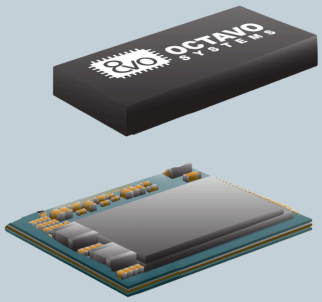
OSD32MP2x-PM

ST STM32MP2 Processor + DDR4 SiP



The OSD32MP2x-PM System-in-Package (SiP) integrates the STMicroelectronics STM32MP2 processor, DDR4 memory, and essential passive components into a compact 9mm x 14mm BGA package. This design simplifies the processor-to-DDR interface, reducing development complexity and time. The OSD32MP2x-PM offers the full functionality of the STM32MP2 in a significantly smaller form factor, making it suitable for new, space-constrained applications.

Size Comparison

OSD32MP2x-PM
9 x 14 mm

US Dime
18 mm Diameter

Benefits

Save Months of Time

Skip months of DDR design, routing, and validation. The OSD32MP2x-PM handles it all out of the package.

Shrink Board Size by 60%

The OSD32MP2x-PM integrates the STM32MP2x, DDR4, and passives into a package the same size as the DDR4 itself.

Slash Project Costs

Fewer components, PCB layers, and a pre-validated design mean lower total system cost from prototype to production.

Complete Support

Reference designs, application notes, Import-Ready DDR Tuning Parameters, schematic and layout review services. Everything you need for first-pass design success.

Technical Specs

STM32MP2, DDR4, and Passives in a 9×14mm Package

STM32MP2 Features:

- Up to 2x Arm® Cortex®-A35 @ 1.5 GHz
- Arm® Cortex®-M33 @ 400MHz
- AI Neural Processing Unit – 1.35 TOPS
- Optional 3D GPU: VeriSilicon® - Up to 900 MHz
  - OpenGL ES 3.1- Vulkan 1.3, OpenCL 3.0, OpenVX 1.3
- 1080p @60 fps H.264, VP8 Video Decoder/Encoder

Access to All STM32MP2 Peripherals Including:

- MIPI DSI 4-lane, 2x 4-lane LVDS, and 24-bit parallel display interfaces up to 1080p @ 60 fps
- MIPI CSI-2 2-lane camera interface with integrated ISP
- 2 + 1 (switch) Gigabit Ethernet with TSN support
- PCIe Gen2 1-lane + USB2.0 Host/Device HS OR USB3.0, USB Type-C
- USB2.0 Host HS
- 3× CAN-FD/TTCAN
- 3× SDIO

Package Options:

- 9mm × 14mm | 500-ball BGA | 0.5mm ball pitch
- x32 DDR4 up to 4GB

Temperature Rating: –40°C to 85°C (Case)

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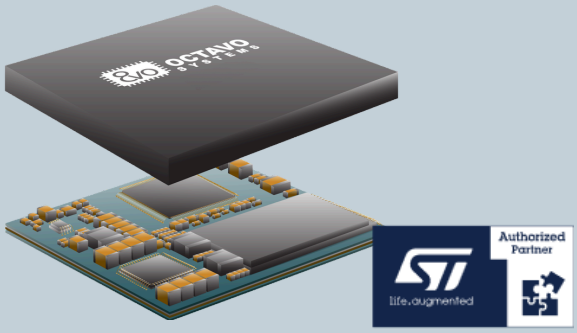
2277 Plaza Drive
Sugar Land, TX 77479 - USA

OSD32MP2x

ST STM32MP2 System in Package



The OSD32MP2x System-in-Package (SiP) integrates the STMicroelectronics STM32MP2 processor with DDR4 memory, STPMIC2 PMIC, EEPROM, Oscillators and passives into a compact 21mm x 21mm BGA package. This integration removes tedious tasks from your design process allowing you to focus on areas that will add value to your STM32MP2 based design.

Size Comparison

OSD32MP2x
21 x 21 mm

US Nickel
21 mm Diameter

Benefits

Save Months of Time

Skip months of DDR and Power design, routing, and validation - The OSD32MP2x handles it all out of package with integrated DDR4 and single voltage rail input.

Shrink Board Size by 60%

The OSD32MP2x integrates STM32MP2x, DDR, PMIC, and passives into a package the size of a nickel.

Slash Project Costs

Fewer components, PCB layers, and a pre-validated design mean lower total system cost from prototype to production.

Complete Support

Reference designs, application notes, Import-Ready DDR Tuning Parameters, schematic and layout review services. Everything you need for first-pass design success.

Technical Specs

STM32MP2, DDR4, STPMIC2, EEPROM, Oscillators, and Passives in a 21 x 21mm BGA Package

STM32MP2 Features:

- Up to 2x Arm® Cortex®-A35 @ 1.5GHz
- Arm® Cortex®-M33 @ 400MHz
- AI Neural Processing Unit - 1.35 TOPS
- Optional 3D GPU: VeriSilicon® - Up to 900 MHz
  - OpenGL ES 3.1- Vulkan 1.3, OpenCL 3.0, OpenVX 1.3
- 1080p @60 fps H.264, VP8 Video Decoder/Encoder

Access to All STM32MP2 Peripherals Including:

- MIPI DSI 4-lane, 2x 4-lane LVDS, and 24-bit parallel display interfaces up to 1080p @ 60 fps
- MIPI CSI-2 2-lane camera interface with integrated ISP
- 2 + 1 (switch) Gigabit Ethernet with TSN support
- PCIe Gen2 1-lane + USB2.0 Host/Device HS OR USB3.0, USB Type-C
- USB2.0 Host HS
- 3× CAN-FD/TTCAN
- 3× SDIO

Power Supply - All Power sequencing handled internal to the SiP. Rails available for system user.

Package Options:

- 21mm X 21mm | 437 Ball BGA | 1.0mm ball pitch
- x32 DDR4 up to 4GB

Temperature Rating: –40°C to 85°C (Case)

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