

Sensors Data Rate Requirements

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Camera (Image sensor) – Data Rate

- Downlink
 - More than 10Gbps
- Uplink
 - < 100 Mbps
- High pixel automotive CMOS image sensor (CIS)
 - 8MP, 60fps, 16b - ~9 Gbps
 - 12MP, 30fps, 24b - ~10 Gbps
 - Sony – [17.42 MP \(Sample Sep-23\)](#), 30fps, 24b - ~15 Gbps (Estimation)

* 20% blanking

Radar – Data Rate

- Satellite architecture
 - Downlink
 - More than 10Gbps - ~10 - 20Gbps (4 x MMIC)
 - MMIC sampling rate and Number of Rx channels are getting higher
 - Uplink
 - < 100 Mbps

Summary

- Upcoming automotive camera sensors and radars will exceed 10Gbps downstream
- In order to support these automotive applications, recommend updating the project objectives to support higher than 10Gbps Downstream