

SIRI SOLUTIONS IN MOTION

JF40 Motion Sensor + BlackBox SE

Reliable acquisition and powerful processing of motion related data

6DoF accelerations

Roll & Pitch

Heave

Up to 8 sensors



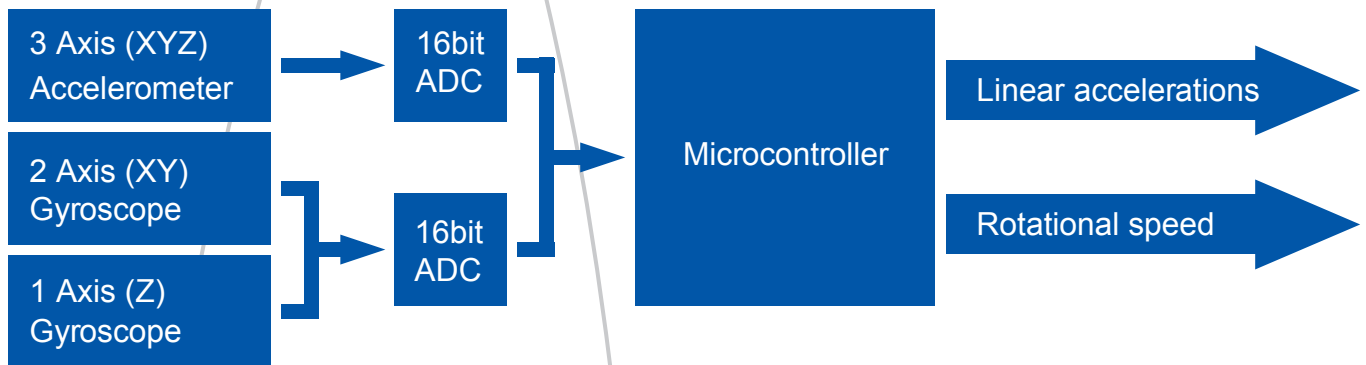
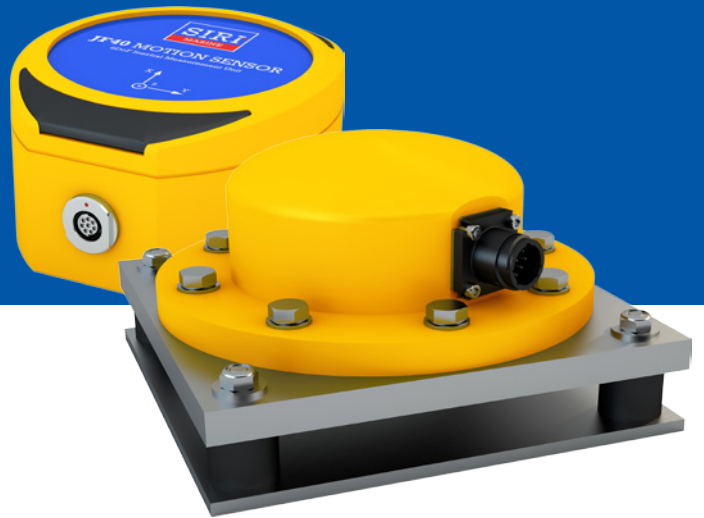
**DATA
ACQUISITION
SYSTEM**



JF40 MOTION SENSOR

A robust IMU for high accuracy measurements

The JF40 is a MEMS based accurate and reliable inertial measurement unit. High data quality is ensured through temperature calibration from -20 to +50°C for bias, gain, cross-axis and linearity. Its solid state design in combination with the rugged stainless steel enclosure ensures reliable operation in most environments.



KEY FEATURES

- High accuracy acceleration measurements
- Temperature calibrated
- Elegant aluminium or robust stainless steel enclosure
- Optional ATEX certified or subsea enclosures
- Ingress protection IP67
- Connection cable up to 250m
- No separate power supply required

FIELDS OF APPLICATION:

SEAMOTION

STORMOTION

SPACEMOTION

TRANSMOTION

STRUCMOTION



BLACKBOX SE PROCESSING UNIT

A versatile data logger for a wide range of applications



The BlackBox is a Unix based processing unit. It combines powerful data processing capabilities with data acquisition functionality. Implementation of new input and output protocols allow support for a wide range of sensors and easy integration in third-party systems.

KEY FEATURES

- Customizable to suit different applications
- Connect up to 8 sensors
- Configure up to 6 virtual sensors
- Binary or NMEA-compliant motion data output
- GNSS input for enhanced accuracy
- Support for NMEA0183 equipment
- Ethernet and/or serial data output
- Output rate up to 200Hz
- Statistical reports with configurable interval
- Optional hard disk up to 2TB

STATISTICAL REPORTS

- Min/mean/max values
- Standard deviation/max deviation
- Sample count
- Zero crossing

STANDARD DATA OUTPUT

- Linear accelerations
- Angular accelerations
- Angular velocity
- Euler angles
- Heave displacement
- Heave velocity
- Spectral analysis

AVAILABLE INPUT PROTOCOLS

- Siri Marine motion sensors
- SBG Systems IMU
- NMEA0183 (GPRMC, WIMWV and HEHDT)
- More available on request

SPECIFICATIONS

JF40 Motion Sensor

ORIENTATION¹

Angular range	± 180°
Maximum rate	30 °/s
Resolution	0.004 °
Accuracy ²	<0.05 ° RMS
Noise	0.04 °/s RMS
Bandwidth	6 Hz
Heave accuracy	5 cm or 5% whichever is highest

ACCELERATION

Range all axes	2g
Resolution	0.1 mg
Accuracy ³	1.0 mg
Non-linearity	0.08% FS
Noise (6HZ BW)	0.17mg RMS

OUTPUT

Interface	RS485
Sample rate	25 Hz

ADDITIONAL SPECS

Ingress protection	IP67
Voltage	8 - 15 Vdc
Working temp. range	-40 to +70°C
Calibrated temp. range	-20 to +50°C
Enclosure material	AISI316, powder coated
Dimensions	180x180x122mm
Weight	6.6 kg

¹ In combination with Siri BlackBox Processing Unit

² Relative accuracy and repeatability, measured with an amplitude of ± 10°

³ Relative accuracy and repeatability

BlackBox SE Processing Unit

HARDWARE

8x serial interface	RS232/RS422/RS485
	12Vdc power supply
1x Ethernet	10/100BASE-T
Logging capacity	Up to 2TB
Processing	Freescall i.MX6x ARM Cortex A9 dual-core
Memory	1GB DDR3

SOFTWARE

Operating system	Unix based
Standard modules	6DoF accelerations Euler angles Heave Custom modules possible
Input protocols	Siri Marine motion sensors SBC Systems IMU NMEA0183 More protocols available on request

POWER

Input voltage	
Supply current	12 Vdc (± 10%) Max. 4.5A @ 12Vdc



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