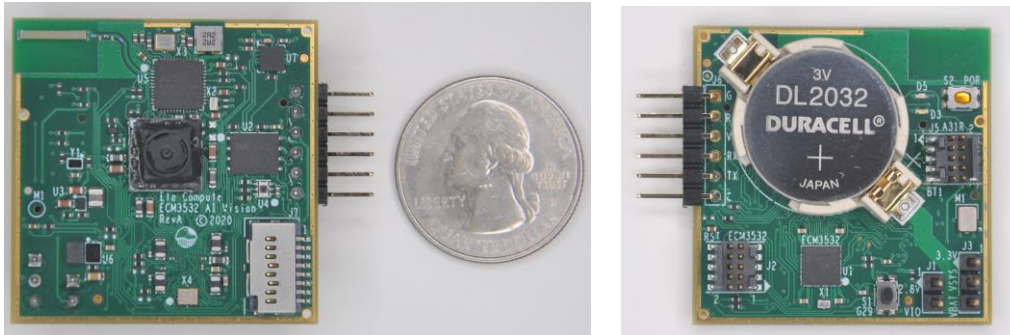# ECM3532 AI Vision Board: Ultra Low Power Vision Board for Artificial Intelligence at the Edge

Part Number: ECM3532-AVBK

Features:

- **1.5 x1.5-inch board with sensors**
    - 1 x Camera: Himax HM0360
    - 1 x ALS (Texas Instrument OPT3001)
    - 1 x PDM MEMS Microphones (TDK ICS-41350)
    - 1 x 6-axis MEMS Accel/Gyro: (TDK ICM-42688-P)

- **Battery cradle for CR2032 battery**

- **Bluetooth Low Energy on board**
    - BLE v4.2: ABOV A31R118 and antenna

- **Extension for other types of RF through Micro SD card slot**

- **6 pin UART and power port**

- **64Mbit serial Flash for datalogging**

- **2 LEDs and 1 push button**.

- **ECM3532 Neural Sensor Processor**
    - Hybrid multi-core with Cortex-M and DSP with operation up to 100MHz with self-timed continuous voltage and frequency scaling technology (CVFS)
    - Lowest energy for inference for machine learning algorithms: less than 1 mW
    - 512kB embedded Flash
    - 256kB + 96KB SRAM
    - Always-on block and low power mode down to sub 1uA
    - Numerous peripherals: UART, SPI, I2C, I2S, PDM, ADC, Timers
    - 5x5mm BGA Package

V01p00

Eta Compute

Description:

The ECM3532 AI Vision board is an ultra-low power AI platform with sensors that can run many algorithms, with a focus in embedded vision: image classification, person detection, object and people counting.
It can also perform sound and motion algorithms: sound classification, keyword spotting, activity classification, context awareness, defect detection and others.

The ECM3532 AI Vision board showcases the capabilities of the ECM3532 Neural Sensor Processor built with Eta Compute's unique self-timed continuous voltage and frequency scaling technology (CVFS).

See below a high-level block diagram:
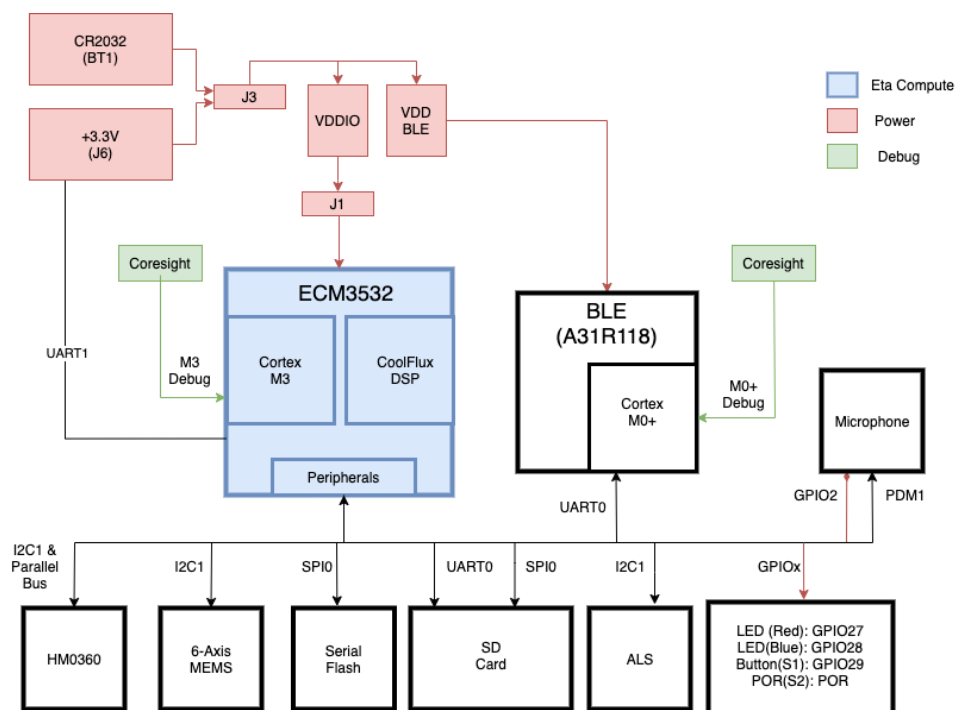
Users can experience the versatility of the ECM3532 AI Vision board in minutes by using Edge Impulse's TinyML development pipeline and the 6 pin UART port.

For advanced users, the board has serial wire debug (SWD) CoreSight connectors for both the ECM3532 and the A31R118 for debugging. A separate JLink or Ulink probe is required.

Website:
http://www.etacompute.com/

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