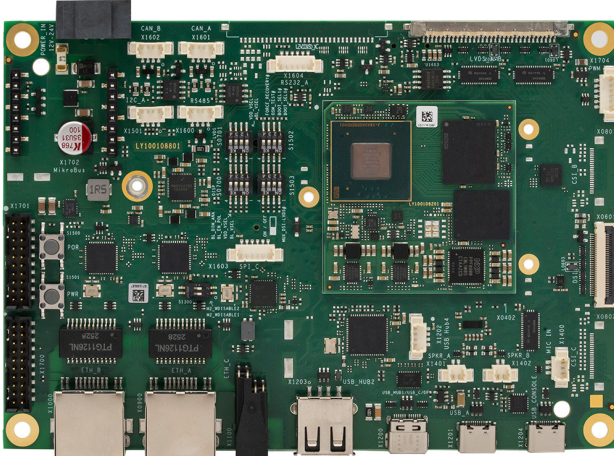


TRIA OSM-SB-EP5

/SimpleFlex, Application-Ready Embedded Platform OSM V1.2

146 x 102 mm



2 W

-25/-40 +85



OPEN
STANDARD
MODULE™

SIMPLEFLEX

Highlights

- OSM V1.2 carrier board suitable for OSM Size-S, Size-M, and Size-L modules (including carrier cut-outs for modules with dual-sided assembly)
- LVDS (single/dual channel) on J130 connector
- MIPI-DSI on FFC30 connector (optional LVDS)
- 3x MIPI CSI
- 2x CAN
- 24x GPIO, 2x ADC, 5x PWM
- 2x I²C, 2x SPI
- 2x Gigabit Ethernet ports with S/RGMII PHYs
- 1x Single Pair Ethernet (SPE) with SGMII PHY
- 2x I2S Audio Support with two Audio Codecs
- 4x UART (RS232, RS485, M.2 socket, MikroBus socket)
- 1x USB3.0/USB2.0 on Type-C incl. DisplayPort on Type-C
- 1x USB2.0 on Type-A, PicoBlade and M.2 socket
- 1x USB2.0 OTG on Type-C
- Integrated USB to Serial converter (on Type-C)
- JTAG connector (for SW debugging)
- M.2 key E socket
- MikroBus socket (for simple sensor/IO extension)
- NOR Flash with Quad SPI

- μ SD Card socket
- RTC Battery Socket / Super Cap Option
- Input voltage 12 VDC to 24 VDC (nominal)
- Form Factor (146 x 102 mm)

Technical Data

Technology	OSM V1.2 carrier board (Size-S, Size-M, Size-L)
Formfactor	146 x 102 mm
Flash	µSD Card Socket NOR FLASH
Storage Interfaces	n/a
USB	- on Type-C 1x USB2.0 (incl. OTG function over CC controller) 1x USB3.0 (also usable as DP if alternate function is supported) 1x USB2.0 (USB to Serial converter for console outputs) - on Type-A 1x USB2.0 - on PicoBlade 1x USB2.0 - on M.2 socket 1x USB 2.0
Serial Interfaces	4 x UART (RS232, RS485, M.2 socket, MirkoBus socket)
Bus Interfaces	2x CAN 24x GPIO, 2x ADC, 5x PWM 2x I²C, 2x SPI - M.2 key E socket (PCIe x1, SDIO, I2C, USB, UART)
Display Interfaces	- LVDS (single or dual channel) on JLI30 connector - using native OSM LVDS interface or - using native OSM MIPI-DSI interface - additional LVDS as optional feature - MIPI-DSI on FFC30 connector 2x MIPI CSI + Additional MIPI CSI as optional feature
Network Interface	2x 10/100/1000BASE-T Ethernet with S/RGMII PHY on RJ45 connector, with two integrated status LED's 1x Single Pair Ethernet (SPE, 1000BASE-T1) with SGMII PHY
Audio Interface	2x I2S Audio Support with two Audio Codecs (DA7212 & TAS2505)
Miscellaneous	Socket for CR2032 type RTC battery (3V) / Super Cap Option JTAG connector for debugging
Feature Highlights	Support of listed carrier board features and interfaces depends on used module
Power Requirement	Input voltage 12 VDC to 24 VDC (nominal)
Environment	Temperature Range: -40°C ... +85°C operating -40°C ... +85°C storage Humidity: 5 ... 90% (operating, non condensing) 5 ... 90% (storage, non-condensing)
Dimensions	146 x102 mm
Certificates	UL / CE

Technical Data for TRIA OSM-SB-EP5

Order Reference

Order No.	Description	Reference	Status *
119 824	OSM-SB-EP5 SBC with OSM-LF-IMX95 OSM Module (#119466) NXP i.MX 9596 (6x A55 @ 1.8 GHz, ISP, NPU, GPU, VPU, Display, PP-Sample), 8GB LPDDR5, 32GB eMMC, Industrial Temperature (-40..+85°C) Engineering Sample - for evaluation only! Preliminary version. See disclaimer for ES restrictions here: https://www.tria-technologies.com/legal/engineering-sample-disclaimer/	MSC OSM-SB-EP5-95-HC9-35N0A10 I ES1 PCBES	OR
122 684	OSM-SB-EP5 SBC with OSM-LF-IMX95 OSM Module (#121782) NXP i.MX 9596 (6x A55 @ 1.8 GHz, ISP, NPU, GPU, VPU, Display), 8GB LPDDR5, 64GB eMMC, Industrial Temperature (-40..+85°C) Engineering Sample - for evaluation only! Preliminary version. See disclaimer for ES restrictions here: https://www.tria-technologies.com/legal/engineering-sample-disclaimer/	MSC OSM-SB-EP5-95-HC9-36N0A10 I ES2 PCBES	OR
120 298	OSM-SB-EP5 SBC with OSM-MF-IMX8PLUS Module (#114881) NXP i.MX 8M Plus Quad (4x A53 @1.6GHz, NPU, VPU, ISP, HiFi4), 4GB LPDDR4, 16GB eMMC, Industrial Temperature (-40..+85°C) Engineering Sample - for evaluation only! Preliminary version. See disclaimer for ES restrictions here: https://www.tria-technologies.com/legal/engineering-sample-disclaimer/	MSC OSM-SB-EP5-8P-QC-24N0A00I ES1 PCBES	OR
122 150	OSM-SB-EP5 SBC with OSM-LF-IQ615 OSM Module (#121079) Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 4GB LPDDR4, 16GB eMMC, TPM 2.0, Extended Temperature (-25..+85°C) Engineering Sample - for evaluation only! Preliminary version. See disclaimer for ES restrictions here: https://www.tria-technologies.com/legal/engineering-sample-disclaimer/	MSC OSM-SB-EP5-615-24N0 901E ES2 PCBES	OR
122 465	OSM-SB-EP5 SBC with OSM-LF-IQ615 OSM Module (#121945) Qualcomm IQ615 (2x Cortex-A76 + 6x Cortex A55), 8GB LPDDR4, 64GB eMMC, TPM 2.0, Industrial Temperature (-40..+85°C) Engineering Sample - for evaluation only! Preliminary version. See disclaimer for ES restrictions here: https://www.tria-technologies.com/legal/engineering-sample-disclaimer/	MSC OSM-SB-EP5-615-36N0 901I ES2 PCBES	OR
121 817	OSM-SB-EP5 SBC with OSM-SF-IMX93 OSM Module (#111852) NXP i.MX9352 (Dual Core, Ind., 1.7 GHz, w/ NPU), 2GB LPDDR4, 16GB eMMC, Industrial Temperature (-40..+85°C) Engineering Sample - for evaluation only! Preliminary version. See disclaimer for ES restrictions here: https://www.tria-technologies.com/legal/engineering-sample-disclaimer/	MSC OSM-SB-EP5-93-DC-14N0A00I ES1 PCBES	OR

Ordering Information for TRIA OSM-SB-EP5

*PV = Preferred variant; OR = on Request (in OEM quantities only)

Accessories

Display Kits

Order No.	Description	Reference
78879	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 10.1" WVGA LCD with PCAP Touch Sensor and Touch Controller. Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch).	MSC DIS-AM1280800-101-KIT BRDFTX

10.1" Display kit

Order No.	Description	Reference
78880	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 12.1" WVGA LCD with PCAP Touch Sensor and Touch Controller Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch)	MSC DIS-AM1280800-121-KIT BRDFTX

12.1" Display kit

Order No.	Description	Reference
81871	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 5.0" WVGA LCD with PCAP Touch Sensor and Touch Controller Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch)	MSC DIS-AM800480-050-KIT BRDFTX

5.0" Display kit

Order No.	Description	Reference
78911	Displaykit suitable for all COM Carrier Boards and all COM Starterkits. Comprises 7.0" WVGA LCD with PCAP Touch Sensor and Touch Controller Includes all cables required to connect to COM Carrier Boards (LVDS, B/L & Touch)	MSC DIS-AM800480-070-KIT BRDFTX

7" Display kit

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