



The Nano altimeter has an onboard Micro-USB port. This functions as a USB mass storage device for accessing the files and settings. So you won't need to dig around for a custom reader or cable.

Just connect your Nano to a PC, Laptop, Tablet or Smartphone and you should be able to access your files. The power switch on the Nano should be OFF in USB mode, you don't need to leave the Nano switch on.

Worth knowing

If you power on the Nano **with** USB power present it will boot to USB file mode.

If you power on the Nano **without** USB power present it will boot to flight mode.

On a PC you will see the device called "ALTCLLOUD" in your This PC folder.



Once you open the drive you will have a few default files, and any flight logs and summaries will also be available here. You can drag and drop flight logs to the [Altimeter Cloud upload tool](#) to view their charts and data in an easy-to-manage format.



Note: If you have hardware revision 1, 2 or 3 you won't see a device_calibration file as these do not have the IMU sensor.
Note: If you place any files onto the Nano these will be deleted when the Nano starts up; it only keeps its own relevant files.

In the order they are displayed here is what each file is for on the default filesystem.

```

device_calibration.txt
File Edit View H1  B I

0

Calibration file for Nano V1 Rev4+ IMU sensors
To calibrate your sensors, change the 0 on the first line to 1
then save this file and safely eject the device.
Calibration begins on next power on.

PLEASE READ THE MANUAL BEFORE CALIBRATING.

Gyro calibration: Place the altimeter on a flat, stable surface.
Keep completely still. LED will flash RED during calibration,
then GREEN when complete.

Accelerometer calibration: You will place the altimeter in 6
orientations. The LED colour tells you which position is needed:
BLUE = Board flat, components facing UP
PURPLE = Board flat, components facing DOWN
CYAN = I2C port facing UP
YELLOW = I2C port facing DOWN
WHITE = Text/label facing UP
GREEN = Text/label facing DOWN
LED turns CYAN when aligned and sampling. RED means not aligned.
GREEN flash between positions means that position is complete.

--- Current calibration values ---
Gyro offset: X=0.0000 Y=0.0000 Z=0.0000
Accel offset: X=0.00 Y=0.00 Z=0.00
(No calibration has been performed yet)

```

1. device_calibration.txt

This is an editable file that allows you to calibrate the sensors on your Nano altimeter. Please read the [dedicated calibration manual page here](#) to perform this.

ROCKETRY LTD — Nano altimeter

Device information

This file is generated automatically. Any edits will be replaced at power on.

ACCOUNT REGISTRATION

SERIAL NUMBER
1000-3bf4-4aa0

VERIFICATION KEY
30d8-a1a4

Use these to add this altimeter to your account at altimetercloud.com. Triple-click a value to select it, then copy.

Device type	Nano V1
Board revision	4
Firmware	1.51
Pressure sensor	BMP581
IMU	LSM6DS032
Gyro calibration	X=0.0000 Y=0.0000 Z=0.0000
Accel calibration	X=0.00 Y=0.00 Z=0.00

2. device_information.html

This is an HTML page that will load in your web browser. It includes information about your specific Nano altimeter. It also includes an 8-character verification key and the device's serial number that you will need to add the Nano to your account on the Altimeter Cloud should you wish to do so.

Altimeter Cloud

Nano V1 altimeter

Compact precision data logging altimeter for sport rocketry and free flight.

English | Deutsch | Français | Español | Polski | Čeština Full manual

DEVICE IDENTIFICATION			
HARDWARE REVISION	Rev 4	FIRMWARE	1.51
SERIAL NUMBER	1000-3bf4-4aa0	VERIFICATION KEY	30d8-a1a4
PRESSURE SENSOR	BMP581	IMU	LSM6DS032 PRESENT

Device summary

The Nano altimeter is a tiny data logging altimeter. It uses a Bosch BMP390 (Rev 3) or BMP581 (Rev4+) high accuracy pressure sensor. The data can be retrieved via a USB cable. The device will load as a USB storage device and you can download flight log CSV files and edit the device_settings.txt file using this method. You can also use a USB Serial monitor for diagnostics and recent flight summary details, and upload flight logs to the Altimeter Cloud website to view charts. Flight logs include a hash key that verifies the log as genuine and unedited when uploading to the Altimeter Cloud.

To fly the altimeter, turn on the power switch without a USB cable connected. When it flashes green every 4 seconds it is ready for launch. We suggest reading the full manual to check the default settings work for you.

To reset the device: connect the altimeter via USB, delete the flight log files (and optionally device_settings.txt to return all settings to defaults), then eject power on again. Alternatively, edit device_settings.txt and set `factoryreset: to 1` — this will reformat the file system on the next power on and rewrite device_settings.txt with defaults.

3. device_readme.html

This is an HTML page in several selectable languages that is included on the Nano. It gives you brief details of how to edit the settings and what the settings do. So if you're stuck in the field without internet you can still access some handy information.

```
device_settings.txt
File Edit View H1
{
  "important": "Check the manual for correct values",
  "device_tag": "MyNano",
  "competitor_tag": "",
  "device": "NanoV1",
  "emode": 1,
  "factoryreset": 0,
  "hybrid_mode": 3,
  "launch_detect": 30,
  "launch_protection": 1500,
  "led_brightness": 5,
  "maintain_power": 1,
  "max_samples": 24000,
  "orientation": 1,
  "recording_stop": 1,
  "sample_ratio": 1,
  "sample_speed": 100,
  "startup_lock": 0,
  "sync_enable": 2
}
```

4. device_settings.txt

This text file is the editable JSON format settings file for the Nano.

You can find out more on the [settings manual page here](#).

The main thing to note is that any errors in this file will cause the Nano to replace the file with default values on its next power on. So it's always worth checking the settings manual page for correct values.

ROCKETRY LTD — Nano altimeter

Startup diagnostics

Captured during the most recent boot. This file is overwritten on every power-on.

Firmware	1.51
Hardware revision	4
Serial number	1000-3bf4-4aa0
Reset reason	Power-on reset
Setup duration	8.80 s
Boot fails counter	0
Recovery from flash	No
C_Count	0

CPU

Model	ESP32-S2 (silicon rev 100)
Frequency	160 MHz (240 MHz max)
SDK	v5.5.2-249-gf56bea3d1f
Temperature	23.1 °C

Memory

Internal RAM	total = 174 KB, free = 132 KB, min free = 126 KB
PSRAM	total = 2048 KB, free = 1241 KB, min free = 1241 KB

5. device_startup_diagnostics.html

This is an HTML page that will load in your web browser. It includes more in-depth information about your device and the startup process.

It can be handy to attach to your email if you have a problem and need support from us.



Snapshot screen support

The Nano can also use its USB port to connect to the Snapshot screen. This allows you to view a snapshot of your latest flight and your device settings.

It's a very handy device at competitions where lots of altimeters need to be checked and allows verification that a Nano is blank, its serial number, competitor tag, device tag and numerous other aspects too.

You can find out more about the [Snapshot screen here](#).