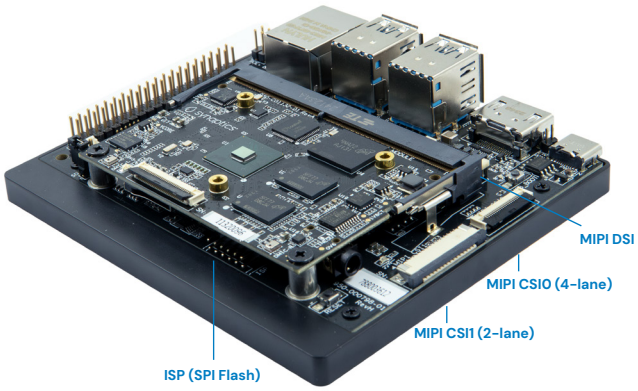
Astra Machina SL2600 Series Development Kit

Product Brief

Future-Ready AI-Native Compute for the IoT

MULTIMODAL > SECURE > LOW POWER

The Synaptics® Astra™ Machina SL2600 Series development kit enables easy and rapid prototyping of multimodal AI-native IoT applications. A flexible design approach supports a core compute module, an I/O base board, daughter cards for integrated Wi-Fi® / Bluetooth® connectivity, debug, and programmable I/O. The evaluation system supports the Synaptics SL2619 SoC family that delivers unmatched price performance for IoT applications, and is enabled through a unified, open-source software stack built on Yocto Linux®. The Machina SL2600 Series supports the Synaptics Torq™ Edge AI platform, featuring the T1 NPU and the industry's first production implementation of the Coral™ NPU Machine Learning (ML) core from Google. Torq promotes a developer-first approach, with an open-source Edge AI compiler and runtime based on IREE/MLIR, capable of processing industry standard model formats such as PyTorch, ONNX, JAX and TFLite (LiteRT).



- EASY + FAST PROTOTYPING
- UNIFIED SOFTWARE EXPERIENCE
- COMPREHENSIVE AI TOOLKIT
- PRE-PAIRED WIRELESS OPTIONS
- MODULAR DESIGN

 | | PN: 190-000448-01 Rev C

Features

Core modules:

- Synaptics Astra™ SL2619 SoC
- Storage (eMMC 5.1), memory (DRAM), PMIC, SD card slot
- Audio Input/Output
- Digital microphones (DMICs)
- RGMII-TX/RX

Daughter card interface options:

- MIPI® DSI℠, MIPI® CSI-2®
- JTAG, 40-pin header
- 4-pin PoE+

I/O board:

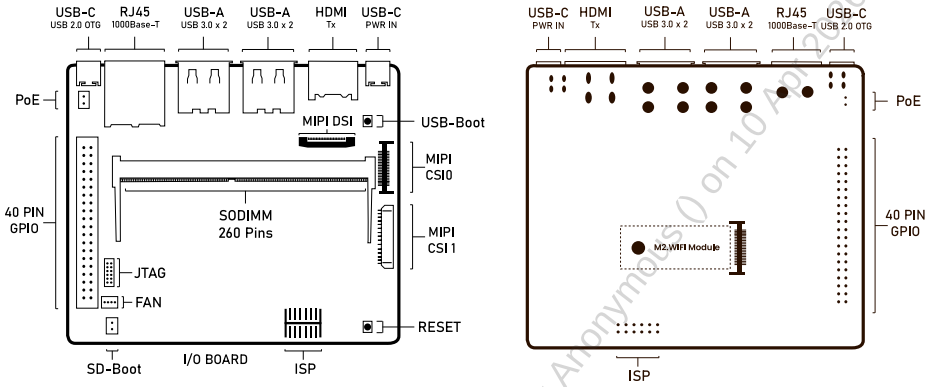
- HDMI Type-A Tx
- M.2 E-key 2230 slot for SDIO, PCIe®[1], and UART
- USB 3.0 Type-A: 4 ports, host mode
- USB 2.0 Type-C: OTG host or peripheral mode
- Push buttons: USB-BOOT selection and system RESET
- 2pin Header: SD-BOOT selection
- Type-C power supply with 15V @ 1.8A

[1] SL2610 Product Line does not support PCIe on the M.2 connector

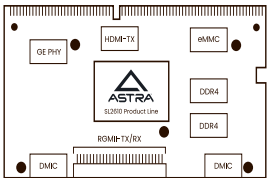
Synaptics Astra Machina

SL2600 Series Development Kit System Diagrams

I/O Module Front and Back Views



SL2619 Core Module



Bluetooth™ WiFi™

- SYN43711
- SYN4612
- SYN4384, SYN43752/56, SYN4381/82/83/84 *

*More SKUs being added

Resources

- Synaptics Astra GitHub: https://github.com/synaptics-astra
- Synaptics Astra AI Developer Zone: https://developer.synaptics.com/

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Contact

Visit our website at www.synaptics.com to locate the Synaptics office nearest you.

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