

PRODUCT BRIEF



M2-SM8M-xx - i.MX8M based SMARC Module

TESSOLVE EMBEDDED SYSTEMS introduces an ultra- low power ARM Core based SOM (System-On-Module) powered by NXP™ i.MX8M Family processor which has a quad ARM Cortex A53 CPUs based on SMARC standard 2.0 for embedded modules. TESSOLVE leverages its vast experience of product development in embedded multimedia systems for professional applications and systems combining audio/video, graphics and HMI.

Target applications for MAGIK2 ARM COMs are HMI units for machines and vehicles, Surround-View Systems, Multimedia streaming devices, Industrial

Tablets, Medical Systems, High End Home Appliances and Multimedia/ Infotainment applications in avionics and transportation environment.

These modules are offered with a complete software suite (details below), including Device Drivers, BSP and support for Linux & Android.

Product development made easy, with the industry leading complete system solution packages from TESSOLVE, is a clear differentiator!

Figure 1:
i.MX8M SOM



TESSOLVE a member of the SGeT





The M2-SM8M-xx module is available in Quad CoreCPU with wide variety of IO feature sets.

TECHNICAL INFORMATION

Module Name	M2-SM8M-4Q
Processor	NXP i.MX8M <ul style="list-style-type: none"> • ARM Cortex A53 CPU (Quad core) • Supports up to 1.5GHz
Graphics	<ul style="list-style-type: none"> • 4Kp60 decode • 2D and 3D Graphics Accelerator
Memory	<ul style="list-style-type: none"> • LPDDR4 (x32 bits) • 512MB to 4GB variants
Flash	<ul style="list-style-type: none"> • 4GB to 64GB eMMC
Display Interface	<ul style="list-style-type: none"> • DSI 4 lane • HDMI 2.0
Camera	<ul style="list-style-type: none"> • 1x Serial Camera (4 lane) • 1x Serial Camera (2 lane)
Audio	<ul style="list-style-type: none"> • 2x I2S • 1x SPDIF
SD/MMC	<ul style="list-style-type: none"> • 1x SDIO (4 bits)
Ethernet	<ul style="list-style-type: none"> • 1x Gigabit
USB	<ul style="list-style-type: none"> • 2x USB 3.0
High Speed Serial	<ul style="list-style-type: none"> • 1x PCIe 2.0
Other Interfaces	<ul style="list-style-type: none"> • 3x I2C • 1x SPI • 2x UART • 1x UART with Flow Control • 3x PWM • 12x GPIO
Operating Voltage Range	<ul style="list-style-type: none"> • 3.3V / 5V
Temperature Range	<ul style="list-style-type: none"> • Industrial and Commercial
Form Factor	<ul style="list-style-type: none"> • SMARC – 82 mm X 50 mm

*Modules are offered with a default flash size of 16GB. Contact TESSOLVE for different memory capacity configurations.



RoHS Compliant

Module Architecture Diagram

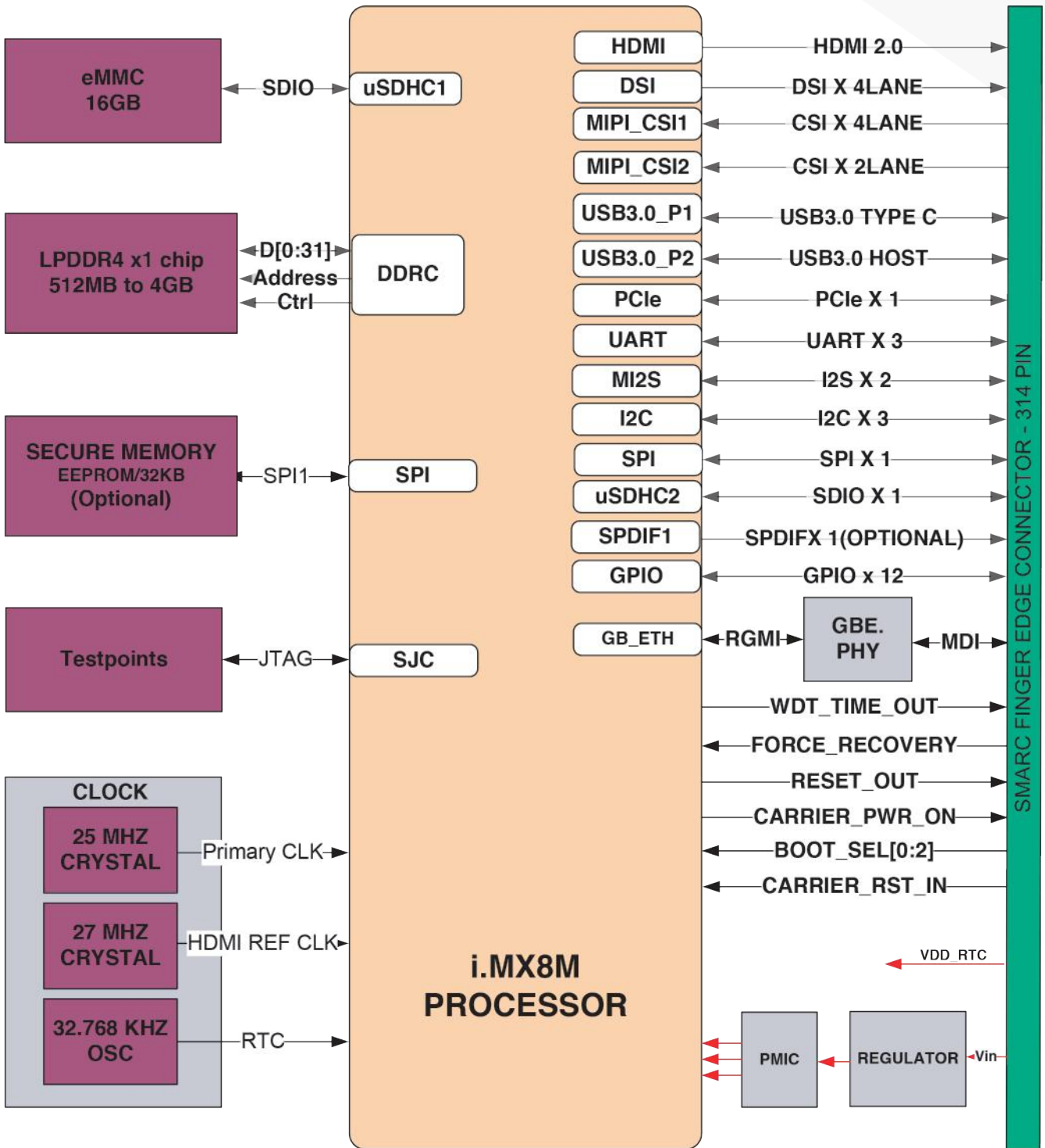


Figure 2: i.MX8M SOM Block Diagram



Software Package

TESSOLVE provides ready to use SDK (Software Development Kit) for evaluation and application development. The section below lists high level details on the included software packages. For complete details please refer TESSOLVE Linux and TESSOLVE Android SDK datasheets.

Board Support Packages (BSP) available for Linux / Android

Operating System Options

- **Linux** (Kernel 4.9.88)
- **Android O (Oreo) 8.1.0**
(Kernel 4.9.78)

Ordering Information

Article	Part No**	Description
MAGIK 2 SMARC Module	M2-SM8M-4Q1G5-4G-16G-IT-S	i.MX8M Quad, 1.5GHz, 4GB RAM, 16GB Flash, Industrial Grade, 80mmx52mm

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