AQUILA IMU

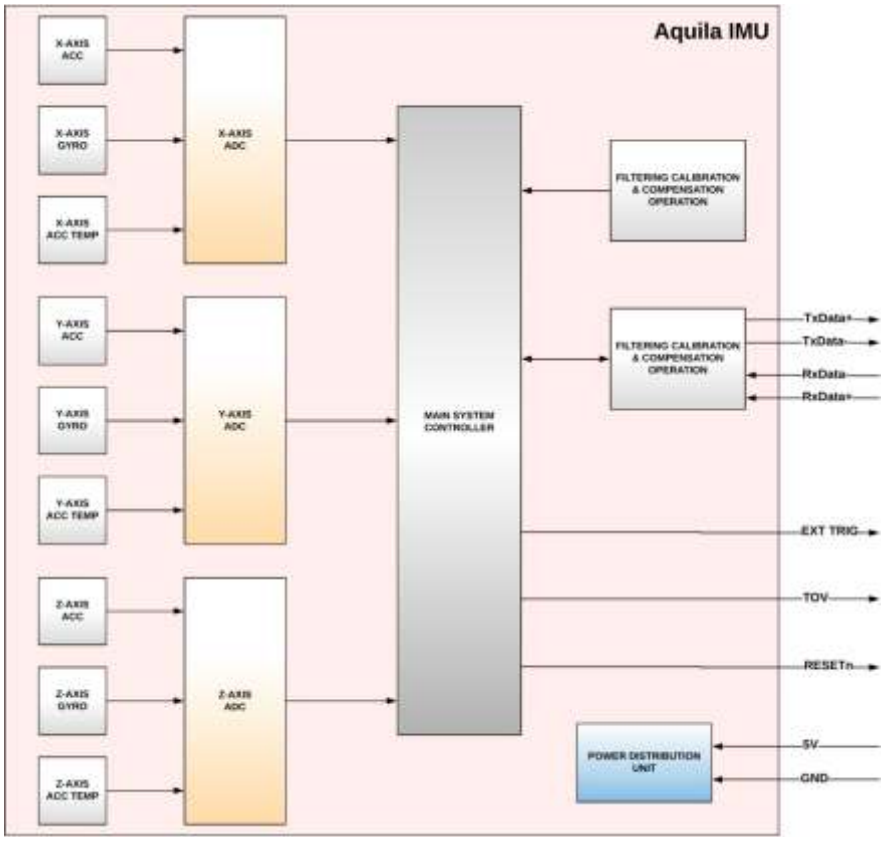
Aquila-IMU is a high-performance Inertial Measurement Unit (IMU). The IMU consists of 3 orthogonally placed MEMS-based accelerometers and 3 gyroscopes. All inertial sensor outputs are filtered, calibrated and compensated for intrinsic errors and external environmental effects such as temperature and vibration.

Aquila-IMU uses RS422 Interface to communicate with the external systems. Artron provides a standalone PC tool to the user in order to evaluate IMU in laboratory conditions.

Features

- ±400 °/s full scale angular rate input range
- ±10 g acceleration input range (options available)
- Low pass filtered and calibrated inertial sensor output
- Digital serial RS422 interface at 4Mbaud
- 2000 SPS sample rate
- Requires single 5VDC power supply
- Miniature package
- Operable from -40°C to 85°C
- Selectable output formats:
  - Angular Rate
  - Acceleration
  - Incremental Angle
  - Incremental Velocity
  - Integrated Angle
  - Average Acceleration

Block Diagram



Design to Function

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ALLIANCE PROGRAM
MEMBER

Target Applications

- Offline Laboratory Experiments for Algorithms Testing
- HWIL Testing of Realtime Application Software
- Control System of Stabilized Platforms
- Navigation of UAVs and Missiles

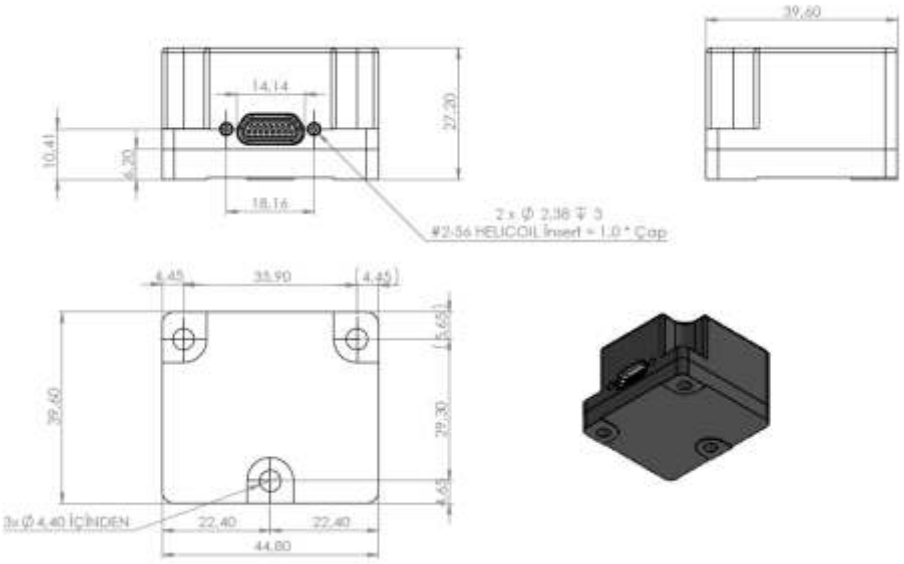
Electrical Connections

SYSTEM	IMU
RxD-	TxD-
TxD-	RxD-
RxD+	TxD+
TxD+	RxD+
RESETn	RESETn
TOV	TOV
EXT TRIG	EXT TRIG

IMU has two additional power supply connections as Vcc and GND where Vcc requires 5V.

Mechanical Specifications

Dimensions: 39.6x44.8 mm
Height: 27.2 mm
Weight: 63.5 g



Ordering Information

Part Number	Definition	Pricing
ART-AQL-01	with 10g accelerometers	Contact us
ART-AQL-02	with 20g accelerometers	
ART-AQL-03	with 30g accelerometers	

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