

SecureIoT-SoC
M1x 2424 System on Module [SoM] v^{0.2}

Features & Specifications list

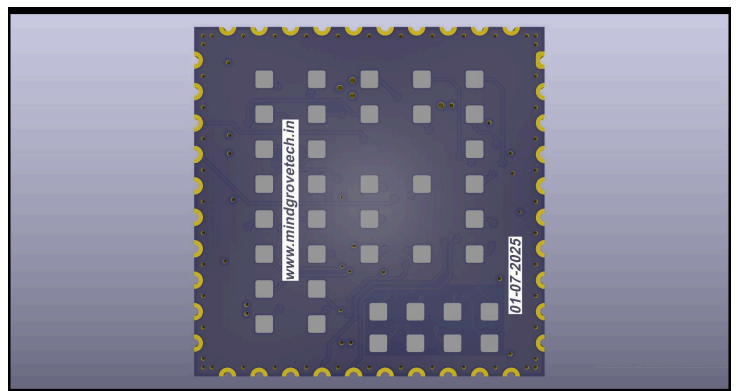
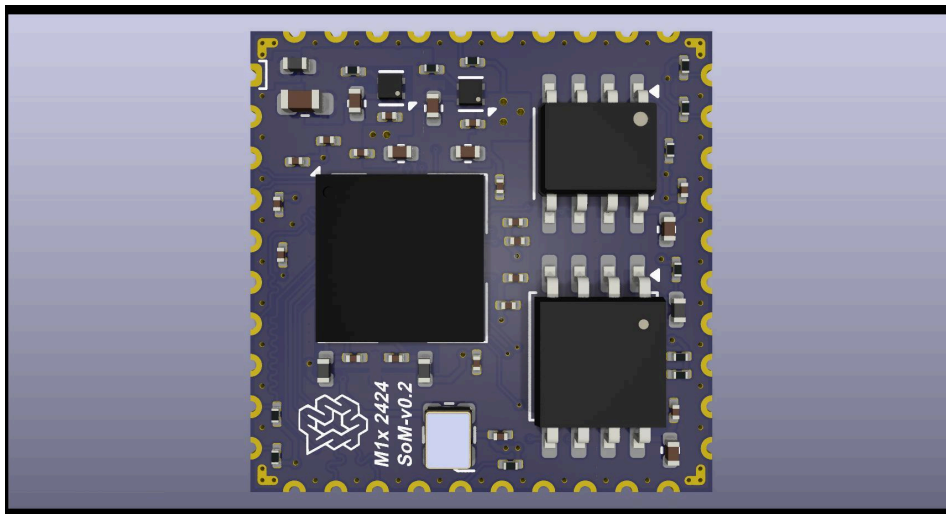
August 20, 2025

MINDGROVE TECHNOLOGIES PVT LTD

Description:

The SecureIoT M1x 2424 SoM-v0.2 is a 20x20mm, compact PCB that can be mounted on a larger application board [starting from a simple 2-layer], depending on the end-user's requirements. The specifications of the SoM are:

- **Input power:** +3.3V/500mA [minimum]
- **I/O operating voltage:** +1.8V [Recommended limit]
- **Peripheral terminations:** The peripherals can be connected via the 40 castellated pads on the borders and the 38 LGA pads on the bottom side of the SoM. [Refer to the images shown below]
- **JTAG:** It has the TRST, TMS, TCK, TDI, & TDO pins exposed out of the SoM to be terminated on the application board with a compatible JTAG adapter.



The features offered on the SecureIoT M1x 2424 SoM-v0.2 are:

1. **Target SoC:** SecureIoT M1x 2424 [0.5mm pitch, 144-pin WBGA package]
2. **Program/Flash memory:** 2Mb/256kB to 128Mb/16MB [SOIC-8 - 5.3x5.3mm package]
3. **Data memory/RAM:** 64Mb/8MB [SOIC-8 - 3.9x4.9mm package]
4. **GPIO pins:** 28
5. **PWM channels:** 8 [Pin-muxed with 8 GPIOs]
6. **Timer I/O channels:** 4
7. **UART port[s]:** 2
8. **I²C port[s]:** 2
9. **SPI port[s]:** 4
10. **ADC channels:** 8
11. **JTAG:** 1