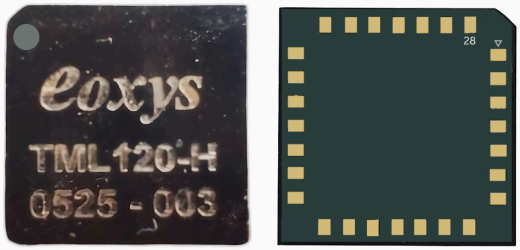
XENO+ Tiny ML Module



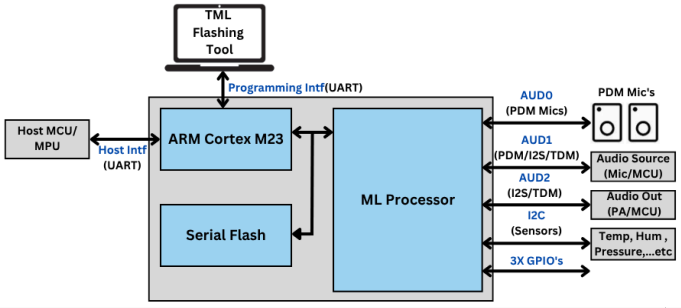
XENO+ TINY ML Module with solderable footprint with 28 pins
Size in mm : 15mm X 15mm

- TML120 is a XENO+ Series Tiny ML Module which is a solderable module and is used for building Audio as well as Sensor data-based Edge AI enabled IoT devices
- The TML120 module integrates the ML Processor for easy/ready to use design approach that brings together AI and deep learning capabilities.
- The TML120 offers factory level flashing through PC Flashing tool and customers configure and flash the ML model binaries required for the TML120 at factory level.

XENO+ Tiny ML Module Specifications

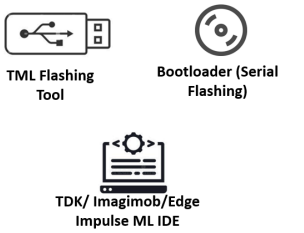
TML120 Module	
MCU	ARM Cortex-M23
Memory	8MB NOR Flash
Audio-0 Interface	AUD0 port interface for external PDM Mics
Audio-1 Interface	AUD1 port interface as PDM/ I2S/ TDM for external Audio input from Mics/ Audio generators.
Audio-2 Interface	AUD2 port interface as I2S/ TDM for Audio output to be sent to Audio processor.
I2C Interface	I2C Interface for connecting any I2C sensors.
GPIO	3x GPIOs from ML processor
Programming Interface	Serial UART based programming interface with TML Flashing tool.
Host Interface	Serial UART based interface to report ML classification events to Host processor.
Size	15 x 15 mm
Operating temperature	-40 to 85℃
Module supply voltage	3V3/1V8

XENO+ Tiny ML Module Block Diagram



Target Applications

- Noise suppression applications for reducing background noise.
- Human Alert Sound detection for Audible Alarm, Glass Breaking & Loud Bangs
- Industrial Machine Vibration/ Machine Noise / Alarm Sound Events Detection
- Human Voice Commands Detection
- Pest Sound Classification
- Traffic Noise Analysis



KEY BENEFITS

- The customers can save up to 40% of hardware and software development time.
- The TML Flashing tool offered along with TML120 module helps the Customers with one-time factory level configuration and binary files flashing and thus reduced Embedded SW development time.
- The customers can quickly target TML120 for variety of Audio and Sensor ML use cases on the same device in future

Meritech Group Company