SATEL XPRS IP radio FW updates via USB-A port

The required hardware for these tasks is a basic, FAT32 flash drive. It is recommended to use the latest firmware versions for the units. In this guide the central unit is referred as CU and the radio unit as RU.

SATEL XPRS IP radio, SATELLAR XT 5RC USB-A port can be used for update, overwrite and setting adjustment/replacement purposes with USB stick during the electrical reboot of the device.
- CU FW overwrite
   o <u>NOTE!</u> process will restore factory settings to CU
- RU FW update
- NMST (device settings file) overwrite

Only one firmware package of a kind shall be set to the USB stick in order to archieve successful update process. Available package file information for different product versions can be found from the firmware release notes.

Log information will be created to the USB stick from the NMST file import and update processes (Note! No log file available of the FW overwrite process).

All processes can be followed from the LCD in the devices equipped with LCD UI.

CU firmware overwrite and RU FW update via USB-A port

1. Place the following files of the latest CU firmware version to the root folder of the USB stick:
   a. rootfs.jffs2
   b. rootfs.jffs2.sig
   c. uImage
   d. uImage.sig
2. Place the latest RU firmware version satellar_rmu-x.x.x.xx.update file to the root folder of the USB stick
3. Place the USB stick to the CU USB-A port
4. Power up the SATELLAR
5. Wait until the CU STAT LED is lid statically after boot up (takes approx. 12 minutes)
6. Remove the USB stick and reboot the device electrically (takes approx. 2.5 minutes)
   CU FW overwrite and RU FW update processes are done

If only RU or CU is needed to overwrite/update, the process takes ~5 minutes (CU STAT LED lid statically). Setting only the .update -file to the device does not require rebooting the device after the process.

Importing the NMST file to the device via USB-A port

The NMST file consists of user selected settings of the SATEL XPRS IP radio, each settings and value has its own numeric ID value called NMS ID. This file can be created in the NMS Import –tab (by pressing the "Create Transport File") in the WEB user interface of the device.

The NMST file can be viewed and edited with word processing software. It is possible to remove the settings that are not intended to be modified in the device from the NMST file, leaving only e.g. TX and RX user frequency and TX power information to the NMST file, to be imported to the device.

Starting from the SATELLAR central unit firmware version 1.4403 (released 11.1.2016), the NMST files can be imported to the device via USB-A port in the boot process of the device with the following rules:

- If the USB stick is placed to the USB-A port in the reboot, NMST files are searched from the <u>root folder</u> of the USB stick.
- If a NMST file is found which matces the pattern *_satellar_export.nmst (* = RMAC number of the device), it is selected primarily for the import.
  E.g.: 5_satellar_export.nmst → matches the SATELLAR with the RMAC 5, thus this nmst file is selected for import from the USB stick.

  CU FW overwrite file overwrites ONLY CU settings, not RU. SATELLAR RMAC stored in the memory of the RU.

- If there are multiple files beginning with the same number, the file selection will be made in alphabetical order.
- If no NMST file is found that matches the RMAC number, the file selection will be made in alphabetical order.

If all, CU firmware overwrite, RU .update file and NMST settings files are set to the USB stick, work order in the SATEL XPRS IP radio will be:

1. The SATELLAR overwrites old CU FW version (CU settings restored to factory settings)
2. The SATELLAR updates the old RU FW version to the version found in the USB stick
3. The NMST file is taken into use according to the previously mentioned rules

Thus all tasks can be executed in order during one single reboot of the device.

Additional information

The SATELLAR devices equipped with the LCD user interface and function buttons, it is also possible to update the CU and RU vial the LCD user interface from the Firmware Updater section. More detailed information regarding this matter can be found from the CU user manual.

CU update files consists always "from version to version" numeric values, correct type of file selection is required. As the CU checks if the update process successful, the CU will revert back to the older firmware version if any errors found in the process. Due to the "checking" process, the CU update process takes >20 minutes, depending of the version.