

Product Brief



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

Using the SMARC standard 2.0 for embedded modules, TESSOLVEEMBEDDED SYSTEMS introduces an ultra-low power ARMCore based SOM (System-On-Module) powered byNXP™ i.MX8M Family processor which has a quad ARM Cortex A53 CPUs. 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 applicationsin avionics andtransportation environment.

These modules are offeredwith 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!

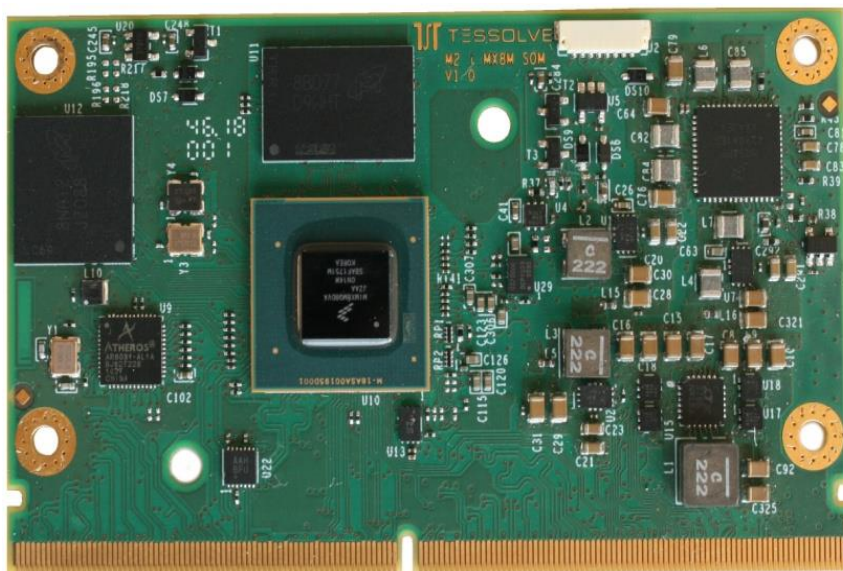


Figure 1: i.MX8M SOM

The M2-SM8M-xx module is available in Quad Core CPU 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 upto 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 • 12XGPIO
Operating Voltage Range	3.3V / 5V
Temperature Range	Industrial and Commercial
Form Factor	SMARC - 82mmX50mm

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

RoHS



RoHS Compliant

Module Architecture Diagram

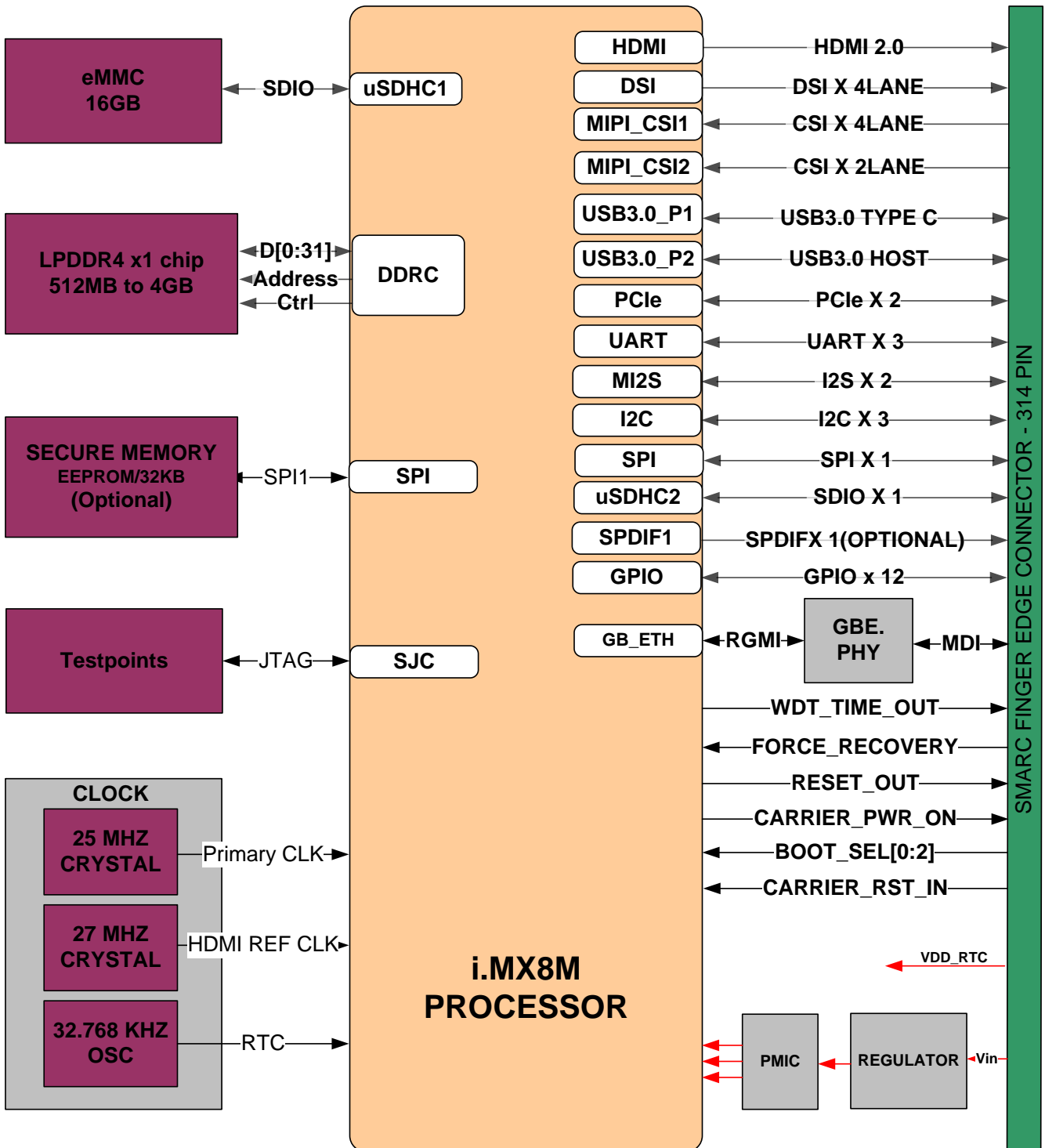


Figure 2: i.MX8M SOM Block Diagram

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

**Contact TESSOLVE for other possible memory and temperature configurations

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