Change log and Instructions of V1.4

# Change log:

1. Added: 4:3 video mode, 1440\*1080 60fps video resolution.
2. Added: Support remote shutter through HDMI port with special cable
3. Added: Video recording pause and resume via Menu button
4. Added: Video Time Lapse: 1F/2Sec
5. Added: Fast-forward clips during playback through a list of 1X, 2X, 4X, 8X via menu button
6. Added: Video Bitrate options for below modes: 1080P 60fps, 1440P 30fps, 1296P 30fps, 2160P 24fps, 1080P 30fps;
7. Added: Support for sensor calibration (fixing hot pixels) by user.
8. Added: Video shutter speed option: Auto, 1/30s, 1/60s, 1/120s, 1/240s, only works while ISO is not set for Auto;
9. Added: Lock Actual Recording via Menu button
10. Added: Photo time lapse: 0.5s option
11. Added: Polish and Dutch language, improved Portugal, French, Spanish, Italian, German translation
12. Improved: Delete the firmware after upgrade new firmware.
13. Improved: Changed Custom AWB adjustment range from 0-9 to 0-19
14. Improved: Soft and Strong sharpness, close to the normal option
15. Improved: Front red LED will be blinking for last 3 seconds while taking self-timer photo (When you see the red Led blinking, it is time to smile)
16. Improved: No Wi-Fi info displayed while OSD off;
17. Improved: Do not auto start recording if powered on by battery on car DVR mode;
18. Improved: Removed 1s overlap;
19. Improved: Support real 240fps;
20. Improved: Update the web camera name to Git2 instead of DEMO1
21. Improved: Display shutter speed option on screen on photo mode
22. Improved: LED blinking as normal recording and update the video mode icon on video time lapse mode
23. Fixed: No audio while playback on TV via HDMI
24. Fixed: The date is not shown properly in the preview mode
25. Fixed: Quick start capture is not working while connected with external charger.
26. Fixed: Unmute Recording Audio issue by menu button
27. Fixed: Video shaking on 720P 30fps mode with Gyro on
28. Fixed: Camera frozen while taking 16MP in 10 sequences burst mode
29. Changed: Top and Front LED blinking on Car DVR mode

# Upgrade Instructions for V1.4:

**If you camera firmware version is V1.2 or earlier, please upgrade the loader GIT2LD.bin(include in Loader\_for\_old\_firmwares.zip) first.**

**If you have already installed the V1.3 firmware, no necessary to upgrade the loader, please ignore the #3--#6 steps.**

**From V1.4 firmware, the firmware will be automatically deleted from Micro SD card after upgrade completed.**

1. Use max. 32GB card formatted by camera or on computer as FAT32
2. Insert card in camera and connect it to computer using USB cable
3. *Copy just the GIT2LD.bin on the root of the card*
4. *After GIT2LD.bin is copied to the card disconnect the camera from computer*
5. *Reconnect the camera to your computer and wait few seconds until you can chose Mass Storage from camera menu*
6. *Delete GIT2LD.bin from the card using your PC and*
7. Copy the GIT2FW.bin file on the root of the card
8. Reconnect the camera to your computer and wait more seconds until you can chose Mass Storage from camera menu, the front green LED and back red LED will be blinking while upgrading.
9. Now you can disconnect the camera from PC and enjoy new GitUp implementations.

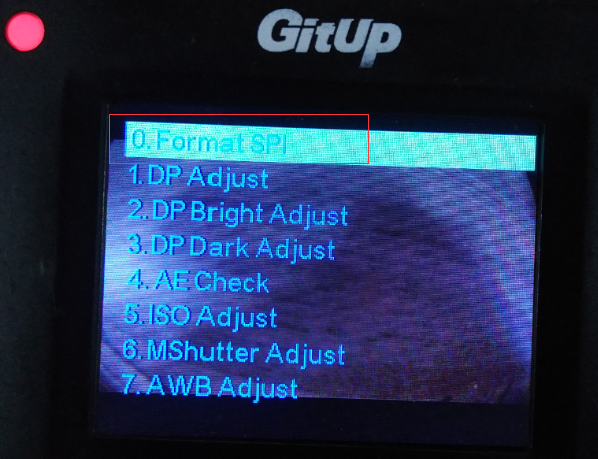
# Guide to calibrating the Git2 image sensor

The image sensor calibration procedure is for the camera have the issue with warm/hot pixels visible on video recordings made in low light conditions, be sure you fully read this document first and have the proper conditions for calibration. Do not use any other options than those described!

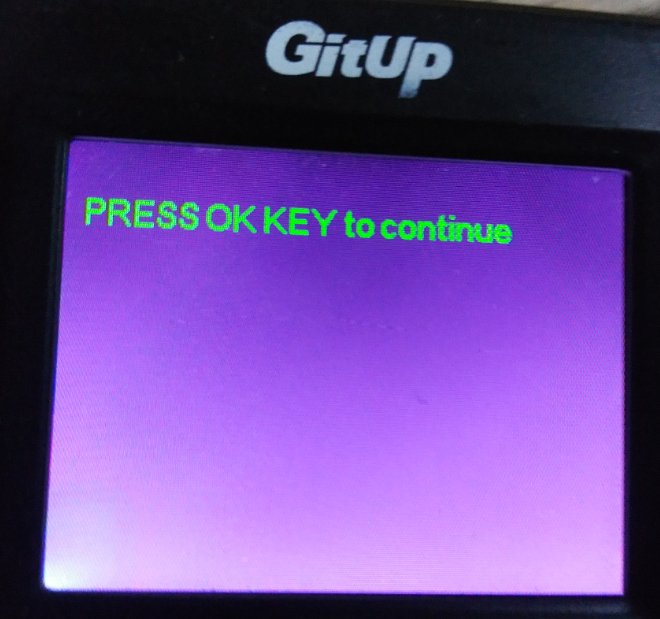
1. Upgrade the firmware to the latest version and ensure the camera has a fully charged battery. Enter in camera menu and set the Auto Power Off to **Off**.

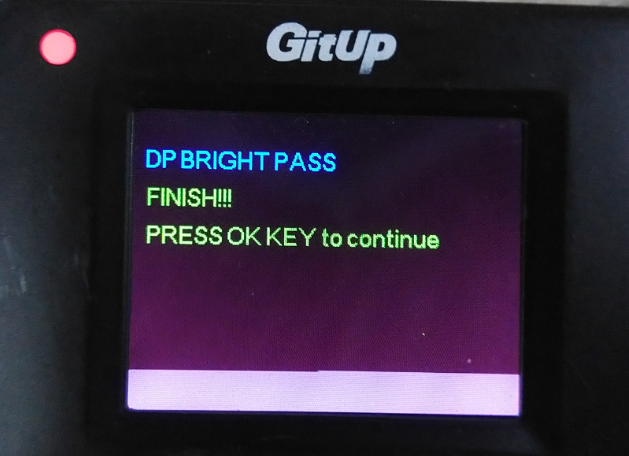
2. Create a new text file in the root folder of the Micro SD card and name it "engmode" without an extension.

3. Turn on the camera using the ***Power button***, the following interface will be displayed. First please choose the #0 to format SPI and confirm the operation pressing the SHUTTER button, then back to this interface.

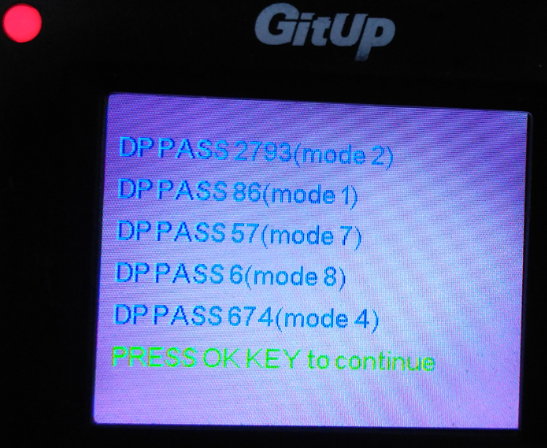
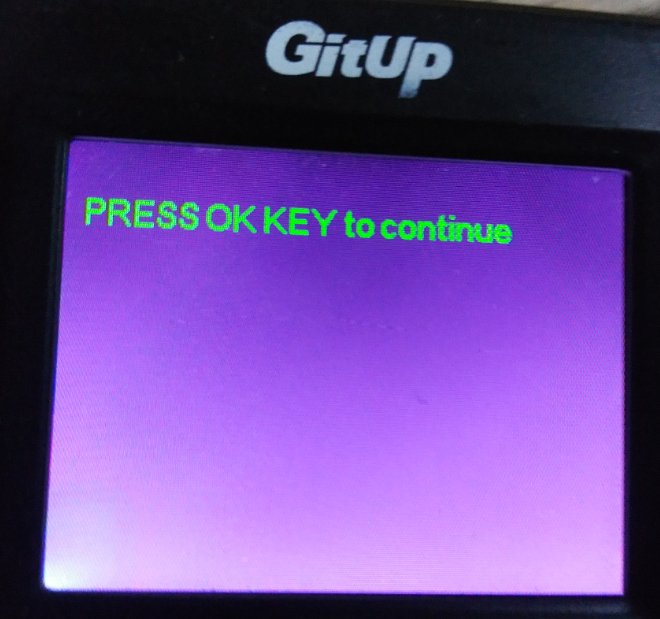


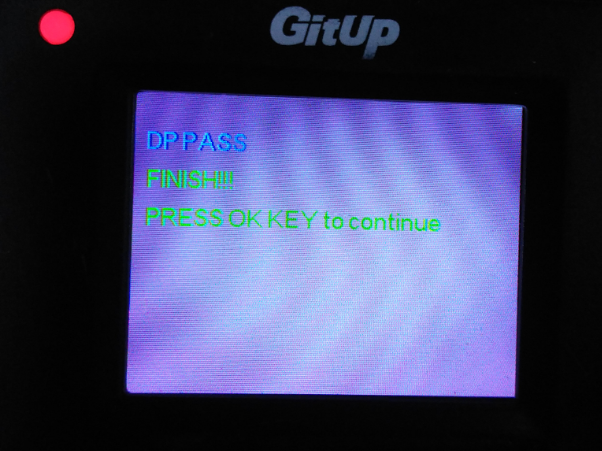
4. Using the camera ***Power button (MODE)*** for navigation, move to the third option **DP Bright Adjust**, first point camera to something white with lots of light (avoiding shadows) and press ***SHUTTER*** button, wait for the message “Press OK KEY to continue” to be shown on the screen, cover the lens with full black in a dark room and wait 10 minutes (20-30 recommended) for the sensor temperature to stabilize, then press the ***Shutter button*** and wait for the following message to be shown on the screen, the bright pixel calibration is then complete.





5. Then, using the ***Power button (MODE),*** choose the fourth option **DP Dark Adjust**, first point the camera to a completely white image, for example an LED flashlight seen through white paper. Please make sure the camera is seeing full white with no shadows. Then press the ***Shutter button*** and keeping the camera steady and oriented to the white object wait for the following screen to be displayed, the dark pixel calibration is then complete:





6. Using the ***Power button,*** turn off the camera, take out the Micro SD card and delete the “engmode” file using a computer.

The Git2 image sensor is now fully calibrated which should result in minimal warm/hot pixels on video recorded in low light conditions. Remember that this is an analog sensor, it will be impossible to achieve 100% perfection and the sensor accuracy will change with temperature, but the calibration should remove any annoying warm/hot pixels from video recorded in low light conditions.

If you are not satisfied with the result, you can do it again, but remember to format the SPI first. And we recommend you heat up the camera more than 30 minutes before fixing hot pixel to get better result.