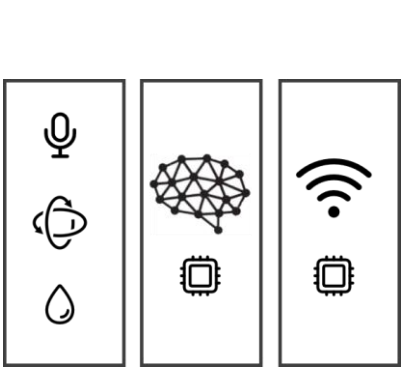
BRICK-ML

Machine Learning at the Edge

Brick-ML is a low-power high-performance embedded board designed to run machine learning operations at the edge.

Brick-ML is a ML building block specifically designed to be directly integrated into final products.
Brick-ML module features on-board compute, sensing and communication capabilities, all packed in one compact form factor.

Brick-ML module accelerates development time and hence reduces time to market by providing customers with both a highly integrated flexible kit for custom development as well as ready-to-use trained Edge ML models.



MAIN APPLICATIONS

- **Embedded Machine Learning**
- **Inference at the Edge**
- **Gesture Recognition**
- **Voice and Sounds Classification**
- **Environmental Conditions Automatic Analysis**
- **Connected Intelligent Sensors**

KEY FEATURES

- 32-bit ARM® Cortex®-M33 core with FPU
- 200 MHz clock speed
- Up-to 2-MB code flash memory, 8-KB data flash and 512-KB RAM
- 128-Mbit on-board serial flash
- Bluetooth 5.1 core specification compliant BLE transceiver and link layer
- USB 2.0 Full-Speed device connector
- Expansion pinout: Ethernet 10/100, USB 2.0 High-Speed, CAN, UART, I2C, SPI

SENSORS

- **Audio**
  Knowles SPH0641LU4H-1 microphone
- **Current**
  Voltage input to ADC for MCSA applications
- **Motion tracking**
  Bosch BNO055 9-DOF inertial sensor
- **Humidity and temperature**
  Renesas HS3001 high-performance T/H sensor

SPECIFICATIONS

Power Supply	2.5V to 5.0V
Operating Temperature	-40°C to +85°C
Standby Current	1µA
Wireless connectivoty	BLE 5.1 - output 2.2 dBm
Wired connectivity	USB Full-Speed
Expansion	USB High-Speed, Ethernet, CAN, UART, I2C, SPI
Size (RM-BML-1U)	40.0 x 23.0 x 5.0 mm

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