

High Precision Gyroscopes

with Epson **Q-MEMS** Technology for Navigation, Platform Stabilization & Autonomous Systems

Epson's gyroscopes leverage advanced Q-MEMS quartz technology to deliver low drift, minimal noise and excellent temperature performance. Models like the XV4311BD, XV7181BB or XV7021BB provide reliable angular rate data for high-precision control and navigation systems.



01 FEATURES

- ◆ Small size: down to 5.0 × 3.2 × 1.3 mm
- ◆ Excellent bias stability over temperature and low ARW: Bias temperature coefficient down to 0.016 °/s/°C typ. Angular random walk down to 0.065 °/√h
- ◆ Low power consumption
- ◆ Operating temperature range from -40 °C to +105 °C
- ◆ Built-in temperature sensor
- ◆ Built-in and selectable digital filter
- ◆ AEC-Q100/200 compliant
- ◆ SPI / I²C serial interface, analog voltage

02 TARGET APPLICATIONS

- ◆ Autonomous Machines
- ◆ Autonomous Driving Equipment
- ◆ Anti-Vibration & Attitude Control
- ◆ Rollover Protection Systems
- ◆ Electronic Stability Control Systems

DEVELOPMENT KITS / ENVIRONMENTS

INCLUDES

- ✓ Evaluation Boards

CONTACT

Get in touch with us!

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YOUR PATH WITH AMCORIS

From idea to series production

- | | | | |
|---------------------------------------|--------------------------|---------------------------------|---------------------------|
| 01 | 02 | 03 | 04 |
| Consulting | Evaluation | Design-in | Series |
| Sensor selection for your application | Kits, samples & software | Integration & technical support | Reliable long-term supply |

WE ENABLE **ORIENTATION** WHEREVER MACHINES MAKE **AUTONOMOUS** DECISIONS

EPSON GYRO PRODUCT LINE-UP

LINE-UP 01

PART	RATE RANGE [°/s]	SCALE FACTOR	BIAS [°/s] @ +25 °C	OPERATING TEMP. [°C]	INTERFACE	SIZE [mm]	AUTOMOTIVE
XV7181BB	±115 (FS=1) ±460 (FS=1/4)	264 LSB ±5% (16 bit) 17920 LSB ±5% (24 bit)	±1 (0 LSB typ.)	-40/+85	SPI/I ² C	5.0×3.2×1.3	—
XV7021BB	±400	70 LSB ±5% (16 bit) 17920 LSB ±5% (24 bit)	±1 (0 LSB typ.)	-20/+80	SPI/I ² C	5.0×3.2×1.3	—
XV7081BB	±400	70 LSB ±5% (16 bit) 17920 LSB ±5% (24 bit)	±1 (0 LSB typ.)	-20/+80	SPI/I ² C	5.0×3.2×1.3	—
XV9100CD	±100	0.004 × V _{DD} mV/(°/s)	±0.5 × V _{DD} V	-40/+105	Analog Voltage	5.0×5.0×1.4	AEC-Q100
XV4311BD	±115 (FS=1) ±460 (FS=1/4)	264 LSB ±2% (16 bit) 67584 LSB ±2% (24 bit)	±1 (0 LSB typ.)	-40/+105	SafeSPI	5.0×3.2×1.3	AEC-Q100
XC1011SD	±160	±30 G (acc. range) ±57 mG (zero-G offset)	±525 LSB (±3 °/s)	-40/+105	SPI	6.5×5.2×1.9	AEC-Q100