xcom-CAN (1.6.44)

- BMS Mode
  - Add the possibility for the installer/user to define its own battery charging current limit. The parameter {6068} enable this function and the parameter {6069} defines the charging current limit value.
  - Add the possibility to define a SOC level under which the battery discharge is stopped using parameter {6070}.
  - Better management of battery disconnection, even in "Activity Inspect" mode.
  - Add compatibility with Pylontech specific frames.
- Public Mode
  - Implement a "protocol tolerant" option for the Studer Public Protocol using DIP switch 4 (position "ON") to activate it.

### BSP (1.6.26)

- Improvement:
  - Compatibility with Xcom-CAN parameters.

### RCC and Xcom232i (1.6.52)

- Improvement:
  - Precision in the message after successful update to check other accessories: Warning 91 " Update finished. Update software of other RCC/Xcom-232i".
  - Configuration assistant menu hidden in Xcom-LAN and Xcom-GSM.

### VarioTrack (1.6.28)

- Improvements:
  - Parameters {10085} "Battery overvoltage level" and {10086} "Restart voltage level after an battery overvoltage" are now accessible from Expert user level.

### VarioString VS-120 et VS-70 (1.6.24)

- Improvements:
  - Parameters {14065} "Battery overvoltage level" and {14066} "Restart voltage level after an battery overvoltage" are now accessible from Expert user level.

### Xcom-SMS (1.6.36)

- Improvement:
  - Synchronisation with RCC software.

### Xtender Settings Manager (1.6.30)

- Improvement:
  - Updated parameter lists.

## **Communication protocol Xcom-232i (1.6.30d)**

- Improvements:
  - Updated parameter lists.

## **Xtender (1.6.30)**

- No change.

## **Xtender Data Analysis Tool (1.6.28)**

- No Change.

## **R650      Software Release Content**

### **Xcom-CAN (1.6.42)**

- Mode Studer Public
  - Update parameters list.
  - Fix conversion between Public addresses and Internal Studer addresses.
  - Fix attribution of UIDs for Xtenders.
  - Fix unicast addressing.
  - Fix messages conversion from Studer bus to External bus.

### **BSP (1.6.24)**

- Improvement:
  - Higher robustness when battery charge current control {6058} is activated.

### **VarioTrack (1.6.28)**

- Improvement:
  - Higher robustness of production test.

### **RCC and Xcom232i (1.6.48)**

- Improvement:
  - Improvement of connection procedure for Xcom-GSM after a bug detected in some countries.
  - Watchdog on Xcom server {5072} is now activated by default on Xcom-LAN/-GSM.

### **Xtender Data Analysis Tool (1.6.28)**

- Improvement:
  - Bug Fix after MS Office last upgrade that create following error message:  
"1004: Workbook is protected and cannot be changed".

### **Xtender Settings Manager (1.6.28)**

- Improvement:
  - Updated parameter lists.

### **Communication protocol Xcom-232i (1.6.30c)**

- Improvements:
  - Updated parameter lists.

### **Xtender (1.6.30)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.24)**

- No change.

## **Xcom-SMS (1.6.34)**

- No change.

## **R648      Software Release Content**

### **Xcom-CAN (1.6.40)**

- Mode Studer Public
  - Update parameters list.
- Mode BMS and CANopen
  - Add the possibility to define a user SOC with the following two parameters:
    - Manufacturer SOC for 0% displayed {6066}
    - Manufacturer SOC for 100% displayed {6067}

### **BSP (1.6.22)**

- Adapt the number of parameters to be compatible with the two new Xcom-CAN parameters.

### **RCC and Xcom232i (1.6.46)**

- Improvement:
  - Management of new Xcom-CAN BMS parameters and user information.

### **Communication protocol Xcom-232i (1.6.30b)**

- Improvements:
  - Updated parameter lists.

### **Xtender Settings Manager (1.6.26)**

- Improvement:
  - Updated parameter lists.

### **Xtender (1.6.30)**

- No change.

### **VarioTrack (1.6.26)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.24)**

- No change.

### **Xcom-SMS (1.6.34)**

- No change.

### **Xtender Data Analysis Tool (1.6.26)**

- No change.

## **R646      Software Release Content**

### **RCC and Xcom232i (1.6.42)**

- Improvement:
  - Better management of the 3G modem (connection and messages).
  - Battery charging current disappear from the menu and list of parameters when managed by the BSP ({6058} Battery current limitation activated and {6059} Max battery charging current)
  - Access to the counter of CAN Errors through Xcom-GSM and Xcom-LAN using info {17020}.

### **Xcom-CAN (1.6.38)**

- Mode Studer Public
  - Update parameters and messages.

### **Xcom-SMS (1.6.34)**

- Improvement:
  - Synchronisation with RCC software.

### **Communication protocol Xcom-232i (1.6.30a)**

- Improvements:
  - Updated parameter lists.

### **Xtender (1.6.30)**

- Improvement:
  - The following parameters are accessible from Expert user level instead of Installer: {1503}, {1504}, {1446}, {1447}, {1448}, {1457}, {1458}, {1459}.

### **VarioTrack (1.6.26)**

- Improvement:
  - Accessibility of MPP algorithms on Expert level instead of QSP.

### **Xtender Settings Manager (1.6.24)**

- Improvement:
  - Updated parameter lists.

### **VarioString VS-120 et VS-70 (1.6.24)**

- No change.

### **BSP (1.6.20)**

- No change.

### **Xtender Data Analysis Tool (1.6.26)**

- No change.

## R644 Software Release Content

### BSP (1.6.20)

- Improvement:
  - Better charging current management from BSP to compatible devices (XT, VT, VS) using parameter {6058} and {6059}. This new implementation enables maximum charging current to the battery using solar energy (from VT and/or VS) in priority.

### Xcom-CAN (1.6.36)

- Mode BMS and CANopen
  - Better visualisation of the SOC values on RCC: if the "High Resolution SOC {7058}" provided by the battery is fixed to zero, we use the value from SOC {7057} instead in order to have a coherent display on the RCC.
  - Better management when SOC > "SOC for grid feeding {6063}":
    - When SOC > "SOC for grid feeding {6063}" and there is production on VT/VS, that production is fed back to the grid. The battery discharge is done only when the solar production disappears. So, the value set in "SOC for grid feeding {6063}" will be reached later by discharging the battery when there will be no production on VT/VS.

### RCC and Xcom232i (1.6.38)

- Added functionalities:
  - New parameters {5072} "Xcom Portal watchdog activation" and {5113} "Delay before Xcom Portal watchdog forces reconnection" in order to better control the Xcom-LAN and Xcom-GSM connection to the web portal.
- Improvement:
  - Better management of the 3G modem (reset and power supply).
  - In the Configuration Assistant, possibility to configure a specific battery.
  - Better detection of very old Xtender versions with a new message on RCC: "173 Incompatible Xtender. Please contact Studer Innotec SA".

### VarioTrack (1.6.26)

- Improvement:
  - Possibility to upgrade FID from an RCC.

### VarioString VS-120 et VS-70 (1.6.24)

- Improvement:
  - Possibility to upgrade FID from an RCC.

### Xcom-SMS (1.6.30)

- Improvement:
  - Synchronisation with RCC software.

### Communication protocol Xcom-232i (1.6.30)

- Improvements:
  - Examples added.
  - Updated parameter lists.

### **Xtender (1.6.30)**

- No change.

### **Xtender Data Analysis Tool (1.6.24)**

- No change.

### **Xtender Settings Manager (1.6.22)**

- No change.



## **R642      Software Release Content**

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

### **Xtender (1.6.30)**

- Improvement:
  - Better startup current control.
  - Output frequency correction.

### **RCC and Xcom232i (1.6.36)**

- Improvement:
  - Improvement of battery charge current distribution between devices in the wizard.

### **Communication protocol Xcom-232i (1.6.28)**

- Improvements:
  - Examples added.
  - Updated parameter lists.

### **Xtender Settings Manager (1.6.22)**

- Improvement:
  - Updated parameter lists.

### **VarioTrack (1.6.24)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.22)**

- No change.

### **BSP (1.6.18)**

- No change.

### **Xcom-CAN (1.6.34)**

- No change.

### **Xcom-SMS (1.6.28)**

- No change.

### **Xtender Data Analysis Tool (1.6.24)**

- No change.

## **R640      Software Release Content**

**Since this software release (R640), "Xtender System Update XTS parallel only (R588)" is no more needed and thus removed from the Studer Innotec Website. We recommend to use R640 for all types of applications involving Studer Innotec devices. Also, the Xcom-MS is no longer supported.**

### **VarioString VS-120 et VS-70 (1.6.22)**

- Added functionalities:
  - AUX relays and Remote entry activity added to the datalogger.

### **VarioTrack (1.6.24)**

- Added functionalities:
  - AUX relays and Remote entry activity added to the datalogger.

### **BSP (1.6.18)**

- Improvement:
  - The parameter "{6026} Minimum duration before end of charge" which unit was in seconds has been replaced by "{6065} Minimum duration before end of charge" but with the unit in minutes.
  - Better LED behaviour for signalling normal activity (blink 2 times repeatedly in green).

### **Xcom-CAN (1.6.34)**

- Mode Studer Public
  - Xcom-MS parameters and user information are deleted.

### **RCC and Xcom232i (1.6.34)**

- Added functionalities:
  - New "Configuration assistant" for basic settings.
  - AUX relays and Remote entry activity from VarioTrack and VarioString added to the datalogger.

### **Xcom-SMS (1.6.28)**

- Improvement:
  - Synchronisation with RCC software.
  - Better reconnexion process after network loss.

### **Communication protocol Xcom-232i (1.6.26)**

- Improvements:
  - The parameter and info users are detached from the original document. Now one document explains the protocol and another has all the parameters and user info tables of each unit.

## **Xtender Settings Manager (1.6.20)**

- Improvement:
  - Updated parameter lists.
  - Xcom-MS parameters and user information are deleted.

## **Xtender Data Analysis Tool (1.6.24)**

- Added functionalities:
  - AUX relays and Remote entry activity added to the datalogger.
  - Better management of the automatic scaling for the frequency graphics.
  - When the graphs tab is in « unlock » mode, the automatic scaling is deactivated.

## **Xcom MS (1.6.10)**

- Since this software release, the Xcom-MS is not supported anymore

## **Xtender (1.6.28)**

- No change.

## **R638      Software Release Content**

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

### **Xcom-CAN (1.6.32)**

- Mode BMS and CANopen
  - Improvement:
    - Force phase to floating of all Studer devices present in the installation.

### **Xtender (1.6.28)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.20)**

- No change.

### **VarioTrack (1.6.22)**

- No change.

### **BSP (1.6.16)**

- No change.

### **Xcom-SMS (1.6.26)**

- No change.

### **RCC and Xcom232i (1.6.32)**

- No change.

### **Communication protocol Xcom-232i (1.6.24)**

- No change.

### **Xtender Settings Manager (1.6.18)**

- No change.

### **Xtender Data Analysis Tool (1.6.18)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

## R636 Software Release Content

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

### Xtender (1.6.28)

- Improvement:
  - Bug fix in AC Coupling system

### Xcom-CAN (1.6.30)

- Mode BMS and CANopen
  - Added functionalities:
    - Add a hysteresis of 1% of SOC on discharging function when reaching "discharge voltage limit" or undervoltage warning/alarm appears. When this happens, SOC need to increase 1% prior to enable discharging again.
    - Add a hysteresis of 1% of SOC on charging function when overvoltage warning/alarm appears. When this happens, SOC need to decrease 1% prior to enable charging again.
  - Improvement:
    - Better behaviour when SOC reaches "SOC for grid feeding". Now the battery current is regulated to zero, avoiding micro cycling and aging of the battery.
    - Better management of LED blinking when working in "Activity Inspect" mode.

### Communication protocol Xcom-232i (1.6.24)

- Improvements:
  - Document updated.

### VarioString VS-120 et VS-70 (1.6.20)

- No change.

### VarioTrack (1.6.22)

- No change.

### BSP (1.6.16)

- No change.

### Xcom-SMS (1.6.26)

- No change.

### RCC and Xcom232i (1.6.32)

- No change.

### Xtender Settings Manager (1.6.18)

- No change.

## **Xtender Data Analysis Tool (1.6.18)**

- No change.

## **Xcom MS (1.6.10)**

- No change.

## R634 Software Release Content !DO NOT USE!

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

### Xtender (1.6.26)

- Added functionalities:
  - Limit the charging function to power available on ACoutput (AC Coupling)
  - Better AC coupling management
- Improvement:
  - When grid come back after a battery low alarm, the charge function is allowed again even if in integral mode when grid is present in all units.
  - Improvement on VT/VS control.
  - Improvement on "new cycle" condition control.
  - New user information available :

N°	Name	Content	Level to be readable
3160	Source of limitation of the functions charger or injector	<ul style="list-style-type: none"> <li>- Ubatt</li> <li>- Ubattp</li> <li>- Ubattpp</li> <li>- lbatt</li> <li>- Pchar</li> <li>- Ubattlnj</li> <li>- linj</li> <li>- lmax</li> <li>- llim</li> <li>- lthermal</li> <li>- PchNeg</li> </ul>	Installer
3164	Battery voltage target for charger/injection	Vdc	QSP
3165	Allowed charge current in limited charger mode	Aac	QSP
3166	Current on converter output stage DC/AC	Aac	QSP
3167	Voltage on converter output stage DC/AC	Vac	QSP
3168	Over temperature state	<ul style="list-style-type: none"> <li>- No error</li> <li>- TR alarm</li> <li>- TR error</li> <li>- EL error</li> <li>- EL stop</li> </ul>	Installer

### Xcom-CAN (1.6.28)

- Mode BMS and CANopen
  - Added functionalities:
    - Add the menu of Xcom-CAN BMS/CANopen
    - Add DC-Coupling capability by using 2 parameters :

- {6062} SOC for backup: maintain minimal SOC (with AC-In if not enough renewables) in order to guarantee enough energy in case of blackout
  - {6063} SOC for grid feeding: SOC level from which grid feeding is allowed
- Use limit or recommended value for charging/discharging the battery using 1 parameter
  - {6064} Use battery limit current or recommended current
- Support of IPS liCube batteries using new protocol Studer BMS
- Add User Informations :
  - {7065} Charge Current Recommended
  - {7066} Discharge Current Recommended
- Improvement :
  - All infos are "n.a." in case of communication loss with the battery
  - Mode "activity inspect" now full passive (no configuration at all of Xt, Vt and Vs)

## **RCC and Xcom232i (1.6.32)**

- Added functionalities:
  - Specific menu for the Xcom-CAN BMS.
  - « Battery management and cycle menu » disappear in Xtender, VarioTrack and VarioString settings if Xcom-CAN BMS or CANOpen is present in control mode.
  - When a Xcom-SMS and a Xcom-GSM are present simultaneously, the GSM level display change from one to the other each 4 second.

## **Xcom-SMS (1.6.26)**

- Improvements:
  - If Xcom-CAN\_BMS or Xcom-CAN\_Open is present in control mode, you cannot change parameters of battery menu in the Xtender, VarioTrack and VarioString using the Xcom-SMS. If an Xcom-SMS is present and you try to change a battery menu parameter, it will send the message "174 Inaccessible parameter, managed by the Xcom-CAN".
  - Synchronisation with RCC software.

## **VarioString VS-120 et VS-70 (1.6.20)**

- Improvements:
  - The parameters {14218} and {14219} make possible to set a watchdog function inside the VarioString. The watchdog is a monitoring software that restarts the VarioString in case the communication is lost.

## **VarioTrack (1.6.22)**

- Improvements:
  - The parameters {10342} and {10343} make possible to set a watchdog function inside the VarioTrack. The watchdog is a monitoring software that restarts the VarioTrack in case the communication is lost.



## **BSP (1.6.16)**

- Improvements:
  - Synchronisation with Xcom-CAN BMS software.

## **Xtender Settings Manager (1.6.18)**

- Improvement:
  - Better management for saving master files.
  - Faster processing.

## **Xtender Data Analysis Tool (1.6.18)**

- Improvement:
  - Better speed when opening graphics.

## **Communication protocol Xcom-232i (1.6.22)**

- Improvements:
  - Document updated.

## **Xcom MS (1.6.10)**

No change.

## R632 beta      Software Release Content

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

**Warning, This software release does not contain update for XTS and Xcom-SMS.**

### Xtender (1.6.24)

- Added functionalities:
  - Limited charge function to power at disposal on ACoutput
  - Better AC coupling management
- Improvement:
  - A battery low situation allow charge function even if in integral mode.
  - Improvement on solar charger control.
  - Improvement on "new cycle" condition control.
- **Don't use Xtender XTS type with this release.**

### Xcom-CAN (1.6.26)

- Mode BMS and CANopen
  - Added functionalities:
    - Add DC-Coupling capability by using 2 parameters :
      - Soc for backup : maintained (by AC-In if needed) minimal soc in order to guarantee enough energy in case of blackout
      - Soc for grid feeding : soc level from which grid feeding is allowed
    - Use limit or recommended value for charging/discharging the battery using 1 parameter
      - Use battery limit current vs recommended
  - Improvement:
    - All infos are n.a. in case of communication loss with the battery
    - Mode "activity inspect" now full passive (no configuration at all of Xt, Vt and Vs)

### RCC and Xcom232i (1.6.28)

- Added functionalities:
  - Specific menu for the Xcom-CAN BMS.

### Xcom-SMS (1.6.26)

- **Don't use Xcom-SMS with this release.**

## **Xtender Settings Manager (1.6.16)**

- Improvement:
  - Correction of the AC-In voltage when saving master files.

## **Communication protocol Xcom-232i (1.6.22)**

- Improvements:
  - Document updated.

## **Xtender Data Analysis Tool (1.6.16)**

- No change.

## **VarioString VS-120 et VS-70 (1.6.18)**

- No change.

## **VarioTrack (1.6.20)**

- No change.

## **BSP (1.6.14)**

- No change.

## **Xcom MS (1.6.10)**

- No change.

## R630 Software Release Content

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

### Xcom-CAN (1.6.24)

- Mode Public
  - Improvement: Fixed a problem regarding writing Boolean parameters.
  - Improvement: Improved detection of 120VAc Xtender versions.
- Mode BMS and CANopen
  - Improvement: Correction for the conversion of High Resolution SOC.
  - Improvement: At start-up, the parameter {1551} is set to "no" (only applies to the XTS model Xtenders) so that the manual parameter configuration is deactivated.

### Xcom-SMS (1.6.24)

- Improvement:
  - The battery temperature is again displayed in the reports.
  - If the installation uses only VarioTrack, their data are present in the reports.

### Xtender Data Analysis Tool (1.6.16)

- Improvement:
  - For annual display mode, the graphs for each month have been improved.

### Xtender (1.6.22)

- No change.

### VarioString VS-120 et VS-70 (1.6.18)

- No change.

### RCC and Xcom232i (1.6.26)

- No change.

### VarioTrack (1.6.20)

- No change.

### BSP (1.6.14)

- No change.

### Xcom MS (1.6.10)

- No change.

### Xtender Settings Manager (1.6.14)

- No change.

## **Communication protocol Xcom-232i (1.6.22)**

- No change.

## R628      Software Release Content

**Warning, Software releases from R6xx series are not compatible with release from R5xx series.**

### Xtender (1.6.22)

- Improvements:
  - {1228;1336} The name of the parameter has been changed as only the inverter mode can give an overload message, not the boost function; "Inverter or ~~Smart-Boost~~ overload (AUX1)"

### VarioString VS-120 et VS-70 (1.6.18)

- Improvements:
  - Better management in case of PV overvoltage.

### Xcom-CAN (1.6.22)

- Improvements:
  - Better management of 120V specific parameters.
  - Better warnings handle for BMS mode

### RCC and Xcom232i (1.6.26)

- Improvements :
  - Better management for 120Vac Xtenders.

### Xcom-SMS (1.6.22)

- Improvements:
  - Synchronisation with RCC software.

### Xtender Settings Manager (1.6.14)

- Improvements :
  - Better management of 120V specific parameters.

### Communication protocol Xcom-232i (1.6.20)

- Improvements :
  - New information added in order to better manage the Xtender on 120V version.
  - List of parameter that have a different value and limits on 120Vac.
  - Document updated.

### VarioTrack (1.6.20)

- No change.

### BSP (1.6.14)

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **Xtender Data Analysis Tool (1.6.12)**

- No change.

## R626 Software Release Content

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### Xtender (1.6.18)

- Improvements:
  - Integral mode stops also in case of communication losses.
  - Extension of the parameter range {1534} "Speed of voltage or frequency change in function of battery" to (-4 to 3).
  - Adjustment of the sensitivity on battery min-max detection.
  - Improvement for the VarioString presence detection and synchronisation.
  - Adjustment of power (95% to 45% Pnom) in case of transformer overtemperature.

### Xcom-CAN (1.6.20)

- Improvements (all modes) :
  - Starting LED sequence
- Public Mode :
  - Add Studer signals support
- CanOpen Mode :
  - Performance improvement
  - Battery low management improvement
- CanOpen & BMS Mode :
  - Improvement : wrong loss of communication on battery side at startup
  - Improvement : "Halted(53): Devices not compatible, software update required" sent when no Xt on the installation.

### Communication protocol Xcom-232i (1.6.18)

- Improvements :
  - Document updated.

### VarioTrack (1.6.20)

- No change.

### VarioString VS-120 et VS-70 (1.6.16)

- No change.

### BSP (1.6.14)

- No change.

### RCC and Xcom232i (1.6.24)

- No change.



### **Xcom-SMS (1.6.20)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **Xtender Settings Manager (1.6.12)**

- No change.

### **Xtender Data Analysis Tool (1.6.12)**

- No change.

## **R624      Software Release Content**

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### **Xcom-CAN (1.6.18)**

- Improvements:
  - BMS and CANOpen mode:
    - Improvement: device recognition on Studer CAN bus.
  - Public mode:
    - No change.

### **Xtender (1.6.16)**

- No change.

### **VarioTrack (1.6.20)**

- No change.

### **VarioString VS-120 et VS-70 (1.6.16)**

- No change.

### **BSP (1.6.14)**

- No change.

### **RCC and Xcom232i (1.6.24)**

- No change.

### **Xcom-SMS (1.6.20)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **Communication protocol Xcom-232i (1.6.16)**

- No change.

### **Xtender Settings Manager (1.6.12)**

- No change.

### **Xtender Data Analysis Tool (1.6.12)**

- No change.

## R622      Software Release Content

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### VarioTrack (1.6.20)

- Improvements:
  - Better accuracy of battery and PV voltage measurements
  - New menu on QSP user level to adjust measurements.

### RCC and Xcom232i (1.6.24)

- Improvements:
  - Better management of the parameters "{5068} Restore all files (system recovery)" and "{5018} Load Xtender parameters" to avoid the RCC to be blocked.

### Xcom-SMS (1.6.20)

- Improvements:
  - Synchronisation with RCC software.

### Xcom-CAN (1.6.16)

- Improvements:
  - BMS and CANOpen mode:
    - New algorithm to share charging current giving priority to VT/VS over XT.
    - New Error message ("Devices not compatible, software update required") to force all software version as 1.6.xx. The Xcom-CAN working with connected batteries must be on R6xx. It is not compatible with software 1.5.xx except if used as CAN Public mode.
    - Better management after Alarms/Warnings events.
  - CANOpen mode:
    - Compatibility approved with LiCube batteries.
    - New timeout on communication with the battery for security purposes.
  - Public mode:
    - Improvement: On error frames returned, the source address was wrong.
    - Improvement: From now on, these parameters use the Yes=1 and No=0 : {1124}, {1125}, {1126}, {1127}, {1128}, {1461}, {1617}, {1618}, {1619}, {1620}, {1621}.

### BSP (1.6.14)

- Improvements:
  - Now compatible with Xcom-CAN BMS user info.

## **Communication protocol Xcom-232i (1.6.16)**

- Added functionalities :
  - Description of new possibility for the scom baudrate speed working on « studer mode ». It is by default 38400bps and can be upgraded to 115200bps using the last version of Xcom configurator.
- Improvements :
  - Document updated.

## **Xtender Settings Manager (1.6.12)**

- Improvements :
  - Updated parameter lists.

## **Xtender (1.6.16)**

- No change

## **VarioString VS-120 et VS-70 (1.6.16)**

- No change

## **Xcom MS (1.6.10)**

- No change.

## **Xtender Data Analysis Tool (1.6.12)**

- No change.

## R620 beta      Software Release Content

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### Xtender (1.6.16)

- Improvements:
  - Better management of Preheating delay for generator when micro interruptions occur.
  - Default parameter changes (same changes in R580):

Parameter ref	Wording	Value	Before	Actual
{1199}	Input voltage giving an opening of the transfer relay with delay	Limit low	50Vac	80Vac
{1199}	Input voltage giving an opening of the transfer relay with delay	User value	150Vac	200Vac
{1200}	Input voltage giving an immediate opening of the transfer relay (UPS)	Limit low	50Vac	80Vac
{1200}	Input voltage giving an immediate opening of the transfer relay (UPS)	User value	90Vac	180Vac
{1283}	Integral mode	User value	NO	YES
{1288}	Use dynamic compensation of battery level (AUX 1)	User value	YES	NO
{1505}	Delta frequency allowed above the standard input frequency	User value	35Hz	5Hz
{1506}	Delta frequency allowed under the standard input frequency	User value	15Hz	5Hz
{1507}	Duration with frequency error before opening the transfer	User value	5s	2s

- On multi-units systems, the grounding relay is managed by the master of the system. If the units are as independent, each unit manage his own grounding relay.

### RCC and Xcom232i (1.6.22)

- Improvements:
  - Compatibility with high speed (115200bps) Xcom-232i
  - Display the Scom Xcom-232i speed (38400 or 115200bps) on RCC (system information) and at the end of the CSV file.
  - Better management for the timeout on the communication bus.

### Xcom-SMS (1.6.18)

- Added functionalities:

- When a user information is not available, the value returned is n.a. As example, if there is no BSP nor BTS in the system, the information about the battery temperature {3001} will send "n.a."
- Improvements:
  - Synchronisation with RCC software.

### **VarioString VS-120 et VS-70 (1.6.16)**

- Improvements:
  - Better management for bisextiles years.

### **Xcom-CAN (1.6.14)**

- Improvements:
  - Stability improvement in Public mode

### **Communication protocol Xcom-232i (1.6.14)**

- Added functionalities:
  - New possibility for the scom baudrate speed working on « studer mode ». It is by default 38400bps and can be upgraded to 115200bps using the last version of Xcom configurator.

### **VarioTrack (1.6.16)**

- No change.

### **BSP (1.6.12)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **Xtender Settings Manager (1.6.10)**

- No change.

### **Xtender Data Analysis Tool (1.6.12)**

- No change.

## **R618 beta      Software Release Content**

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### **Xtender (1.6.14)**

- Improvements:
  - Bugfix on parameter {1580} Delay before closing transfer relay. It was not taken into account.
  - Update improvement

### **VarioTrack (1.6.16)**

- Improvements :
  - Better management of ground fault detection.
  - Better accuracy for battery and PV voltage measurement.
  - Automatization of the final power test at the end of manufacturing process with the VT Boxtest.

### **RCC and Xcom232i (1.6.16)**

- Added functionalities :
  - Display the GSM signal level on the clock display of the RCC.
- Improvements:
  - Xcom-GSM: better management of the timeout when the GSM signal is low. A reconnection could take up to 10 min.

### **Xcom-SMS (1.6.14)**

- Improvements :
  - Synchronisation with RCC software.

### **Xtender Data Analysis Tool (1.6.12)**

- Improvements :
  - Possible to import one year of data in one Excel sheet, but only with Office 64 bits on Windows 10 / 64 bits. For the other versions (Excel 2007 SP3 and higher on other windows machines, only a couple of months can be imported at a time).

### **VarioString VS-120 (1.6.14)**

- No change.

### **VarioString VS-70 (1.6.14)**

- No change.

### **BSP (1.6.12)**

- No change.

### **Xcom-CAN (1.6.12)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **Communication protocol Xcom-232i (1.6.10)**

- No change.

### **Xtender Settings Manager (1.6.10)**

- No change.



## R616 beta      Software Release Content

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### Xcom-CAN (1.6.12)

- Added functionalities:
  - New parameter saving type for Xcom-Can BMS: In the past when the CAN BMS was activated, all parameters were only saved in RAM ({1550}=No), so the user cannot see the changes he did with the RCC. From now on it is possible to change parameters saving type in order them to be saved in RAM or Flash without using external parameters as the {1550} for Xtender. See SCOM description for more details.
- Improvements:
  - SOC value and Temperature value are now sent to all devices in the communication bus.

### Xtender (1.6.12)

- Added functionalities:
  - Support new parameter saving type.

### VarioString VS-120 (1.6.14)

- Improvements :
  - Improvement in battery voltage regulation in case of "independent wiring" of PVs.
- Added functionalities:
  - Support new parameter saving type.

### VarioString VS-70 (1.6.14)

- Added functionalities:
  - Support new parameter saving type.

### VarioTrack (1.6.14)

- Added functionalities:
  - Support new parameter saving type.

### BSP (1.6.12)

- Added functionalities:
  - Support new parameter saving type.

### RCC and Xcom232i (1.6.14)

- Added functionalities:
  - Support new parameter saving type.
- Improvements:

- By default, the errors in communication bus are logged when a VT, VS or BSP is present in the communication bus (case of damaged cable for example).

### **Xcom-SMS (1.6.12)**

- Improvements :
  - Synchronisation with RCC software.

### **Xcom MS (1.6.10)**

- No change.

### **Xtender Settings Manager (1.6.10)**

- No change.

### **Xtender Data Analysis Tool (1.6.10)**

- No change.

### **Communication protocol Xcom-232i (1.6.10)**

- No change.

## **R612 beta      Software Release Content**

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### **Xtender (1.6.10)**

- Improvements:
  - Improvement: Access to list of parameter by number

### **VarioTrack (1.6.12)**

- Added functionalities:
  - New MPP algorithm to be used in case of strong shadowing on PV array by activating the parameter: {10335} Partial shading check (default = no). Parameter {10336} Time between checks (default = 5 minutes), can be left in default setting or modified as needed.

### **VarioString (1.6.10)**

- No change.

### **BSP (1.6.10)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **RCC and Xcom232i (1.6.10)**

- No change.

### **Xcom-SMS (1.6.10)**

- No change.

### **Xcom-CAN (1.6.10)**

- No change.

### **Xtender Settings Manager (1.6.10)**

- No change.

### **Xtender Data Analysis Tool (1.6.10)**

- No change.

### **Communication protocol Xcom-232i (1.6.10)**

- No change.

## R610 beta      Software Release Content

**Warning, Software releases from R6xx serie are not compatible with release from R5xx serie.**

### Xtender (1.6.10)

- Added functionalities:
  - New user information; {3158}{3159}{3160}{3161}{3162}. See details in the SCOM or RCC document.
  - New parameters on QSP user level, for specific cases:
    - {1615} Fast charge/inject regulation
    - {1645} Pulse cutting regulation
    - {1632} Adjustment in % for battery dynamic compensation
    - Calibration adjustment
- Improvements:
  - ARN4105 functionality added on XTS models
  - Better stability of the internal current regulators; {1645} which is NO by default (To reduce and avoid fluctuations on battery voltage, to avoid overvoltage when prohibit charger, to allow a 0Adc consign for charger and 0Aac consign for injection working correctly, to stay for long period without activity in boost mode).
  - Better synchronization of battery cycle between XT units.
  - Better management of remote entries on multi-units systems.
  - Specific use case:
    - When charger is prohibited ({1125}=NO), battery priority is allowed ({1296}=Yes) and standard injection is allowed ({1127}=Yes) the behaviour is that the Xtender will start feeding energy to the grid when the floating voltage is reached. Between the Priority level {1297} and the floating level {1140}, the Xtender will keep the battery priority behaviour with a reduced input limit. But when the floating voltage is reached, therefore when the production is higher than the consumption, the Xtender starts feeding the excess energy to the grid rising the input limit to its maximum {1107}. At this point, even if the loads rise, the Xtender will continue feeding the renewable energy from DC to the AC side without discharging the battery (grid feeding behaviour). The battery priority behaviour will restart when the battery voltage goes below floating, therefore after the production has stopped.

- Change of some factory values:

Level	N°	Description	Unit	New value	Old value
Expert	1999	Input voltage giving an opening of the transfer relay with delay	Vac	200	180
Expert	1200	Input voltage giving an immediate opening of the transfer relay (UPS)	Vac	180	90
Expert	1505	Delta frequency allowed above the standard input frequency	Hz	5	35
Expert	1506	Delta frequency allowed under the standard input frequency	Hz	5	15
Expert	1507	Duration with frequency error before opening the transfer	sec	2	5
Expert	1288	Use dynamic compensation of battery level (AUX 1)	No/Yes	No	Yes
Expert	1283	Integral mode	No/Yes	Yes	No

### **Xtender Settings Manager (1.6.10)**

- Added functionalities:
  - New buttons to « Load all projects » and « Reset all values » on the Help tab. They allow to load or reset the values of all devices type (XT, VT, VS, BSP, RCC) instead of doing it type by type.

### **Xtender Data Analysis Tool (1.6.10)**

- Improvements:
  - Improvement regarding compatibility with Excel 2007 and 2010.

### **Communication protocol Xcom-232i (1.6.10)**

- Added functionalities :
  - Description of the new information in the Xtender table.
- Improvements :
  - Document updated.

### **VarioString (1.6.10)**

- No change.

### **VarioTrack (1.6.8)**

- No change.

### **BSP (1.6.10)**

- No change.

### **Xcom MS (1.6.10)**

- No change.

### **RCC and Xcom232i (1.6.10)**

- No change.

### **Xcom-SMS (1.6.10)**

- No change.

### **Xcom-CAN (1.6.10)**

- No change.

## **R586      Software Release Content**

### **VarioString VS-120 et VS-70 (1.5.40)**

- Improvements:
  - Better management in case of PV overvoltage.

### **Xcom-CAN (1.5.14)**

- Improvements:
  - Better management of 120V specific parameters.

### **RCC and Xcom232i (1.5.96)**

- Improvements:
  - Better management of 120V specific parameters.
  - Better management during upgrade process.

### **Xcom-SMS (1.5.42)**

- Improvements:
  - Synchronisation with RCC software.

### **Xtender Settings Manager (1.6.14)**

- Improvements :
  - Better management of 120V specific parameters.

### **Communication protocol Xcom-232i (1.6.20)**

- Improvements :
  - Document updated.
  - Better management of 120V specific parameters.

### **Xtender (1.5.36)**

- No change.

### **VarioTrack (1.5.42)**

- No change.

### **BSP (1.5.12)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

### **Xtender Data Analysis Tool (1.6.12)**

- No change.

## R584      Software Release Content

### VarioTrack (1.5.42)

- Improvements:
  - Better accuracy of battery and PV voltage measurements.
  - New menu on QSP user level to adjust measurements.

### RCC and Xcom232i (1.5.94)

- Improvements:
  - Better management of the parameters "{5068} Restore all files (system recovery)" and "{5018} Load Xtender parameters" to avoid the RCC to be blocked.

### Xcom-SMS (1.5.40)

- Improvements:
  - Synchronisation with RCC software.

### Xcom-CAN (1.5.12)

- Improvements:
  - Public mode:
    - Improvement: On error frames returned, the source address was wrong.
    - Improvement: From now on, these parameters use the Yes=1 and No=0 : {1124}, {1125}, {1126}, {1127}, {1128}, {1461}, {1617}, {1618}, {1619}, {1620}, {1621}.
- Deleted functionalities:
  - The Xcom-CAN with BMS or CANOpen protocol cannot be used anymore with any products having software version 1.5.xx. They must be used with a software version 1.6.xx. Only the Xcom-CAN with public protocol can be used with R5xx softwares.

### BSP (1.5.12)

- Improvements:
  - Now compatible with Xcom-CAN BMS user info.

### Communication protocol Xcom-232i (1.6.16)

- Added functionalities :
  - Description of new possibility for the scom baudrate speed working on « studer mode ». It is by default 38400bps and can be upgraded to 115200bps using the last version of Xcom configurator.
- Improvements :
  - Document updated.

### Xtender Settings Manager (1.6.12)

- Improvements :



- Updated parameter lists.

### **Xtender (1.5.36)**

- No change.

### **VarioString VS-120 et VS-70 (1.5.38)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

### **Xtender Data Analysis Tool (1.6.12)**

- No change.

## R582 Software Release Content

### Xtender (1.5.36)

- Improvements:
  - Better management of Preheating delay for generator when micro interruptions occur.
  - Default parameter changes:

Parameter ref	Wording	Value	Before	Actual
{1199}	Input voltage giving an opening of the transfer relay with delay	Limit low	50Vac	80Vac
{1199}	Input voltage giving an opening of the transfer relay with delay	User value	150Vac	200Vac
{1200}	Input voltage giving an immediate opening of the transfer relay (UPS)	Limit low	50Vac	80Vac
{1200}	Input voltage giving an immediate opening of the transfer relay (UPS)	User value	90Vac	180Vac
{1283}	Integral mode	User value	NO	YES
{1288}	Use dynamic compensation of battery level (AUX 1)	User value	YES	NO
{1505}	Delta frequency allowed above the standard input frequency	User value	35Hz	5Hz
{1506}	Delta frequency allowed under the standard input frequency	User value	15Hz	5Hz
{1507}	Duration with frequency error before opening the transfer	User value	5s	2s

### RCC and Xcom232i (1.5.92)

- Improvements:
  - Compatibility with high speed (115200bps) Xcom-232i
  - Display the Scom Xcom-232i speed (38400 or 115200bps) on RCC (system information) and at the end of the CSV file.
  - Better management for the timeout on the communication bus.

### Xcom-SMS (1.5.38)

- Added functionalities:
  - When a user information is not available, the value returned is n.a. As example, if there is no BSP nor BTS in the system, the information about the battery temperature {3001} will send "n.a.".
- Improvements:
  - Synchronisation with RCC software.

## **VarioString VS-120 et VS-70 (1.5.38)**

- Improvements:
  - Better management for bisextiles years.

## **Xcom-CAN (1.5.10)**

- Improvements:
  - Stability improvement in Public mode

## **Communication protocol Xcom-232i (1.6.14)**

- Added functionalities:
  - New possibility for the scom baudrate speed working on « studer mode ». It is by default 38400bps and can be upgraded to 115200bps using the last version of Xcom configurator.

## **VarioTrack (1.5.38)**

- No change.

## **BSP (1.5.10)**

- No change.

## **Xcom MS (1.5.4)**

- No change.

## **Xtender Settings Manager (1.6.10)**

- No change.

## **Xtender Data Analysis Tool (1.6.12)**

- No change.

## **R578      Software Release Content**

### **VarioTrack (1.5.38)**

- Improvements :
  - Better management of ground fault detection.
  - Better accuracy for battery and PV voltage measurement.
  - Automatization of the final power test at the end of manufacturing process with the VT Boxtest.

### **RCC and Xcom232i (1.5.86)**

- Added functionalities :
  - Display the GSM signal level on the clock display of the RCC.
- Improvements:
  - Xcom-GSM: better management of the timeout when the GSM signal is low. A reconnection could take up to 10 min.

### **Xcom-SMS (1.5.34)**

- Improvements :
  - Synchronisation with RCC software.

### **Xtender Data Analysis Tool (1.6.12)**

- Improvements :
  - Possible to import one year of data in one Excel sheet, but only with Office 64 bits on Windows 10 / 64 bits. For the other versions (Excel 2007 SP3 and higher on other windows machines, only a couple of months can be imported at a time).

### **Xtender (1.5.32)**

- No change.

### **VarioString VS-120 (1.5.36)**

- No change.

### **VarioString VS-70 (1.5.34)**

- No change.

### **BSP (1.5.10)**

- No change.

### **Xcom-CAN (1.5.8)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## **Communication protocol Xcom-232i (1.6.12)**

- No change.

## **Xtender Settings Manager (1.6.10)**

- No change.

## **R576      Software Release Content**

### **VarioString VS-120 (1.5.36)**

- Improvements :
  - Improvement in battery voltage regulation in case of "independent wiring" of PVs.

### **VarioString VS-70 (1.5.34)**

- No change.

### **RCC and Xcom232i (1.5.84)**

- Improvements:
  - By default, the errors in communication bus are logged when a VT, VS or BSP is present in the communication bus (case of damaged cable for example).

### **Xcom-SMS (1.5.32)**

- Improvements :
  - Synchronisation with RCC software.

### **Xcom-CAN (1.5.8)**

- No change.

### **VarioTrack (1.5.36)**

- No change.

### **Xtender (1.5.32)**

- No change.

### **BSP (1.5.10)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

### **Communication protocol Xcom-232i (1.5.36)**

- No change.

### **Xtender Data Analysis Tool (1.5.36)**

- No change.

### **Xtender Settings Manager (1.5.36)**

- No change.

## **R574      Software Release Content**

### **VarioString (1.5.30)**

- Improvements :
  - Improvement in user information related to the type of wiring.

### **RCC and Xcom232i (1.5.82)**

- Improvements :
  - Improvement of Xtender files management.

### **Xcom-SMS (1.5.26)**

- Improvements :
  - Synchronisation with RCC software

### **Xcom-CAN (1.5.8)**

- Improvements :
  - For the BMS protocol : all basic Xtender functionalities (charger, inverter, grid feeding, boost) are controlled based on the user configuration. These functionalities are sometimes disabled, but never enabled again if not previously done by user configuration.
  - For the BMS protocol : better management of alarms/warnings sent by the battery BMS. The system will not turn off on alarm warning anymore, but will just deactivate temporally some functions in order to prevent the battery to open their internal relays.

### **VarioTrack (1.5.36)**

- No change.

### **Xtender (1.5.32)**

- No change.

### **BSP (1.5.10)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

### **Communication protocol Xcom-232i (1.5.36)**

- No change.

### **Xtender Data Analysis Tool (1.5.36)**

- No change.

### **Xtender Settings Manager (1.5.36)**

- No change.

## R572a Software Release Content

### RCC and Xcom232i (1.5.80)

- Improvements :
  - In the German language only: correction of the access to parameter {5070} "Anwenden aller Konfigurations- dateien (Masterfile)".

## R572 Software Release Content

### Xtender (1.5.32)

- Improvements :
  - Parameters {1622}, {1623} and {1624}. Inversion of the displayed value; inductive becomes capacitive and reverse:
    - For an alternating voltage generator connected to an inductive load:  
The current injected by the generator is behind the voltage (generator convention). The generator is over-excited. They say he is capacitive (see from network, so by load convention). It is also said that the generator produce reactive power.
    - For an alternating voltage generator connected to a capacitive load:  
The current injected by the generator is ahead the voltage (generator convention). The generator is under-excited. They say he is inductive (see from network, so by load convention). It is also said that the generator consume reactive power.

### VarioString (1.5.32)

- Improvements :
  - Better management of the current displayed. It force to show 0A when the converter is not active (also out of the night and OFF modes).

### RCC and Xcom232i (1.5.80)

- Improvements :
  - The value of the changed parameter is stored in the messages.csv file and in the event record menu in the RCC.
  - Text change to validate the software upgrade: "Do you want to update the system? (Automatic OFF of Xtenders during process)".
  - Treatment of the new SCOM service "Custom datalog field object". See description in the SCOM documentation.
  - Treatment of the messages in the Xcom-CAN.
  - If the unit that sent a message is not anymore in the system (communication loss or exchange of unit), the stored messages of that unit will have his UID under brackets (). If the unit is still there, the UID is normal. For example : (140) Synchronized on XT master / VarioTrack(1). That VarioTrack is not anymore present in the system.

### VarioTrack (1.5.36)

- Improvements :



- Force an equalization start automatically a new cycle.
- Better precision on Upv measurement

### **Communication protocol Xcom-232i (1.5.38)**

- Added functionalities :
  - Description of the new SCOM service "Custom datalog field object".
- Improvements :
  - Document updated.
  - VarioTrack parameters ({10090}, {10144}, {10204}, {10257}) and VarioString parameters ({14072}, {14124}) change their format from BOOL to ENUM

### **Xtender Data Analysis Tool (1.5.40)**

- Added functionalities :
  - New display for SCOM service "Custom datalog field object".

### **Xcom-SMS (1.5.26)**

- No change

### **Xcom-CAN (1.5.6)**

- No change

### **BSP (1.5.10)**

- No change

### **Xcom MS (1.5.4)**

- No change

### **Xtender Settings Manager (1.5.36)**

- No change

## **R570      Software Release Content**

### **VarioString (1.5.30)**

- Improvements :
  - Factory internal change for PCB detection.

### **VarioTrack (1.5.36)**

- Improvements :
  - Force an equalization start automatically a new cycle.
  - Better precision on Upv measurement

### **RCC and Xcom232i (1.5.78)**

- Improvements :
  - Improvement in the GSM network authentication protocol (for Xcom-GSM only)
  - Improvement in the datalogger when a device disappear during the day.
  - Modification on the locker (prohibited function) displayed in multi-systems.
  - Better management of the scom "error 42" (repeat request automatically).

### **Xcom-SMS (1.5.26)**

- Added functionalities :
  - Display of the remote entry status in the reports.

### **Xcom-CAN (1.5.6)**

- Added functionalities :
  - Management of CanOpen protocol with profile CiA 418/9.
  - Add features for Xcom-CAN-35 special execution.
- Improvements :
  - Better management of current thresholds in BMS mode
  - Modification of a timeout in the battery management process

### **Communication protocol Xcom-232i (1.5.36)**

- Improvements :
  - Document updated.

### **Xtender (1.5.32)**

- No change

### **BSP (1.5.10)**

- No change

### **Xcom MS (1.5.4)**

- No change

### **Xtender Data Analysis Tool (1.5.36)**

- No change

### **Xtender Settings Manager (1.5.36)**

- No change

## **R568      Software Release Content**

### **VarioString (1.5.28)**

- Improvements :
  - When equalization is activated, the unit goes directly to that battery phase instead of waiting for a new cycle.
  - When equalization with fixed interval was activated, it appeared every day instead of waiting the programmed delay. Now it works properly.

### **VarioTrack (1.5.34)**

- Improvements :
  - Higher tolerance on earth fault detection (from 1 to 3V).
  - Usage of only one temperature information when both BSP and BTS present in the system.

### **RCC and Xcom232i (1.5.76)**

- Added functionalities :
  - Compatibility with Xcom-CAN.
- Improvements :
  - Change of FID restricted to one device.
  - Recording of parameter change in message log include now the reference of the parameter.

### **Xcom-SMS (1.5.24)**

- Added functionalities :
  - Compatibility with Xcom-CAN.
- Improvements :
  - Better automatic reports in multiple devices installation.

### **Xcom-CAN (1.5.2)**

- New product.

### **Communication protocol Xcom-232i (1.5.34)**

- Improvements :
  - Better description around the Scom watchdog and the Xtender watchdog.
  - Longer timeout (1->2sec) when asking datalog through Xcom.

### **Xtender Data Analysis Tool (1.5.36)**

- No change

### **Xtender Settings Manager (1.5.36)**

- No change

### **Xtender (1.5.32)**

- No change

### **BSP (1.5.10)**

- No change

### **Xcom MS (1.5.4)**

- No change

## **R566      Software Release Content**

### **VarioString (1.5.24)**

- Added functionalities :
  - New parameter for battery undervoltage {14216} that is able to create a message, create a blinking in the ERROR LED and can be used as event for the AUX relays.
  - New parameter for maximum charging current on VS-70 {14217}

### **VarioTrack (1.5.32)**

- Added functionalities :
  - New parameter for battery undervoltage {10334} that is able to create a message, create a blinking in the ERROR LED and can be used as event for the AUX relays.

### **RCC and Xcom232i (1.5.74)**

- Improvements :
  - Better management when changing all parameters to a new user level.
  - If the Xtender flash memory is empty, a software update can help to solve the problem.

### **Xcom-SMS (1.5.22)**

- Improvements :
  - The event configuration by category was not saved in the flash memory, therefore they were not saved when restarting or upgrading the software.
  - When saving event configuration, the report configuration might be deleted.

### **Communication protocol Xcom-232i (1.5.32)**

- Improvements :
  - Modification in the tables (new parameters)
  - Added comments for « ENUM type » parameters

### **Xtender Data Analysis Tool (1.5.36)**

- Improvements :
  - Better management of the VarioTrack/VarioString running mode visualisation for week, month and year visualisation

### **Xtender Settings Manager (1.5.36)**

- Improvements:
  - French and Italian version of the menu adjusted

### **Xtender (1.5.32)**

- No change

**BSP (1.5.10)**

- No change

**Xcom MS (1.5.4)**

- No change

## **R564      Software Release Content**

### **VarioString (1.5.22)**

- Added functionalities :
  - Remote entry inside the unit and new settings for this function
  - New conditions for AUX relay settings:
    - Time schedule
    - Event remote entry status

### **Xtender (1.5.32)**

- No change

### **VarioTrack (1.5.30)**

- No change

### **BSP (1.5.10)**

- No change

### **RCC and Xcom232i (1.5.72)**

- No change

### **Xcom-SMS (1.5.18)**

- No change

### **Xtender Data Analysis Tool (1.5.34)**

- No change

### **Xtender Settings Manager (1.5.34)**

- No change

### **Communication protocol Xcom-232i (1.5.30)**

- No change

### **Xcom MS (1.5.4)**

- No change



## **R562      Software Release Content**

### **Xtender (1.5.32)**

- Improvements :
  - Better management during upgrade process

### **VarioTrack (1.5.30)**

- Added functionalities :
  - Possibility to limit the charging current depending on BSP settings
  - Remote entry inside the unit and new settings for this function
  - New settings for auxiliary relays: Time schedule condition
- Improvements :
  - Improvement in the way of storing temperature values below 0°C to avoid the unit stop working with negative temperatures

### **VarioString (1.5.20)**

- Added functionalities :
  - Possibility to limit the charging current depending on BSP settings
- Improvements :
  - Improvement in the way of storing temperature values below 0°C to avoid the unit stop working with negative temperatures

### **BSP (1.5.10)**

- Added functionalities :
  - New parameters to adjust battery charging current on VarioTrack & VarioString depending on BSP current measurement.  
{6058} " Battery current limitation activated "  
{6059} " Max battery charge current "

### **Xcom-SMS (1.5.18)**

- Improvements :
  - CSV Files saving method improvement

### **RCC and Xcom232i (1.5.72)**

- Improvements :
  - Adaptation to new settings of the different products

## **Xtender Data Analysis Tool (1.5.34)**

- Improvements :
  - New charging mode added (limited by BSP parameter) beside VarioTrack and VarioString graphics.
  - Better visualisation of negative temperatures.

## **Xtender Settings Manager (1.5.34)**

- Improvements :
  - Updated parameter lists

## **Communication protocol Xcom-232i (1.5.30)**

- No change

## **Xcom MS (1.5.4)**

- No change

## **R560      Software Release Content**

### **VarioTrack (1.5.28)**

- Improvements :
  - In case of earthing error, message giving that alarm, the VT will continue to charge the battery. There will only be an alarm on RCC and VT's display.

### **Xcom-SMS (1.5.16)**

- Improvements :
  - Synchronisation with RCC software

### **RCC and Xcom232i (1.5.68)**

- Added functionalities:
  - Compatibility with VS-70

### **Xtender Settings Manager (1.5.32)**

- Improvements :
  - Updated parameter lists

### **VarioString (1.5.18)**

- No change

### **Xtender (1.5.30)**

- No change

### **BSP (1.5.8)**

- Improvements :
  - Internal changes for factory after sales service

### **Xtender Data Analysis Tool (1.5.32)**

- No change

### **Communication protocol Xcom-232i (1.5.30)**

- No change

### **Xcom MS (1.5.4)**

- No change

## **R558      Software Release Content**

### **VarioString (1.5.18)**

- Improvements :
  - improvement in battery voltage regulation
- Added functionalities:
  - new MPPT algorithm, better in low power situation(LSF) {14043, 14176, 14046}
  - PV – earth and Bat - earth floating control. When PV or BAT are grounded an alarm is generated (when activated with params {14040,14041,14042,14175})

### **Communication protocol Xcom-232i (1.5.30)**

- Improvements :
  - Modification of menu VarioString.

### **VarioTrack (1.5.26)**

- No change.

### **Xcom-SMS (1.5.14)**

- No change.

### **RCC and Xcom232i (1.5.64)**

- No change.

### **Xtender (1.5.30)**

- No change

### **BSP (1.5.6)**

- No change.

### **Xtender Data Analysis Tool (1.5.32)**

- No change.

### **Xtender Settings Manager (1.5.28)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## **R556      Software Release Content**

### **VarioString (1.5.18)**

- Improvements :
  - Calibration adjustment on a PV current measure

### **VarioTrack (1.5.26)**

- Improvements :
  - Improvement in user information treatment.

### **Xcom-SMS (1.5.14)**

- Improvements :
  - Improvement in reports management and values
  - Improvement : support of PIN Code as long as 6 characters

### **RCC and Xcom232i (1.5.64)**

- Added functionalities:
  - Possibility to choose a different value stored on 4 track in the datalogger {5123}
- Improvements :
  - Better management of the SCOM stability and error information.

### **Xtender (1.5.30)**

- No change

### **BSP (1.5.6)**

- No change.

### **Xtender Data Analysis Tool (1.5.32)**

- No change.

### **Xtender Settings Manager (1.5.28)**

- No change.

### **Communication protocol Xcom-232i (1.5.26)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## **R554      Software Release Content**

### **Xtender (1.5.30)**

- Improvements :
  - Better management of charging current with high grid voltages (>245Vac)
  - Better management of remote entry functionality when Xtender alone.
  - Better accuracy on battery voltage ripple

### **VarioString (1.5.14)**

- Improvements :
  - Better management on the communication bus
  - MPPT algorithm improvement
  - Voltage measurement correction between –Bat and PE (was reversed)
  - Better management of the message n°156

### **Xcom-SMS (1.5.8)**

- Added functionalities :
  - New command that return the language used: "lang ?". Not yet in the manual.

### **RCC and Xcom232i (1.5.60)**

- Added functionalities:
  - The 3rd DEV column in the CSV files is now used to store the first message of the minute.
  - If the number of units in the system increase (add new device) the datalogger will erase the data stored (of all units) until that moment in the day. Don't forget that all changes should be done with the units switched off.
- Improvements :
  - Correction of the individual access to VT information while on multi-system.
  - Correction of the XT max power information in the datalogger (was not summing the units in parallel)
  - Better management of the complete system reset {5121}

### **Xtender Data Analysis Tool (1.5.32)**

- Added functionalities :
  - New graph options

### **Xtender Settings Manager (1.5.28)**

- Improvements :
  - New BSP parameters.

### **VarioTrack (1.5.24)**

- No change.

### **BSP (1.5.6)**

- No change.

### **Communication protocol Xcom-232i (1.5.26)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## **R552      Software Release Content**

### **VarioString (1.5.12)**

- Improvements :
  - Better management of the fan

### **VarioTrack (1.5.24)**

- Improvements :
  - When relay open due to an error, Night mode or other reason, a 1min 30 second delay is added.

### **Xcom-SMS (1.5.6)**

- Added functionalities :
  - New user information to see type and level of phone coverage
- Improvements :
  - Add values and type in big report (r2)
  - Improved management of SIM and SD card when starting

### **RCC and Xcom232i (1.5.56)**

- Added functionalities :
  - New user information to see type and level of phone coverage
- Improvements :
  - Adaptation to BSP new information.

### **BSP (1.5.6)**

- Added functionalities :
  - New parameter to compensate end of charge level depending on Temperature, {6048}
  - FID number available on scom communication
  - New parameter to fix the battery system voltage, {6057}
- Improvements :
  - Different way of calculating SOC
  - Modification of {6022} default value, from 80% to 90%.
- Deletions:
  - Relative capacity is not shown anymore

### **Xtender Data Analysis Tool (1.5.30)**

- Improvements :
  - New tables for VarioTrack and VarioString



## **Xtender Settings Manager (1.5.26)**

- Improvements :
  - Improvement when generating the files

## **Communication protocol Xcom-232i (1.5.26)**

- Improvements :
  - Modification of menu and user info for new BSP software
  - New messages for Xcom-SMS
  - Change on writing AC-In and AC-Out

## **Xtender (1.5.28)**

- No change

## **Xcom MS (1.5.4)**

- No change.

## **R550      Software Release Content**

### **Xcom-SMS (1.5.4)**

- New product

### **VarioTrack (1.5.22)**

- Improvements :
  - Internal changes for factory tests

### **VarioString (1.5.10)**

- Improvements :
  - Better recognition of Hardware PCB version

### **RCC and Xcom232i (1.5.52)**

- Added functionalities :
  - Compatibility with Xcom-SMS.
- Improvements :
  - Priority on BTS temperature value when BTS and BSP on the system.
  - When changing the real time information screen from a device to another, the old values are not displayed. The values will appear after the refresh time (between 0,5 to 1,5 sec).

### **Communication protocol Xcom-232i (1.5.26)**

- Modification in the tables :
  - New Xtender parameters: 1632.
  - Improvement of Xtender parameters: 1627, 1628 and 1629
  - Improvement of Xtender user information: 3049, 3155, 3158 and 3159.
  - New VarioTrack parameters: 10200 and 10201.
  - New VarioTrack user information: 11009.
  - Improvement of VarioString parameters: 14005, 14009, 14017, 14021, 14182, 14051 and 14052.

### **Xtender Data Analysis Tool (1.5.30)**

- Added functionalities :
  - New tables with max or min values for VarioTrack and VarioString

### **Xtender Settings Manager (1.5.24)**

- Improvements :
  - New parameters compatibility

### **Xtender (1.5.28)**

- No change

**BSP (1.5.4)**

- No change.

**Xcom MS (1.5.4)**

- No change.

## **R548      Software Release Content**

### **VarioTrack (1.5.20)**

- Improvements :
  - Better stability on the real time clock.

### **Xtender Data Analysis Tool (1.5.28)**

- Improvements :
  - The combo choice for VarioTrack/VarioString begins with VarioTrack as it is the most used.

### **Xtender (1.5.28)**

- No change

### **VarioString (1.5.8)**

- No change

### **RCC and Xcom232i (1.5.44)**

- No change.

### **BSP (1.5.4)**

- No change.

### **Communication protocol Xcom-232i (1.5.20)**

- No change.

### **Xtender Settings Manager (1.5.20)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## **R546      Software Release Content**

### **Xtender (1.5.28)**

- Improvements:
  - Charge phase synchronisation issue solved.
  - AC source synchronisation message from slave avoided when master not in synchronisation.
  - Software compatibility check enhancement.
  - New message to mention AC cabling error.

### **VarioTrack (1.5.18)**

- Improvements :
  - LED blinking time when checking unit reduced from 45 to 7 seconds (it allows to see the working status after location of the right product).
  - Modification on the date information send between the units.

### **VarioString (1.5.8)**

- Improvements :
  - LED blinking time when checking unit reduced from 45 to 7 seconds (it allows to see the working status after location of the right product).
  - Modification on the date information send between the units.
  - Improvement in the message notifications.

### **RCC and Xcom232i (1.5.44)**

- No change.

### **BSP (1.5.4)**

- No change.

### **Communication protocol Xcom-232i (1.5.20)**

- No change.

### **Xtender Data Analysis Tool (1.5.26)**

- No change.

### **Xtender Settings Manager (1.5.20)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## **R542      Software Release Content**

### **VarioString (1.5.6)**

- Improvement in the tracking algorithm

### **RCC and Xcom232i (1.5.44)**

- No change.

### **Xtender (1.5.22)**

- No change.

### **VarioTrack (1.5.16)**

- No change.

### **BSP (1.5.4)**

- No change.

### **Communication protocol Xcom-232i (1.5.20)**

- No change.

### **Xtender Data Analysis Tool (1.5.26)**

- No change.

### **Xtender Settings Manager (1.5.20)**

- No change.

### **Xcom MS (1.5.4)**

- No change.

## R540      Software Release Content

### VarioString (1.5.4)

- New product

### RCC and Xcom232i (1.5.44)

- Added functionalities :
  - Compatibility with VarioString.
  - ON/OFF per type of units on respective information screen.

The ON/OFF possibility on the clock screen will now switch ON/OFF all the system (all units connected to the communication bus).
  - New preset to apply ARN 4105 parameters (to select in {5045}).
  - New parameter in the RCC settings; {5121} Reset all devices of the system.
  - When the upgrade is finished and after quitting the message of this process, a message « Error (091): Please update SW of other RCC or Xcom-232i » could be displayed if another device in the communication bus is still not updated. This can happen with Xcom + RCC as one cannot update the other.
  - When selecting a value of an individual unit member of a multi-unit system, all LEDs of that unit are blinking together. The blinking will stop automatically after some seconds.
  - New message when a device is lost in the communication bus after some seconds;
  - New user information regarding FID msb and lsb for VarioString, VarioTrack and BSP (by Scom access).
- Improvements:
  - Folder name's adaptation to improve clarity in the SD card CSVFiles.
  - When the AUX2 is as generator control mode, this is indicated in the "Events relay AUX2" screen.
  - If a system is modified (new device, replacement device or a device less), the datalogger will erase the data of the day when you restart the system.
  - In the datalog files .csv :
    - New column for all solar power sum.
    - New column for all VarioTrack solar power sum.
    - New column for all VarioString solar power sum.
    - New columns for VarioString data
    - New columns for the following information: AUX1 relay status, AUX2 relay status, transfer relay status, battery cycle status, running mode and remote entry status.
  - Information n.a. (not available) shown when the user information requested returns NaN.
  - The number of messages is not shown, but only the time and date remains.
  - Modification on the messages windows appearing in the RCC:
    - The message box is not shown if the message has a user level higher than the RCC.
    - In this case, the information of the message is not shown. Only the number of the message will remain in the event log and .csv file.

- While checking Xtender parameters by number, the SET option to enter the parameter will not be available if the parameter is at higher user level than the RCC.

## **Xtender (1.5.22)**

- Added functionalities :
  - Compatibility with VarioString.
  - Management of the grid feeding current depending on the frequency to follow ARN 4105 rule. Activation with parameter {1627}.
  - New user information {3158} and {3159} to see current limitations while grid feeding.
  - New user information {3154} to see Frequency on ACin with better precision (need for ARN 4105).
  - New parameter to accelerate the charger/injector regulation ({1615} in QSP user level).
  - New WatchDog (WD) in the Xtender. This is useful for Systems with Scom communication and without saving parameters ({1550}=no). So when there is no communication between the SCADA system and the Xtender (no requests) in a period of time {1629} if this WD is activated {1628}, the Xtender will do a RESET.
- Improvements :
  - Better management of the SOC values. In case of 99,99% it will mention 100%.
  - Better management between grid feeding and battery priority :
    - If both functions are activated at the same time, the battery priority is prior.
    - If battery priority is deactivate by command entry, the second function becomes prior with his own regulation voltage.
  - Better management for the battery regulation when battery priority function used.
  - Better management of forced grid feeding. It is now possible to force the grid feeding thru midnight (i.e from 22h to 6h).
  - Better management of the charger/injector behaviour, smoothing transitions.
  - Better management of auto restarts after short circuits or overloads.
  - Correction of value sent by scom. If not available it remains always 0.
  - The remote entry status is now sent to all the units. Before this correction, the software activation of remote entry was not communicated to all the units.
  - Better description of the activation/deactivation conditions in the AUX user information display.

## **VarioTrack (1.5.16)**

- Added functionalities :
  - Compatibility with VarioString.
  - New user information about VarioTrack state {11069}.
  - New user information to obtain FID (only accessible by scom).
  - New parameters {10198} and {10199} to activate the AUX relays depending on VarioTrack events.
- Improvements:
  - Better management of Real Time Clock with multi-VarioTracks and ARM-02.



- Possibility to set an unlimited activation time of AUX relay during night mode.

### **BSP (1.5.4)**

- Added functionalities :
  - Compatibility with VarioString.

### **Communication protocol Xcom-232i (1.5.20)**

- Added functionalities :
  - Compatibility with VarioString.
- Modification in the tables :
  - New Xtender parameters: 1627, 1628, 1629, 1630 and 1631.
  - New Xtender user information: 3154, 3155, 3156, 3157, 3158 and 3159.
  - New RCC parameters: 5121.
  - Improvement of RCC parameters: 5073, 5076, 5077, 5078 and 5091.
  - New VarioTrack parameters: 10198 and 10199.
  - New VarioTrack user information: 11067, 11068 and 11069.
  - New VarioString parameters and user info: all.

### **Xtender Data Analysis Tool (1.5.26)**

- Added functionalities :
  - Compatibility with VarioString.
  - Possibility to choose the time of start/stop when looking to data of the day.
  - New graphics showing status of VarioTrack.
- Improvements:
  - Total solar power data import has been corrected.

### **Xtender Settings Manager (1.5.20)**

- Added functionalities :
  - Compatibility with VarioString.

### **Xcom MS (1.5.4)**

- No change.

## **R536      Software Release Content**

### **RCC and Xcom232i (1.5.34)**

- Added functionalities :
  - The datalog files are downloadable through the Xcom-LAN/GSM
- Improvements:
  - Better management of the AUX relay events visualization in the Xcom Portal.
  - Better management of the messages shown on Xcom Portal.

### **Xtender (1.5.18)**

- Improvements:
  - Better management of current settings between physical or software option while using an XTS.

### **Xtender Settings Manager (1.5.18)**

- Improvement:
  - The parameters {1497} and {1498} indicate error where changed to AND. This is now corrected.

### **Xtender Data Analysis Tool (1.5.16)**

- Improvement:
  - Since the RCC software version 1.5.26 (R530), there was a column containing the sum of VarioTrack solar power in the datalogger .csv file. While importing the data with old "Data Analysis Tool" versions, this column data overwrites the VarioTrack 1 solar power. This is now corrected.

### **Communication protocol Xcom-232i (1.5.18)**

- Improvements:
  - New flag "is\_datalog\_supported" (BIT5 of byte frame\_flags on SCOM).

### **VarioTrack (1.5.14)**

#### **BSP (1.5.2)**

#### **Xcom MS (1.5.4)**

- No change

## **R534      Software Release Content**

### **RCC and Xcom232i (1.5.30)**

- Added functionalities :
  - New message when the SD card is removed.
- Improvements:
  - Better management for saving and restore parameters.

### **Xtender (1.5.16)**

- Improvements:
  - Better management of current in charging/grid feeding mode.
  - Active filtering can now be connected at any moment.

### **Xtender Settings Manager (1.5.16)**

- Improvements:
  - Update of the Xtender parameters

### **Xtender Data Analysis Tool (1.5.14)**

- Improvements:
  - After pressing Generate button, the sheet switches to the graphs sheet on L1.
  - Import data modified if L1 is not present in the CSV files.

### **Communication protocol Xcom-232i (1.5.16)**

- Improvements:
  - Modification of the parameters {1622} {1623} format.
  - Modification of the parameter {5073} level.
  - Text "minute avg" added to info BSP {7030} {7031} {7032} and {7033}.
  - Text "minute avg" added to info Xcom-MS {9018}.

### **VarioTrack (1.5.14)**

#### **BSP (1.5.2)**

#### **Xcom MS (1.5.4)**

- No change

## **R532      Software Release Content**

### **RCC and Xcom232i (1.5.28)**

- Improvements:
  - Correction for datalogger of Xtender Energies (ACin & ACout)

### **Xtender (1.5.14)**

### **VarioTrack (1.5.14)**

### **Communication protocol Xcom-232i (1.5.12)**

### **Xtender Settings Manager (1.5.14)**

### **Xtender Data Analysis Tool (1.5.12)**

### **BSP (1.5.2)**

### **Xcom MS (1.5.4)**

- No change

## R530      Software Release Content

### Xtender (1.5.14)

- Improvements:
  - Better management of forced grid feeding with multi-Xtender.
  - Better management of phase shift (steps of 0.01 instead of 0.05).
  - Stabilisation of XTS functions.
- Deletions :
  - Function to control the external transfer.

### VarioTrack (1.5.14)

- Improvements:
  - Correction of user info "total produced Energy" in kWh instead of MWh as it was calculated in kWh.
- Deletions:
  - Message of Battery undercurrent (136) as it is useless and can overload the event log.

### RCC and Xcom232i (1.5.26)

- Added functionalities :
  - When the SD card is full, the datalogger will delete the oldest 30 days.
  - If there is a problem during the datalogger savings at midnight, it will return a message.
  - On automatic, the datalogger is active in both RCC and Xcom-LAN/GSM, but deactivated in Xcom-232i when used in SCADA systems.
  - Battery phase visualization in the datalogger csv file.
  - Detection of a unit in a system (visible by LED blinkings) from a parameter {5119} using the Xcom and Scom addresses.
- Improvements:
  - When the RCC user level is below the level required to see a message, this one will be displayed as "(nnn): -" where nnn is the message number.
  - The parameter "{5035} Clear messages" is accessible by Scom.
  - Auxiliary contacts events description in the user information display.
- Deletions:
  - User information for multi VarioTrack that are normally only accessible from simple VarioTrack visualization (11016, 11018, 11019 and 11022). They remain accessible on single VarioTrack.

### Communication protocol Xcom-232i (1.5.12)

- Improvements:
  - Update of the parameters list and user information available
  - Upgrade in the frame flags

## **Xtender Settings Manager (1.5.14)**

- Improvements:
  - Update of the Xtender parameters
  - Restore cell type when applying "Reset all values"

## **Xtender Data Analysis Tool (1.5.12)**

- Added functionalities :
  - New button to show battery cycle beside battery current graph.
  - New button to show the running mode beside the battery current graph.

## **BSP (1.5.2)**

- No change

## **Xcom MS (1.5.4)**

- Improvements:
  - Now compatible with the Xtender Settings Manager

## R528      Software Release Content

### Xtender (1.5.12)

- Added functionalities :
  - Possibility to dynamically compensate the new cycle levels {1608}.
  - Better management of the Boost function to avoid overheat in long term high power systems, limiting the maximum power added; {1607} in % of P30.
  - New regulation to reduce flickering during grid feeding and charging.
  - Phase shift control for grid feeding current; {1610-1614}.
  - Information of Auxiliary relays switch conditions on RCC display.
  - New timeout management during files transfer.
- Improvements:
  - Better management of the Boost function at low voltages.
  - Better management of synchronization between Xtender and VarioTrack.
  - Grid feeding securities in function of input frequency and voltage.
- Deletions :
  - Battery Autonomy test function.

### VarioTrack (1.5.12)

- Added functionalities :
  - Protection against external flash invalidation by error.
- Improvements:
  - Indication of parameters loss by lighting only LED 70-80A.
  - Indication of SPI Flash defective by lighting only LED 50-60A.
  - Better indication of sunshine hours of the day or yesterday.
  - Simplify earthing error while floating

### RCC and Xcom232i (1.5.24)

- Added functionalities :
  - Visualization of LAN or GSM type of Xcom in the system information.
  - Visualization of Xtender auxiliary conditions of activation.
- Improvements:
  - Better management of Xcom-GSM; when PIN code begins with 0 and some kind of SIM cards.
  - Better management of steps visualization when modifying a parameter.
  - Correction for the SOC curve visualization thru the Scom LAN and Scom GSM.

### SCOM (actual version 1.5.6)

- Improvements:

- Parameter lists and user information lists update

## **Xtender Settings Manager (actual version 5.2)**

- Improvements:
  - Parameters update for Xtender, VarioTrack and RCC

## **BSP**

- No change

## **Xcom MS**

- No change

## **Datalogger**

- No change



## R526      Software Release Content

### VarioTrack (1.5.10)

- Added functionalities :
  - Use of auxiliary relays (ARM-02)
  - Possibility to deactivate saving the parameters in Flash memory (for control thru Xcom-232i) {10058}
  - Possibility to deactivate SET Button functions {10087}
  - Information 11066: cycle synchronisation state
- Improvements:
  - Information shown in charger mode (I, U, Temp)
  - Information shown on 11038: battery cycle phase
  - Information shown on 11034: type of error
  - Precision on daily counters
  - MPPT algorithm and regulation speed
  - Detection of battery loss

### RCC et Xcom232i (1.5.20)

- Added functionalities :
  - New Timeout management for readings thru SCOM. The possible blocking disappear
  - AUX relay events shown on screen
  - Information
- Improvements:
  - Datalog works until all data are saved in SD card
  - Better management while uploading all master files with parameter {5070}
  - Information shown in charger mode (I, U, Temp)
  - Reorganisation of the information shown for single VT display
  - The SCOM doesn't stop during datalogger savings at midnight
  - The signal level value is now between 1 and 4 instead of being a dB value.
- Deletions :
  - Some user information not adapted to multiple VT visualisation

### Xtender

- No change

### BSP

- No change

### Xcom MS

- No change

## **SCOM**