BirdDog Firmware Release Notes

5.5.094–Si2 BETA25 All cameras except P400/P4K

Due to internal BirdDog requirements, our firmware releases don't always have sequential numbering. To upgrade the firmware, please follow the **Firmware Upgrade Instructions** located in your firmware download.

NOTE

You must be on 5.5.089 firmware or later, before installing this beta release.

For example, if you are upgrading your P200 from an older software, please first upgrade to the displayed LTS firmware on the website before moving on to the latest NDI 5 firmware.

This means that if you are still running older firmware, such as NDI 3.X, you must first upgrade to the 4.5.X–LTS firmware, then upgrade to the latest NDI 5.X, and then to this beta Si2 release.

P200 NDI® 5 ↓

P200 LTS FW ↓

- This beta release is not intended for production use.

- To upgrade your camera, please follow the **Firmware Upgrade Instructions** located in your firmware download folder.
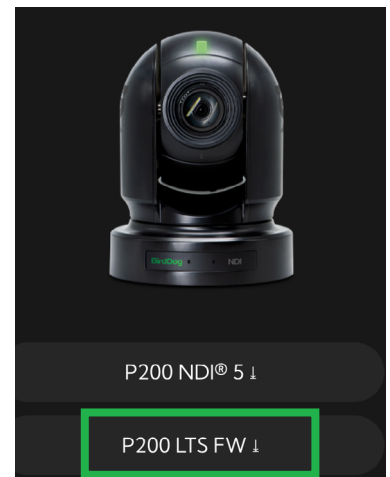
RTMP, RTSP, SRT and NDI|HX Streaming Protocols
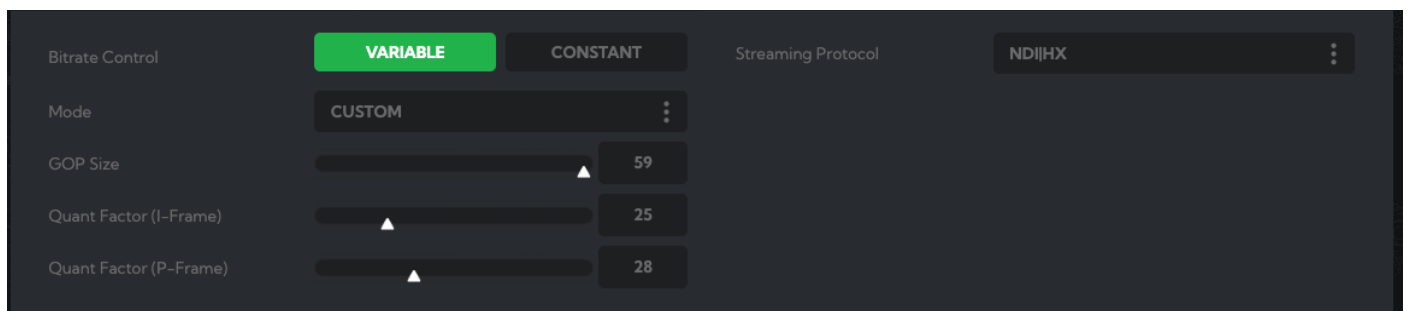
The engine encodes the camera signal into high efficiency H.264 which is then transported via either the RTMP, RTSP, SRT or NDI|HX streaming protocols.

This release has the following features:

- High efficiency H.264 video encode.

- Choice of either RTMP, RTSP, SRT, NDI|HX2/HX3 streaming protocols.

- Maximum Resolution (High Efficiency Mode) : 1080p30.

- Maximum Resolution (Full NDI): HD or 4K depending on the camera.

- Stability enhancements.

Si2 Encode

This new panel is located in the BirdUI at **AV Setup / Si2 Encode**.

NOTE You'll need to click the **Restar**t button in **Device Settings** or the **Dashboard** after adjusting Encoder settings.

Bitrate Control

Bitrate control provides two modes of encoding video, allowing you to prioritise either file size or video quality.

Variable

In this setting, you set the overall video quality by adjusting the GOP Size and Quant Factor (I and P Frame). The stream segments are then encoded at different bitrates (ensuring that bits are not wasted on less complex video frames), thereby maintaining consistent quality with often reduced, but unpredictable, file sizes.

Constant

In this setting, you have control over the file size by adjusting the GOP Size and Bitrate. This encodes the stream at a single, set bitrate which can be more suitable for mobile delivery.

Mode

Allows you to select from presets (for Variable Bitrate Control) or make manual adjustments (for Constant Bitrate Control) to optimise your stream.

Variable Bitrate Control

- Choose from **Low, Med**, **High** and **Ultra** presets that automatically adjust GOP Size and Quant Factor (I and P Frame).

Constant Bitrate Control

- The **Custom** profile allows you to manually adjust GOP Size and Bitrate.

Quant Factor (I and P Frame)

When **Variable Bitrate Control** is selected, you can set the level of frame quantisation for I and P frames during video compression. Higher values result in higher compression with reduced image quality.

GOP Size

Sets the number of frames between two consecutive I-frames in the temporal compression scheme of H.264. A longer GOP length will compress the content more efficiently, providing higher video quality, especially at lower bitrates.

Bitrate

When **Constant Bitrate Control** is selected, this sets the desired target bitrate in Mbps. Higher bitrates result in a higher quality stream but larger file size.

Streaming Protocol

Select either SRT, NDI|HX or RTSP as the streaming protocol. NDI|HX is a lower bandwidth version of full NDI® and uses the H.264 video compression method to reduce the required network bandwidth. You can also choose to disable streaming.

SRT Connection Type

Secure Reliable Transport (SRT) achieves high-quality, low-latency streaming across unreliable internet connections via UDP packets. In order to establish a bidirectional stream, SRT employs a handshake mechanism where each device identifies itself as a caller or as a listener. In certain cases, two devices can simultaneously negotiate an SRT session in what is referred to as rendezvous mode.

Caller

Sets a source or destination device as the initiator of an SRT streaming session. To establish an SRT link between the source and destination devices, ensure that one device is a listener and the other is a caller. The device you set as the caller or listener is arbitrary.

Listener

Sets a device to wait for a request to start an SRT streaming session. The listener device only needs to know that it should listen for an SRT stream on a certain port.

Rendezvous

Allows two devices to negotiate an SRT session over a mutually agreed upon port. Both source and destination must be in rendezvous mode.

IP Address

For **caller** and **rendezvous** connection types, enter the destination IP Address.

Port

Enter the port number.

Latency

When packets are lost during streaming, extra time is required to recover the packet before its "time to play" arrives. This parameter sets how long the receiver should wait for retransmission of lost packets.

Encryption Key Length

Choose to enable or disable encryption. You can configure your SRT streams to use 128, 192, or 256 bit AES encryption. The encryption settings on the sending camera must match the settings on the SRT decoder receiving the stream

Pass Phrase

For additional security, you can optionally assign the SRT stream an alphanumeric pass phrase. The pass phrase settings on the camera sending the stream must match the settings on the SRT decoder receiving the stream. The pass phrase must be between 10 and 79 characters.

Stream ID

When the SRT connection type is set to **Caller**, you can optionally identify the stream with a **Stream ID** (maximum 512 characters).