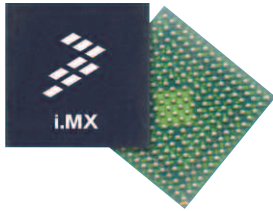




i.MX Multimedia Applications Processors

Core: i.MX27 IP Camera Reference Design



Design engineers seeking a development platform for a high-performing, low-power, feature-rich digital IP camera for video surveillance need look no further than Freescale Semiconductor. The i.MX27 IP Camera Reference Design is a

comprehensive HW/SW package that enables an OEM to accelerate months of design and focus on adding their differentiating IP, or go straight to manufacture.

The comprehensive form factor reference design is based on the powerful i.MX27 multimedia applications processor from Freescale. It delivers a high-performance, low-power, well-connected and cost-effective platform for a variety of imaging solutions, including the rapidly expanding digital IP video surveillance market. In addition to IP network cameras, the i.MX27 reference design can be used to create applications such as household doorbell products and consumer baby monitor devices. For more information on this reference design please visit www.freescale.com/imx27ipcamera.

Features ▶

- Form-factor design is powered by Freescale's i.MX27 multimedia applications processor
- Supports the Freescale Linux® 2.6 Board Support Package (BSP)
- Real-time compression of full-color 720 x 480 (D1) video in H.264, H.263 or MPEG-4 part 2 format at 30 fps
- Design supports wired and wireless streaming of compressed video data to remote host, with on-screen display for time-stamping
- Power supplied through Power-over-Ethernet (POE) or wall supply
- Web server for remote viewing of video stream, camera configuration, network setup and system control
- Motion detection over single region-of-interest
- Aptina® Mt9D131 2MP CMOS sensor provides best-in class image quality in low light conditions

Benefits ▶

- Royalty-free reference design
- Comprehensive HW/SW development kit includes camera with enclosure, tripod, design files, BOM, source code and documentation
- Multi-standard hardware video codec enables high-quality, low-power video compression while leaving ample headroom on the ARM® core to implement advanced software features

- POE allows for seamless integration into existing networks
- Freescale's i.MX27 provides the connectivity to support expandable memory storage (SD/MMC, USB) and other communication options such as Wi-Fi
- Advanced power management enables low-power design targets to be met
- Design supports industrial temperature range for outdoor applications

Freescale's i.MX27 IP Camera Reference Design Camera Unit with Enclosure and Tripod



Family Comparative Features ▶

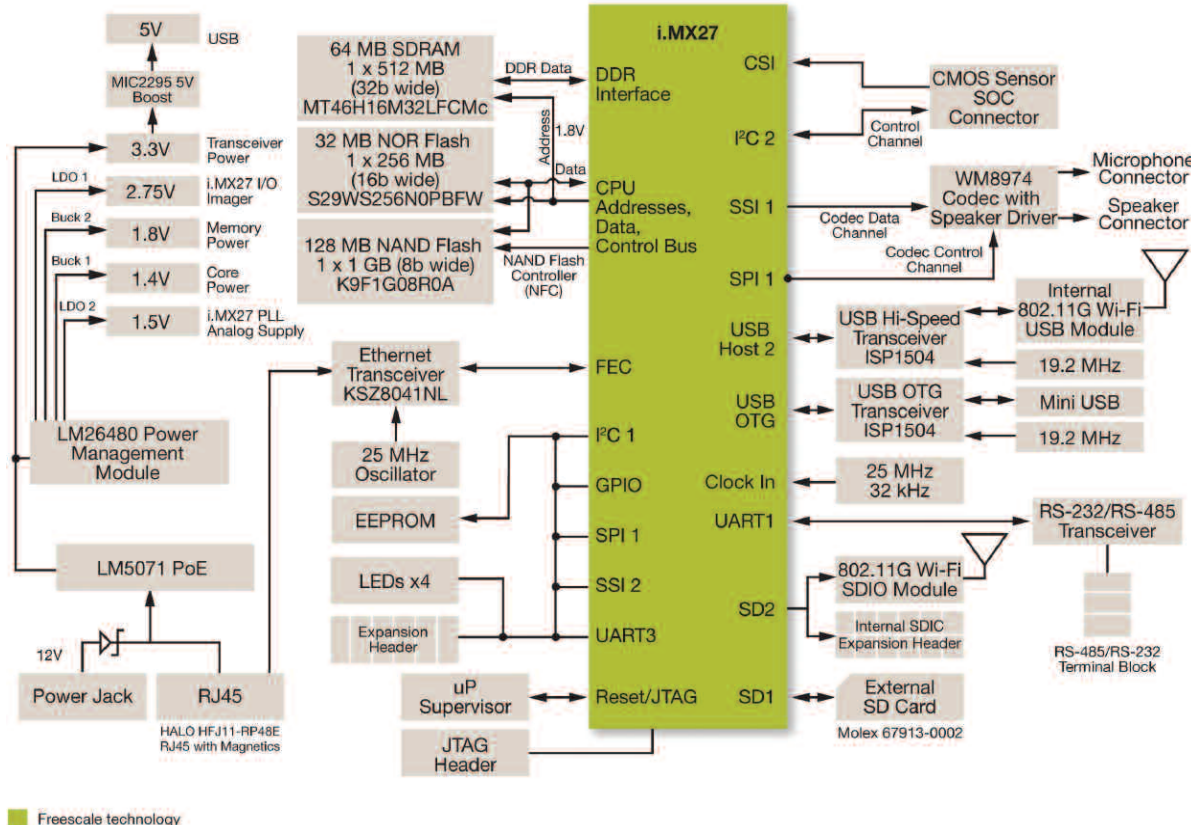
Part Number	Temperature °C	Package	Core Variant	Frequency (MHz)	Timers (channels/bits)	Serial Interface(s) (#/Type)	GPIO	Ethernet (#/Type)	USB (#/Type)	Other Key Peripherals
MCIMX27VOP4A	-20 to +85	0.65 mm pitch, 17 x 17, 404 MAPBGA	ARM926EJ-S	400	6 x 32-bit	I ² C, 3 x CSPI, SSI, 6 x UART	32	10/100 802.3 MAC	2.0 high speed OTG + 1 high speed host +1 full speed host	H.264/MPEG-4 HW video codec, HW pre-/post-processing and re-sizing, LCD controller, CMOS sensor port, SD/MMC, MemoryStick Host Controller, P-ATA
MCIMX27MOP4A	-40 to +85	0.8 mm pitch, 19 x 19, 473 MAPBGA	ARM926EJ-S	400	6 x 32-bit	I ² C, 3 x CSPI, SSI, 6 x UART	32	10/100 802.3 MAC	2.0 high speed OTG + 1 high speed host +1 full speed host	H.264/MPEG-4 HW video codec, HW pre-/post-processing and re-sizing, LCD controller, CMOS sensor port, SD/MMC, MemoryStick Host Controller, P-ATA
MCIMX27LVOP4A *	-20 to +85	0.65 mm pitch, 17 x 17, 404 MAPBGA	ARM926EJ-S	400	6 x 32-bit	I ² C, 3 x CSPI, SSI, 6 x UART	32	10/100 802.3 MAC	2.0 high speed OTG + 1 high speed host +1 full speed host	LCD controller, CMOS sensor port, SD/MMC
MCIMX27LMOP4A *	-40 to +85	0.8 mm pitch, 19 x 19, 473 MAPBGA	ARM926EJ-S	400	6 x 32-bit	I ² C, 3 x CSPI, SSI, 6 x UART	32	10/100 802.3 MAC	2.0 high speed OTG + 1 high speed host +1 full speed host	LCD controller, CMOS sensor port, SD/MMC

* Not recommended for IP camera due to reduced peripheral set

Development Tools Matrix ▶

Type	Description	Part Number
i.MX27 IP Camera Kit	Turn-key reference design including IP camera unit with plastics, tripod, high-quality lens and Linux board support package	MCIMX27IPCAM
i.MX27 ADS	Complete hardware development system with power management board, includes LCD, camera and Linux and WinCE board support packages	MCIMX27ADSE
i.MX27 Zoom LiteKit	Low-cost development kit for basic evaluation and application development; peripheral accessories and software available separately	MCIMX27LITEKIT

i.MX27 Applications Processor IP Camera Reference Design



For more information on Arrow's ARM solutions, pricing, and availability, visit www.arrow.com/arm or call 1-866-910-3650.