

IP Camera Latency Specification Report

Gen 1 Sensor Module

Document Version: 1.0

Purpose

This document reports the video stream latency of the ToughEye-1700™ and ToughCam-1000™ IP cameras equipped with Gen 1 sensor modules. This corresponds to ToughEye-1700™ S/N's 1700999 and below, and ToughCam-1000™ S/N's 1000799 and below.

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 firmware (firmware found [here](#)).
2. Configure the camera with default video and sensor settings, and set encoding to H264.
3. Direct the camera to the monitor, and open a stopwatch app on your PC.
4. Run the 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 1 sensor, which was powered with a PoE+ midspan injector, directly connected to a computer through a 300-ft shielded Cat-5e 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

ExcelSense IP cameras equipped with Gen 1 sensor modules have a latency of about **172 ms**.