
GHOST N1 QUICK GUIDE



Thank you for purchasing the Drift GHOST N1

CUSTOMER SUPPORT

Download the full manual and check our official website for firmware updates, customer support, and info on all of our products.

<https://driftinnovation.com/>

If you have any suggestions, comments or concerns; please contact our customer support team at: sales@driftinnovation.com

WARRANTY

Warranty does not apply if the product is damaged due to physical abuse, mishandling, accident, fire, frostbite, water damage, negligence or failure to follow the supplied operating instructions. For more information on warranty, see:

<https://driftinnovation.com/warranty>

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Product Specification:

Livestream resolution

4K(4096*2160 17:9) : 24/25FPS

4KUHD(3840*2160, 16:9): 24/25/30FPS

2.7K(2704*1520, 16:9): 25/30/50FPS

1080P(1920*1080,16:9): 24/25/30/50/60/100/120FPS

720P(1280*720, 16:9): 25/30/50/60/200/240FPS

WVGA(854*480, 16:9) 25/30FPS

Livestream bitrate: adjustable, 45Mbps maximum

Ethernet Port: RJ45

POE Power: Supported

POE Input: 12V@1A

Network Speed: 100Mbps

Livestream protocol: RTSP, RTMP, H.264

Mic: Internal and External

USB : Mini USB

Size: 43 (W) * 82.2 (L) * 31.4 (H) mm

Weight: 120g

Package Contents

Ethernet Module

Ghost 4K+ Camera

Accessories bag

USB cable

Ethernet cable
POE Power Adaptor
POE Splitter

Installing the Ethernet Module

1. Remove the original battery module from your Ghost 4K+ camera.
2. Place Drift Ethernet Module on the camera body, ensuring that the module's 30pin connector is above the camera's female connector, press down on both ends simultaneously till the module clicks into place.
3. Connect the Ethernet cable to the port of the Ethernet module, and the other end to the port of the POE (Power over Ethernet) Splitter.
4. Connect the Ethernet cable on your POE Splitter to a router, and make sure the master device, either a computer or mobile phone, wired or wirelessly, is connected to the router as well.
5. Connect the POE power adaptor to the power cable on your POE splitter. Your camera will automatically power on and join the network. Once the camera's rear LED becomes solid green, you can find the last 8 bits of your camera's IP address from camera's rear LCD.



Power On/Off

Press and hold  button to power on your Ghost N1, to turn it off, press and hold  button for 3 seconds.

OR.

If Ghost N1 is connected with an Ethernet cable, it will automatically power on once POE is applied. Removing the POE will turn off camera instantly.

Once the ethernet cable is connected and the camera is powered on, the Ghost N1 will automatically join the network through DHCP protocol.

Mode Navigation

Press  button to toggle between Video mode and Settings mode.

Video mode:

(Green LED): In this mode you can setup your livestreaming or HD Record resolution and frame rate.

Press  once to highlight on Resolution menu, and press  to toggle between 4K, 4KUHD, 2.7K, 1080P, 720P and WVGA. Press  again to highlight the framerate, and press  button to scroll through the options.

The available livestream or HD Record resolutions, Frame Rates and corresponding bitrates are specified below. By default the bit rate is using Mid value (Grey column).

resolution	framerate	SFine (Mbps)	Fine (Mbps)	Normal (Mbps)
4K	24,25	45	28	8
4KUHD	24,25, 30	45	28	8
2.7K	25, 30, 50	45	28	6
1080P	100,120	45	28	6
1080P	50,60	45	28	6
1080P	24,25,30	30	20	4
720P	200,240	30	20	6
720P	50,60	30	20	4
720P	25,30	16	8	2

Settings mode:

(Blue LED) In this mode you can setup your livestreaming or HD record parameters. Press  to

scroll down through the menu options, or press and hold  to navigate up. Use  to change options for the highlighted setting. At any time, press the  button to return to Video mode.

HD Record	On/Off
Field Of View	140/115/90
Exposure	0/1/2/-1/-2
Bitrate	High/Middle/Low
Filters	Normal/Vivid/Low Light
ISO Sensitivity	Auto/100/200/400/800
Video Stabilization	On/Off
Microphone	Front/Rear
Microphone Sensitivity	0/1/2/3/4/5
Speaker Volume	Off/Low/Med/High
LED Indicator	On/Off
Indicator Timer	Off/5s/10s/20s/1m
Date	YY-MM-DD
Date Stamp	On/Off
Camera off	Never/2m/5m/10m/20m
Language	Eng/CN/FR/GE/IT/SP
Reset Settings	Yes/No
Format SD Card	Yes/No
Serial Number	xxxxxx
Firmware Version	x.x.x.x

HD Record mode

In menu mode, select "HD video", the camera is in the high-definition shooting mode, the live stream is only used for monitoring (the quality of the live stream is not high), the live stream parameters are WVGA, 30fps, 3Mbps, and modification is not supported. The camera supports local button shooting and remote API control shooting. The default high-definition shooting parameters are 4KUHD, 30fps, 45Mbps high bit rate, and the parameters modified through remote API commands are the same as those modified by the local menu.

Live stream mode

The live stream mode is the default mode of N1. In the live stream mode, the camera is only used for live stream and does not support shooting. The default live stream parameters are 1080P, 60fps, 6Mbps. The camera can modify the live stream parameters through the local menu and remote API commands. Modifying parameters through remote API commands is consistent with modifying parameters in the local menu.

Download the Drift Life App

Install “Drift Life” App and Setup your livestream from your mobile devices.



Connecting to a PC

1. Connect the camera using the USB cable (provided); the camera screen will show a USB icon.
2. The camera’s folder may open automatically; if not, open using My Computer.
3. The camera should be recognised as a removable disk; double-click to open.
4. Open the DCIM folder to access your files.

Connecting to a Mac

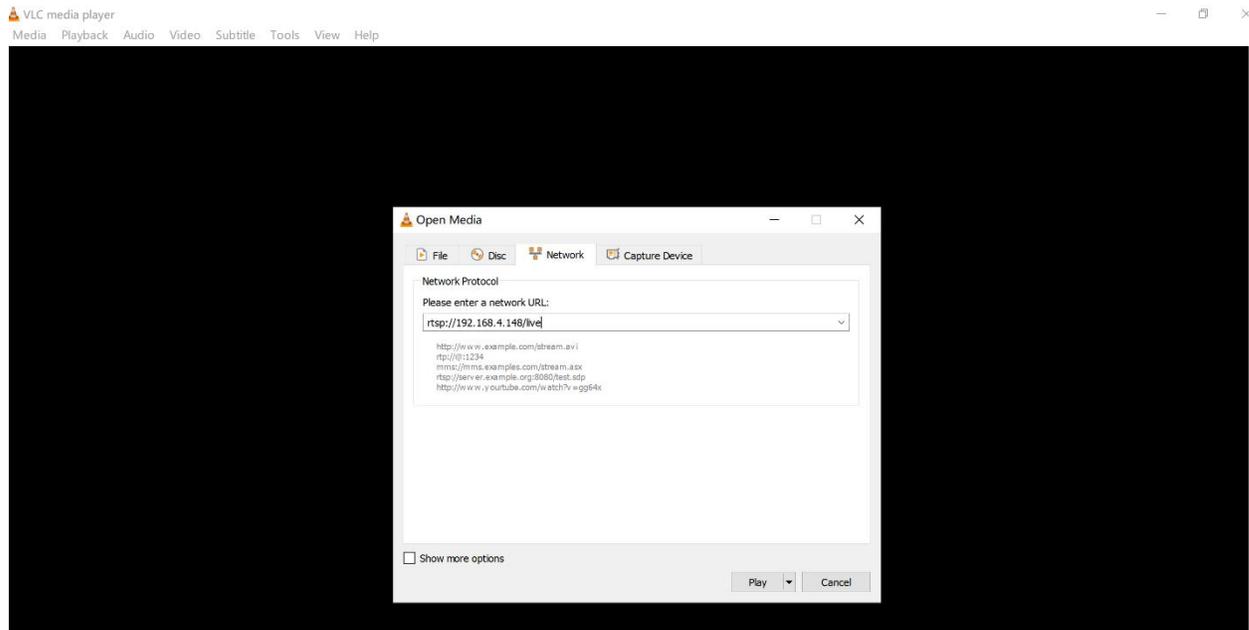
1. Connect the camera using the USB cable (provided); the camera screen will show a USB icon.
2. The camera’s folder may open automatically; if not, open using Finder.
3. The camera should be recognised as an external device; double-click to open.
4. Open the DCIM folder to access your files.

How to access real-time video from your camera (for developers)

1. Find the default router gateway of your network: From a computer in the same network, click “Start”, type “cmd” and press “Enter” to open the Command Prompt window. Type “ipconfig” and press “Enter” and you should find the Default Gateway, for example 192.168.4.1.
2. Look at your camera’s rear screen, you should see something like rtsp xxx. The 3 digits following “rtsp” are the last 8 bits of your IP address, for example, 148. Now you have your camera’s IP address as 192.168.4.148.

Lots of PC software can play live video through an RTSP address, such as VLC or Blue Iris. Take VLC as example.

- 1) Open VLC on your PC, navigate to media / open network streaming, input below texts “rtsp://192.168.4.148/live” in the URL dialog , where "192.168.4.148" is your camera's IP address.



- 2) Click on the “Play” button, you should see the live video from your camera instantly.

Remote Control & Setup (for developers)

With camera's IP address, you can use HTTP commands to configure or manipulate your camera remotely from either a computer or mobile device.

Command list:

1. Zoom in/out

http://192.168.4.148/cgi-bin/foream_remote_control?dzoom=1

where the value set to dzoom can be from 1 to 10.

2. Setup RTMP live streaming

http://192.168.4.148/cgi-bin/foream_remote_control?start_rtmp_with_param=192.168.3.133:1935/live/5&stream_res=720P&stream_bitrate=2000000

where 192.168.3.133:1935/live/5 stands for the URL of your RTMP server, here rtmp:// is omitted. You can also setup the livestream resolution & bitrate with this command.

Note: in case the RTMP URL contains **【&】** character, please replace it with **【***】** .

3. Stop live stream

http://192.168.4.148/cgi-bin/foream_remote_control?stop_rtmp

4. Setup Livestream Resolution

http://192.168.4.148/cgi-bin/foream_remote_control?stream_res=0

where the value of stream_res can be:

Ghost 4K+: 0(4K), 1(4KUHD), 2(2.7K), 3(1080P), 4(720P),5(WVGA).

5. Setup Livestream Bitrate

http://192.168.4.148/cgi-bin/foream_remote_control?stream_bitrate=1000000

where stream bitrate value is in Byte, 1000000 means 1Mbyte, 8Mbps.

Note: maximum 45Mbps (value = 5625000) can be configured for Ghost 4K+

6. Setup Livestream Framerate

http://192.168.4.148/cgi-bin/foream_remote_control?stream_framerate=30

4K (4096 * 2160 17: 9) :	24 / 25FPS
4KUHD (3840 * 2160, 16: 9) :	24 / 25 / 30FPS
2.7K (2704 * 1520, 16: 9) :	24 / 25 / 30 /50 FPS
1080P (1920 * 1080,16: 9) :	24 / 25 / 30 / 50 / 60 / 100 / 120FPS
720P (1280 * 720, 16: 9) :	25 / 30 / 50 / 60FPS
WVGA (854 * 480, 16: 9)	25 / 30FPS

7. Start Recording

http://192.168.4.148/cgi-bin/foream_remote_control?start_record

8. Stop Recording

http://192.168.4.148/cgi-bin/foream_remote_control?stop_record

9. Reset Setting

http://192.168.4.148/cgi-bin/foream_remote_control?reset_setting

10. Reboot your Camera

http://192.168.4.148/cgi-bin/foream_remote_control?reboot

11. Power off your camera

http://192.168.4.148/cgi-bin/foream_remote_control?power_off

12. Setup Camera LED Indicator

http://192.168.4.148/cgi-bin/foream_remote_control?led=1

where the value: 1 stands for On, 0 stands for Off

13. Setup Camera Exposure Value

http://192.168.4.148/cgi-bin/foream_remote_control?exposure=1

where the value: 0 stands for 0, 1 stands for 1, 2 stands for 2, 3 stands for -1, 4 stands for -2.

14. Set Camera Filter

http://192.168.4.148/cgi-bin/foream_remote_control?filter=1

where the value: 0 stands for Normal, 1 stands for Vivid and 2 stands for Low Light

15. Setup Camera Mic Sensitivity

http://192.168.4.148/cgi-bin/foream_remote_control?mic_sensitivity=1

where the value should be 0 to 5, 0 stands for Mic Off, 1 to 5 stands for each Mic level, from low to high.

16. setup camera time

http://192.168.4.148/cgi-bin/foream_remote_control?set_time=2021-03-01_09:35:00

setup the camera time to : 2021/3/1 9: 35.

17. Setup Video Resolution

http://192.168.4.148/cgi-bin/foream_remote_control?video_res=0

where the value of video_res can be:

Ghost X, Ghost XL, X3: 0 (1080P), 2(720P), 3(WVGA)

Ghost 4K+, 0(4K), 1(4KUHD), 2(27K), 3(1080P), 4(720P), 5(WVGA).

18. Setup Video Bitrate

http://192.168.4.148/cgi-bin/foream_remote_control?video_bitrate=1000000

where video bitrate value is in Byte, 1000000 means 1Mbyte, 8Mbps.

19. Setup Video Framerate

http://192.168.4.148/cgi-bin/foream_remote_control?video_framerate=30

4K (4096 * 2160, 16: 9) :	24 / 25FPS
4KUHD (3840 * 2160, 16: 9) :	24 / 25 / 30FPS
2.7K (2704 * 1520, 16: 9) :	24 / 25 / 30 / 50 FPS
1080P (1920 * 1080, 16: 9) :	24 / 25 / 30 / 50 / 60 / 100 / 120FPS
720P (1280 * 720, 16: 9) :	25 / 30 / 50 / 60FPS
WVGA (854 * 480, 16: 9)	25 / 30FPS .

20. get camera current status and settings

http://192.168.4.148/cgi-bin/foream_remote_control?get_camera_status

return camera status and setting in XML, for example:

```
<?xml version="1.0" encoding="utf-8"?>
<Response>
  <Status>1</Status>
  <Cam_Status>
    <camera_status>
      <capture_mode>0</capture_mode>
      <battery>1</battery>
      <sd_free>31150080</sd_free>
      <sd_total>31154688</sd_total>
      <rec_time>0</rec_time>
      <fw_ver>8022</fw_ver>
      <model_name>N1</model_name>
    </camera_status>
    <video_setting>
      <res>2</res>
      <framerate>30</framerate>
      <bitrate>2000000</bitrate>
      <quality>2</quality>
    </video_setting>
    <stream_setting>
      <stream_res>2</stream_res>
      <stream_framerate>30</stream_framerate>
      <stream_bitrate>2000000</stream_bitrate>
    </stream_setting>
    <camera_setting>
      <dzoom>0</dzoom>
      <filter>0</filter>
      <exposure>0</exposure>
      <mic>3</mic>
      <led>1</led>
      <hd_record>0</hd_record>
    </camera_setting>
  </Cam_Status>
</Response>
```

Where the item :

<capture_mode>: 0 stands for video mode , 1 stands for photo mode, 2 stands for timelapse mode, 3 stands for burst mode;

N1/N2 only support video and photo mode.

<battery> means the remaining battery in percentage

<sd_free> means the free size of TF card capacity in KB, if the free size is less than 400Mbps, it will prompt card

full and the recording is not allowed.

<sd_total> means the total size of TF card capacity in KB.

<rec_time>: 0 means camera is in idle mode, otherwise it stands for current recording time.

<fw_ver> the FW version.

<model_name> the model name of camera

<hd record>: 0 means it's now in live streaming mode, 1 means it's now in HD recording mode.

21. list SD media folders

http://192.168.4.148/cgi-bin/foream_remote_control?list_folders=/tmp/SD0/DCIM

return:

```
<?xml version="1.0" encoding="utf-8"?>
<Response>
  <Folders>
    {"Path":"100MEDIA"},
    {"Path":"101MEDIA"},
    {"Path":"102MEDIA"},
  </Folders>
<Amount>3</Amount>
</Response>
```

22. list SD media files

http://192.168.4.148/cgi-bin/foream_remote_control?list_files=/tmp/SD0/DCIM/

return:

```
<?xml version="1.0" encoding="utf-8"?>
<Response>
  <Files>
    {"Path":"100MEDIA/VID00001.MP4","CreateTime":"Nov 03 11:38:00 2021","Size":112767067,"Thumb":0},
    {"Path":"100MEDIA/VID00002.MP4","CreateTime":"Nov 03 13:32:08 2021","Size":1686118,"Thumb":0},
    {"Path":"100MEDIA/VID00003.MP4","CreateTime":"Nov 03 13:35:52 2021","Size":146324100,"Thumb":0},
  </Files>
<Amount>3</Amount>
</Response>
```

Note:

If you want to preview or download the media file, please use the following URL:

<http://192.168.4.148/DCIM/100MEDIA/VID00001.MP4>

<http://192.168.4.148/DCIM/100MEDIA/VID00002.MP4>

Auto detection in a network (for developers)

Once a Ghost 4K+ (mounted by Ethernet module) connects into a network, it will broadcast a UDP

package to present itself to devices (mobile or PC) in the same network. The package contains the necessary info for the device to establish the connection. Once connected, the device can issue http command to Drift camera for further actions, the following are the details of how the connection can be established.

1. Broadcast package (UDP) format

The broadcast package (from camera) is in this format

5|cam_serial|cam_model||cam_status

Definition:

- 1) 5 - fixed value to specify the broadcast type
- 2) cam_Serial - Camera Serial Number
- 3) cam_Model - Camera Model
- 4) cam_Status - Camera Status, the default is n, indicating normal status.

Note: camera's IP address is embedded in the header of the UDP package which can be extracted by the receiver.

2. Acquire real-time video feed from camera

once the connection is established, an application can use a media player (such as VLC, ijk or vitamio player) to acquire real-time video feed. The command format is the following

RTSP:

rtsp://Camera IP/live

TCP:

tcp://Camera IP:8001

3. Camera control

Once the connection is established, the application can manipulate camera with the commands described in above section.