

1.1 Upgrade from USB pendrive

A new way to update the DSPU firmware has been added to simplify the upgrading procedure:

1. Place 2 files on the root directory of the USB Pendrive.
 - service.lnx : software managing the update
 - panova.gz : firmware to download.
2. Once the panoramic unit has started, and has reached the "MACHINE SETTING" "PRESS >O<", Insert the PenDrive in the DSPU (on the top of keyboard, or directly on DSPU)
3. Follow instructions (on screen with Owandy keyboard, on DSPU LEDs with VSM Keyboard).

Note :

- the file **panova.gz** is the renamed file corresponding to the **panova.bin.gz** which is usually delivered for tftp upgrade.
- It also works with the current official release (1.17).

Principle of operation:

When the Pendrive is inserted, the DSPU application (running on Linux) verifies if it found "service.lnx" on the pendrive. If it finds this file, it launches it as a program. This has 2 main consequences:

- The upgrade is launch from a valid image already running, not from the boot loader. It's necessary to have a valid release in Flash to use this simplified procedure. If the firmware in Flash is corrupted, it is necessary to come back to the TFTP procedure.

- Service.lnx start to erase and write Flash only when all previous tasks are complete, but it is mandatory to not interrupt the process once the erasing of flash has start. Otherwise, a new upgrade with TFTP server will be necessary.

- If an error is detected during the upgrade, a message is displayed on the LCD screen. For the VSM keyboard, you can observe the red led of DSPU (named "err"). If it blinks 2 times periodically, it means an error without erasing the flash. If it blinks 3 times periodically, it means an error after the erasing of the flash.

- During few seconds, both applications (Panoramic and service.lnx) are running simultaneously. If you don't touch to any key / button, service.lnx will stop automatically after 10s, with the panoramic application still running. If you decide to do the upgrade, service.lnx will "kill" the panoramic application, and you will have to turn power off at the end of the upgrade.

Instruction

Step	Operation	Owandy keyboard	VSM Keyboard
1	Service.lnx start when found on USP pen drive. It verifies if panova.gz is present. If it is, it wait during max 10s that the operator confirms the upgrade pressing SW2 (on DSPU) or LASER on (Owandy Keyboard).	Screen becomes black and a text appears: Press SW2 or LASER to upgrade	On DSPU, the 2 Yellow leds "BUSY" and "RES" blink in alternatively.
2	Once the upgrade is confirmed, service.lnx stops the panoramic application	A message appears on screen saying Stopping panoramic application...	the 2 Yellow leds "BUSY" and "RES" are OFF
3	Service.lnx loads the firmware from USB Pen drive and verify the file	A message appears on screen saying Loading Firmware in RAM... And Verify loaded Firmware	The yellow LED "BUSY" is blinking. LED "RES" is OFF.
4	Service.lnx erases the flash (application	A message appears on	The yellow LED "BUSY"

	sectors, not the boot loader). <u>The machine must NOT be stopped at this step.</u>	screen saying DON'T POWER OFF THE PANO Erasing Flash...	is OFF. LED "RES" is ON.
5	Service.Inx write the firmware in flash. <u>The machine must NOT be stopped at this step.</u>	A message appears on screen saying DON'T POWER OFF THE PANO Writing FLASH...	The yellow LED "BUSY" is OFF. LED "RES" is blinking.
6	Upgrade is complete. You must turn power OFF the panoramic unit	A message appears on screen saying FIRMWARE SUCCESSFULLY UPGRADE Power off the Pano and restart it	The green LED "READY" is ON. The two orange LED are OFF.