

eDM-SBC-iMX8Mm

Datasheet



FEATURES

Small Pico-ITX Format (100mm x 72mm x 21mm)

NXP® i.MX8M Mini Cortex-A53 SoC up to 1800MHz

Up to 4 Cores and up to 4GB onboard LPDDR4 memory

Customizable Full-HD Graphics interface

Extensive I/O connectivity

Designed for 24/7 applications

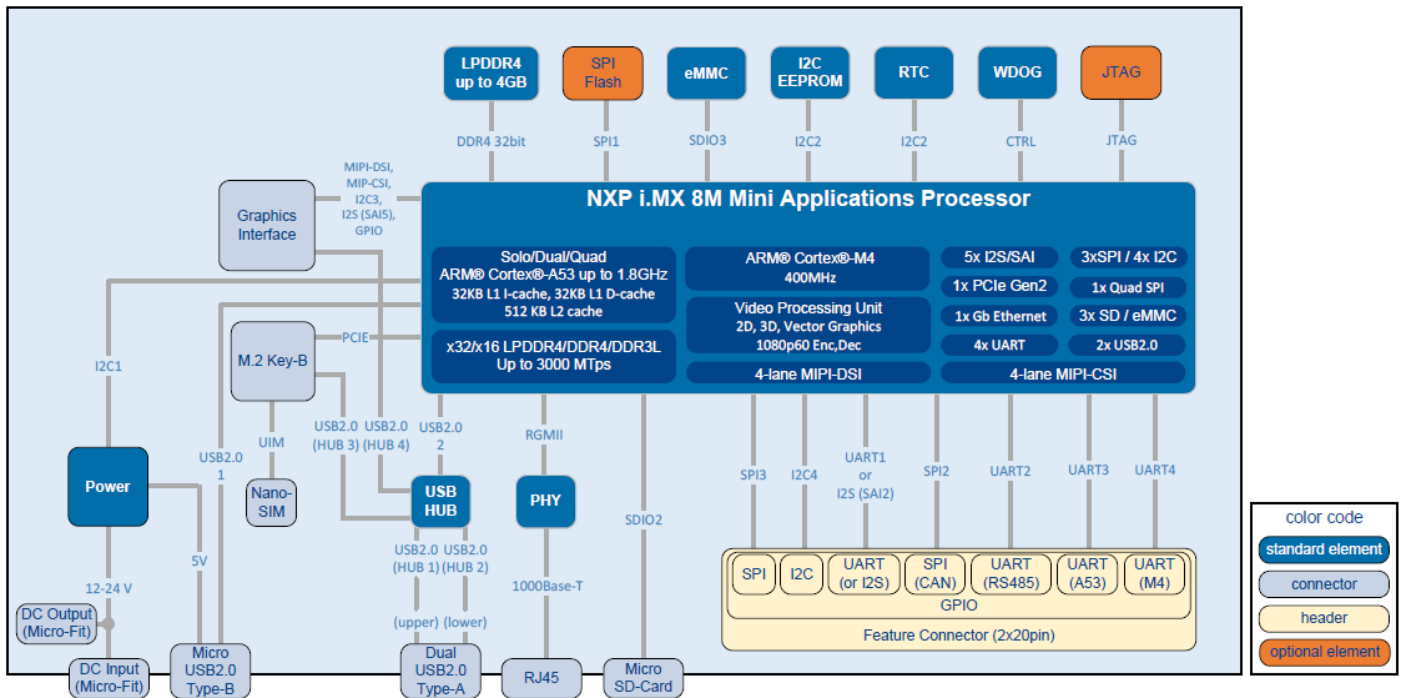
TECHNICAL INFORMATION

Form Factor	100 mm x 72 mm x 21 mm (Pico-ITX)
CPU	NXP® i.MX8M Mini Dual, Cortex-A53 1800 MHz ¹⁾ , 2C, 512KB L2 Cache, GCNanoUltra NXP® i.MX8M Mini Quad, Cortex-A53 1800 MHz ¹⁾ , 4C, 512KB L2 Cache, GCNanoUltra
Memory	Onboard up to 4 GByte LPDDR4
Mass Storage	Onboard eMMC up to 64GByte
Graphics	Integrated Graphics Processing Unit with 2D, 3D accelerator Integrated Video Processing Unit for video encode and decode
Display/Monitor Interfaces	Customizable Graphics Interface via mezzanine module 4-lane MIPI DSI, dual-channel 24-bit LVDS, 24-bit RGB, HDMI 1.2a (Type A) Up to Full HD 1920 x 1080 Pixel @ 60fps
Ethernet	1000Base-T interface with Qualcomm AR8031 PHY
I/O Interfaces²⁾	2 x USB 2.0 (Type-A), 1 x USB2.0 (micro Type-B) Up to 4 x UART (1 x RS485 over UART optional via I/O module) 1 x Micro-SD card slot 1 x PCIe 2.0 Lane on M.2 Key-B socket 2 x SPI (1 x CAN over SPI optional via I/O module), 1 x I ² C, 1 x I ² S, 3 x GPIO 1 x M.2 Key-B socket for wireless connection 1 x Nano SIM card slot
Power Supply	VCC: 12V...24V (+/-10%), optional: +5V (+/-5%)
Operating Systems	Linux (Yocto) Kernel 5.10
Temperature	Operating: 0°C ... +70°C (with commercial grade CPU) / -20°C ... +80°C (with industrial grade CPU) Storage: -40°C ... +85°C
Humidity	Operating: < 80% RH non-condensing
Safety, Shock and Vibration	Designed to meet EN60950, IEC/EN60068-2-27 and IEC/EN60068-2-6
Available Certificates	RoHS, REACH
Assembly option	MOQ: 2000

¹⁾ The maximum processor speed is 1600 MHz for industrial grade CPUs

²⁾ Some interfaces require the optional eDM-MOD-iMX8Mm-FIO1 I/O module

BLOCK DIAGRAM



ORDERING INFORMATION

Model Name	Part No.	Description
eDM-SBC-iMX8Mm-D-2G	12046697	SBC with i.MX8M Mini Dual 1800MHz, 2GB RAM, 16GB eMMC, micro-SD, 2 + 1 USB2.0, Gigabit Ethernet, Graphics Connector, M.2 Key-B Socket, RTC, Feature Connector, 12...24VDC, 0°C...+70°C
eDM-SBC-iMX8Mm-Q-4G	12040973	SBC with i.MX8M Mini Quad 1800MHz, 4GB RAM, 16GB eMMC, micro-SD, 2 + 1 USB2.0, Gigabit Ethernet, Graphics Connector, M.2 Key-B Socket, RTC, Feature Connector, 12...24VDC, 0°C...+70°C
eDM-SBC-iMX8Mm-D-2G-E	12052598	SBC with i.MX8M Mini Dual 1600MHz, 2GB RAM, 16GB eMMC, micro-SD, 2 + 1 USB2.0, Gigabit Ethernet, Graphics Connector, M.2 Key-B Socket, RTC, Feature Connector, 12...24VDC, -20°C...+80°C
eDM-SBC-iMX8Mm-Q-4G-E	12053340	SBC with i.MX8M Mini Quad 1600MHz, 4GB RAM, 16GB eMMC, micro-SD, 2 + 1 USB2.0, Gigabit Ethernet, Graphics Connector, M.2 Key-B Socket, RTC, Feature Connector, 12...24VDC, -20°C...+80°C
eDM-MOD-iMX8Mm-LVDS	12045244	Graphics Module with Dual-Channel LVDS, USB Touch, Backlight, -20°C...+85°C
eDM-MOD-iMX8Mm-HDMI	12046330	Graphics Module with HDMI 1.2a Type A connector, -20°C...+85°C
eDM-MOD-iMX8Mm-FIO1	12047960	I/O Module with 3 x RS232, 1 x RS485 (isolated), 1 x CAN (isolated), 1 x SPI, 1 x I2C, 3 x GPIO, Buzzer, 0°C...+70°C.

ORDERING INFORMATION - Starterkits

Model Name	Part No.	Description
eDM-SBC-iMX8Mm-SK	12049886	Starterkit with eDM-SBC-iMX8Mm-Q-4G, eDM-MOD-iMX8Mm-HDMI Module, eDM-MOD-iMX8Mm-FIO1 I/O-Module, µSD-Card, DM-USB-Stick, Power Supply 12V 75W, RTC-Battery, Interface-set (Adapter-cables, Power-cable), 0°C...+70°C
eDM-SBC-iMX8Mm-SK1	12058498	Starterkit with eDM-SBC-iMX8Mm-Q-4G, eDM-MOD-iMX8Mm-HDMI Module, µSD-Card, DM-USB-Stick, Power Supply 12V 75W, RTC-Battery, Interface-set (Adapter-cables, Power-cable), 0°C...+70°C
eDM-SBC-iMX8Mm-SK2	12052037	Starterkit with eDM-SBC-iMX8Mm-D-2G, eDM-MOD-iMX8Mm-HDMI Module, eDM-MOD-iMX8Mm-FIO1 I/O-Module, µSD-Card, DM-USB-Stick, Power Supply 12V 75W, RTC-Battery, Interface-set (Adapter-cables, Power-cable), 0°C...+70°C
eDM-SBC-iMX8Mm-SK3	12058500	Starterkit with eDM-SBC-iMX8Mm-D-2G, eDM-MOD-iMX8Mm-HDMI Module, µSD-Card, DM-USB-Stick, Power Supply 12V 75W, RTC-Battery, Interface-set (Adapter-cables, Power-cable), 0°C...+70°C
eDM-SBC-iMX8Mm-DSPK2	12050257	Display-Kit including 7.0" LVDS Display, Touch and eDM-iMX8Mm-LVDS Adapter (add-on kit for eDM-SBC-iMX8Mm-SK / -SK2), 0°C...+70°C