

Use case	ASIL target	AEC-Q100 Grade
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Axes	Range (\pm°/s)	
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Candidate	Manufacturer	Part number	Type	Axes	Range (\pm°/s)	Noise density ($^\circ/s/\sqrt{Hz}$)	Bias stability ($^\circ/h$)	DR/BW
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Decision Tips

- Noise density: 0.004–0.02 $^\circ/s/\sqrt{Hz}$ (application typical)
- Bias stability: $\leq 10\text{--}20^\circ/h$ (INS), $\leq 50\text{--}100^\circ/h$ (ESC)
- Control bandwidth $\sim 50\text{--}80$ Hz; end-to-end latency $< 10\text{--}15$ ms
- Prefer SPI with CRC/frame counter for safety paths
- Fix range to avoid discontinuities; validate any runtime switching