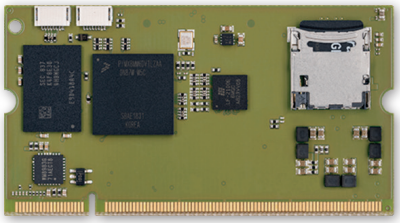
# TRIZEPS SODIMM SOM

## SOM-Trizeps-VIII-MX8M-Mini

SODIMM-200 CPU-Module with NXP i.MX 8M Mini Applications Processors

## High performance for high-level video, voice and audio processing combined with low power consumption thanks to 14nm LPC FinFET technology



### HIGHLIGHTS

**CPU**
NXP i.MX 8M Mini Applications Processors

**CONNECTIVITY**
1x Gigabit Ethernet, WiFi/BT, USB 2.0, LVDS

**GRAPHICS**
GC320 2D accelerator + GCNanoUltra 3D accelerator

**MEMORY**
Up to 8 GB LPDDR4-3200 RAM memory, 32 Bit

Available in Industrial Temperature Range

GOLD PARTNER NXP

Windows 10 IoT · debian · yocto PROJECT · android

### MAIN FIELDS OF APPLICATION

Coffee & Vending · Medical · Transportation · Industrial Automation · Smart Devices · Smart Buldings & Smart Cities · Digital Signage · Energy & Utilities

### FEATURES

| | |
|---|---|
| Processor | NXP i.MX 8M Mini Family based on Arm® Cortex®-A53 cores + general purpose Cortex®-M4 400MHz processor:<br>· i.MX 8M Mini Quad - Full featured, 4x Cortex®-A53 cores<br>· up to 1.8GHz<br>· i.MX 8M Mini Dual - Full featured, 2x Cortex®-A53 cores<br>· up to 1.8GHz<br>· i.MX 8M Mini Solo - Full featured, 1x Cortex®-A53 cores<br>· up to 1.8GHz<br>· i.MX 8M Mini Quad Lite - 4x Cortex®-A53 cores up to 1.8GHz, no VPU<br>· i.MX 8M Mini Dual Lite - 2x Cortex®-A53 cores up to 1.8GHz, no VPU<br>· i.MX 8M Mini Solo Lite - 1x Cortex®-A53 cores up to 1.8GHz, no VPU<br><br>Optional: Programmable FPGA with up to 4300 LUTs to convert parallel display/camera/data-streams to MIPI DSI/CSI |
| Memory | Soldered down LPDDR4-3200 memory up to 8GB, 32-bit interface |
| Graphics | i.MX 8M Mini Family of processors:<br>Vivante GC320 2D accelerator + GCNanoUltra 3D accelerator<br>OpenGL ES 2.0, OpenVG 1.1 support |
| Video Interfaces | MIPI display (4 channel) / Single- or Dual-LVDS, LCD 24 Bit RGB |
| Video Resolution | LVDS, MIPI: Up to 1920 x 1080p @60 |

| | |
|---|---|
| Mass Storage | Onboard 4 Bit wide µSD Card Socket or onboard 8 Bit wide eMMC |
| Networking | 1x GB Ethernet RGMII PHY and SIOP interface<br>Optional: WiFi 802.11 a/b/g/n/ac 2x2 MU-MIMO / BT 4.2/5.0 |
| USB | 2x USB 2.0 OTG |
| PCI-e | PCIe |
| Audio | Audio Codec: Stereo Headphone output, Mono Speaker output, Stereo Line-In, Microphone input |
| Serial Ports | 4x UART |
| Other Interfaces | 4 Bit wide SDIO<br>SPDIF In/Out<br>I2S<br>Multichannel Serial-Audio-Interface<br>2x I2C<br>SPI<br>QSPI<br>GPIOs<br>PWM<br>MIPI CSI (4 channel) |
| Power Supply | 3.3 $V_{DC}$ |
| Operating System | Linux Yocto<br>Linux Debian<br>Android<br>Windows 10 IoT |

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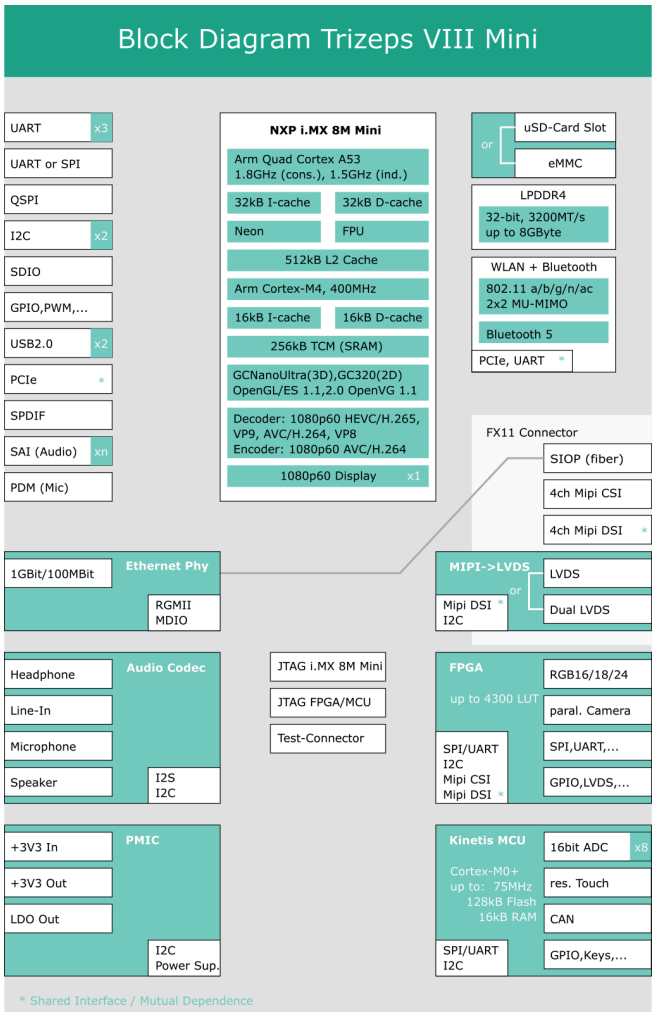
## FEATURES

| | |
|---|---|
| Operating Temperature* | 0 ÷ 70°C (Consumer)<br>-25 ÷ 85°C (Extended Consumer)<br>-40 ÷ 85°C (industrial) |
| Dimensions | 67.6 x 36.7 x 6.4 mm |

*All carrier board components must remain within the operating temperature at any and all times, including start-up; carrier operating temperature is independent of the module installed. Please refer to the specific module for more details. Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider specific cooling solutions for the final system.

## BLOCK DIAGRAM

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## PORTAL

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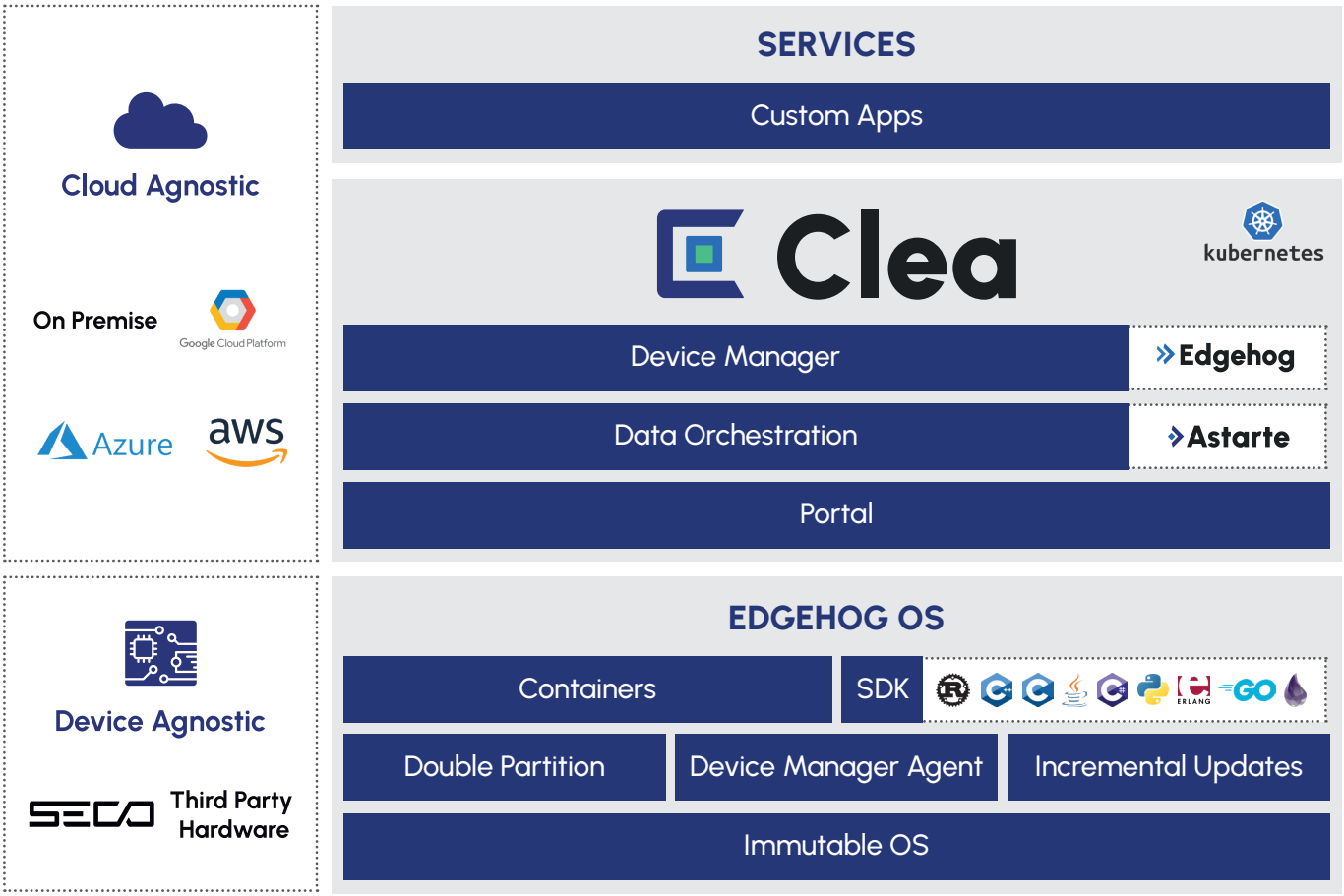


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