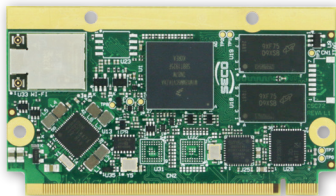




μQ7-C72

μQseven® standard module with NXP i.MX 8M Mini & NXP i.MX 8M Nano Processors

with NXP's first MPU built using advanced 14LPC FinFET process technology for more speed and improved power efficiency



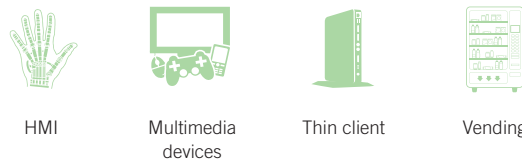
HIGHLIGHTS

CPU NXP i.MX 8M Mini Family / i.MX 8M Nano Family	CONNECTIVITY Gigabit Ethernet; opt. Wi-Fi +BT 5.0; 2 x UART; opt. CAN; 5x USB 2.0; 1 PCI-e x1
GRAPHICS GC320 2D accelerator + GCNanoUltra 3D accelerator	MEMORY Soldered on-board DDR4-2400 Memory



DEVELOPMENT | SAMPLING | PRODUCTION

MAIN FIELDS OF APPLICATION



FEATURES

Processor NXP i.MX 8M Mini Family based on ARM® Cortex®-A53 cores + general purpose Cortex®-M4 400MHz processor: <ul style="list-style-type: none"> i.MX 8M Mini Quad - Full featured, 4x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Dual - Full featured, 2x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Solo - Full featured, 1x Cortex®-A53 cores up to 1.8GHz i.MX 8M Mini Quad Lite - 4x Cortex®-A53 cores up to 1.8GHz, no VPU i.MX 8M Mini Dual Lite - 2x Cortex®-A53 cores up to 1.8GHz, no VPU i.MX 8M Mini Solo Lite - 1x Cortex®-A53 cores up to 1.8GHz, no VPU NXP i.MX 8M Nano Family based on ARM® Cortex®-A53 cores + general purpose Cortex®-M7 750MHz processor: <ul style="list-style-type: none"> i.MX 8M Nano Quad - Full featured, 4x Cortex®-A53 cores up to 1.5GHz i.MX 8M Nano Dual - Full featured, 2x Cortex®-A53 cores up to 1.5GHz i.MX 8M Nano Solo - Full featured, 1x Cortex®-A53 cores up to 1.5GHz i.MX 8M Nano Quad Lite - 4x Cortex®-A53 cores up to 1.5GHz, no VPU i.MX 8M Nano Dual Lite - 2x Cortex®-A53 cores up to 1.5GHz, no VPU i.MX 8M Nano Solo Lite - 1x Cortex®-A53 cores up to 1.8GHz, no VPU 	i.MX 8M Mini Family of processors: Vivante GC320 2D accelerator + GCNanoUltra 3D accelerator OpenGL ES 2.0, OpenVG 1.1 support i.MX 8M Nano Family of processors: Vivante GC7000UL 2D/3D GPU OpenGL ES 3.1, OpenCL1.2, Vulkan support Only for i.MX 8M Mini Family, not for Lite processors, embedded VPU able to offer: <ul style="list-style-type: none"> VP9, HEVC/H.265, AVC/H.264, VP8 HW Decoding AVC/H.264, VP8 HW encoding
Max Cores	4+1
Memory	Soldered Down onboard DDR4 memory: <ul style="list-style-type: none"> Up to 4GB of DDR4-2400, 32-bit bus memory (i.MX8M Mini) Up to 2GB of DDR4-2400, 16-bit bus memory (i.MX8M Nano)
Graphics	Single/Dual Channel 18/24 bit LVDS interface or eDP interface
Video Interfaces	Up to 1920 x 1080p
Video Resolution	Up to 1920 x 1080p
Mass Storage	eMMC 5.1 drive on-board, up to 64GB SD / MMC / SDIO interface Optional QSPI Flash for booting
Networking	Gigabit Ethernet interface Optional WiFi 802.11 a/b/g/n/ac +BT 5.0 NGFF module soldered on-board
USB	5x USB 2.0 Host ports (i.MX 8M Mini) 4x USB 2.0 Host ports (i.MX 8M Nano)
PCI-e	1 x PCI Express x 1 lane (only with i.MX 8M Mini)
Audio	I2S Audio Interface
Serial Ports	1x 4-wire UART + 1 x Debug UART Optional CAN interface
Other Interfaces	SPI interface Watchdog 8x GPIO SM Bus I2C interface

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FEATURES

Power Supply	+5V _{DC} and +5V _{SB} (optional)
Operating System	Linux (Yocto)
Operating Temperature*	0°C ÷ +60 °C (commercial temp.) -30°C ÷ +85°C (extended temp.)
Dimensions	40 x 70 mm (μQseven, 1.57" x 2.76")

*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.

BLOCK DIAGRAM

