

# RAVEN RCM

## RATE CONTROL MODULE

Technical Data Sheet

## RCM > SPECIFICATIONS

The Raven Rate Control Module (RCM) is your solution for every season. The RCM is an ISOBUS product controller that can control up to five products in one ECU for both liquid and dry applications.

### DIMENSIONS

- Overall: 10.19in L x 8.94in W x 2.4in H
- Mounting: 9.33in L x 7.87in W

### POWER

- Operating voltage: 9-16 VDC
- Supply Current (ECU Power): 22mA Typical Operation at 13.4 VDC
- Supply Current (Valve Power): 300mA Typical Operation Unloaded at 13.4 VDC (25 Amps Maximum per ECU)

### DIAGNOSTICS

- 4 tri-color LEDs reflecting power, system and connectivity status
- Support for monitoring supply voltages, current draw, input short/open load detection, output driver current/temperature, and ECU self-test

### ENVIRONMENTAL

- Operating temperature: -40° to 85° C
- Storage temperature: -40° to 85° C

### MEMORY

- CPU: 32-BIT Cortex-M4 @ 180MHZ
- On Board RAM: 256 KB
- CPU Flash Memory: 2 MB
- Serial Nor Flash: 16 MB
- FRAM Non-Volatile Memory: 32 KB

### APPROVALS/CERTIFICATIONS

- CE, RCM, IC, FCC

### INERTIAL SENSORS

- Built-in 3-Axis Gyroscope and Accelerometer

### INPUT/OUTPUT CAPABILITY

Field Programmable Gate Array (FPGA) capable of programming flexible I/O dynamically to support up to:

- 32 - Driver outputs (20 PWM)
  - 9 Full H-Bridge + 14 high side drivers
  - 5 Amps maximum each driver
- 30 - Analog (12-bit) or digital (frequency) inputs
- 4 - Differential 24-bit inputs (Wheatstone Bridge)
- 3 - Sensor power - 8, 10 or 12 VDC
  - 2 Amps maximum each
- 2 - Sensor power - 5 VDC
  - 0.5 Amps maximum
- 1 - Sensor power - 10 VDC
  - 0.5 Amps maximum

### BLUETOOTH® MODULE

- Manufacturer: BLUEGIGA
- Model #: BLE121LR
- FCC ID: QOQBLE121LR
- IC: 5123A-BGTBLE121LR
- Version: 4.0LE with extended range line-of-sight support (up to 200 feet)



### BENEFITS & FEATURES:

- Liquid, NH3 and dry applications
- Easily navigate and manage multiple products, tallies, and sensor data
- Diagnostic tests and reading to easily calibrate, tune and troubleshoot system
- ISOBUS compliant CAN channel + three available CAN subnets
- Compatible with ISOBUS Virtual Terminal and Task Controllers
- Integrated Bluetooth® Low Energy providing long range line-of-sight wireless connectivity for control, monitoring and diagnostic features
- Multi-lingual support
- IP 67 environmental rating for the harshest of environmental conditions
- Integrated magnet mount option to easily attach and detach with any metal frame
- Dynamically configure run screen based on operator preferences to show most relevant data during operation