

# IP Camera Latency Specification Report

## Gen 2 Sensor Module

Document Version: 1.1

### Purpose

This document reports the video stream latency of the ToughEye-1700™ and ToughCam-1000™ IP cameras equipped with Gen 2 sensor modules. This corresponds to ToughEye-1700™ S/N's 1701000 and above, and ToughCam-1000™ S/N's 1000800 and above.

### Prerequisites

The experiment used to measure the video stream latency requires Gstreamer v1.21, which can be downloaded [here](#).

### Experiment Procedure

1. Update the camera sensor module to the latest firmware (found [here](#)).
2. Ensure the camera's video stream and sensor settings are set to the factory default values, except for the video encode type in stream settings which should be set to H.264.
3. Direct the camera to the monitor, and open a stopwatch app on the PC.
4. Run the appropriate Gstreamer command to open an RTSP stream.
5. Capture screenshots of the live clock (stopwatch app) and latent clock (RTSP stream).
6. Calculate the average latency from the time difference measurements.

### Experiment

This experiment was conducted at room temperature using a ToughEye-1700™ [TE17-XDS100S-N-NR-N] camera with Gen 2 sensor, which was powered with a PoE+ midspan injector, directly connected to a computer through a 300-ft shielded Cat7 cable.

The following Gstreamer command was used to produce the RTSP stream:

```
gst-launch-1.0 rtspsrc location=rtsp://admin:admin@192.168.0.120:554/sn/1/1 latency=0 !  
queue ! rtpH264depay ! h264parse ! avdec_h264 ! d3dvideosink
```

### Conclusion

ToughEye-1700™ equipped with Gen 2 sensor modules has a latency of **105 ms**.