



M3C Series

H.264 Encoder SoC with Integrated Fisheye Correction Function

Models		M388C	M392C
Host Controller		ARM926EJ™ 600MHz	ARM926EJ™ 800MHz
Video Compression	H.264 Profile	H.264/MPEG-4 AVC (ISO/IEC 14496-10) baseline, main, and high profile@Level 4.1	
	H.264 Performance	1080p@30fps+D1@30fps	1080p@30fps+720p@30fps
	H.264 ROI Encoding	Up to 8 independent ROI windows. Support different quality and frame rate in each ROI region.	
	H.264 SVC-T Encoding	Up to 4 layers	
	MJPEG Performance	2M@30fps	
Video Input I/F	Bayer	Up to two 12-bit channels	
	MIPI Rx	Up to one 2-lane channel	
	BT.1120	Up to one channel	
	BT.656	Up to two channels (including one MUX-4 channel)	
	BT.601	Up to two channels	
Video Output I/F	8-bit BT.656	Support	
	16-bit BT.1120	Support	
	RGB 888	Support	
	sRGB (i80-50MP)	Support	
	CVBS	Support	
Image Pipeline		Up to two channels	
Image Signal Processing		Fisheye correction	
		Geometric lens distortion correction	
		Lens shading correction	
		Chromatic aberration correction	
		Fixed pattern noise removal	
		Saturation, Brightness and Contrast adjustment	
		Statistic data output for customized 3A process	
		Static and dynamic defect pixel correction	
		Separated black clamp for R/G _B /G _B /B	
		Crop, mirror, flip, rotation	
		Color correction (3x3 RGB to RGB matrix with offset)	
		Gamma correction (12-bit to 8-bit correction table)	
		Separated digital gain control for R/G/B	
		Digital WDR (local tone mapping)	
		2D/3D noise reduction	
		Edge enhancement	
		Motion detection	
De-interlace			
Privacy mask (support arbitray mask shape)			
Resize (support arbitrary scaling ratio from 1/4x to 4x, up to four size-down channels simultaneously)			
Video Analytic		Intelligent classifier	
Audio Interface		Built-in audio codec with LSPK (mono differential output up to 500mW)	
		Full duplex	
		Single channel	
SDRAM I/F		16-bit DDR3 SDRAM port (400MHz, 4Gb) x1	16-bit DDR3 SDRAM port (533MHz, 4Gb) x1
USB		USB 2.0 OTG x1	
Ethernet MAC		10/100/1000M (support MII, RMII, and 3.3V RGMII)	
MMC/SD/SDIO		x2, support up to UHS-1 SDXC; One for SDIO only	
NAND Flash		x1	
UART		x4 Tx/Rx, or x2 Tx/Rx and x1 RS485, or x1 full function	
ADC		x4, 10-bit resolution	
I2C		x3	
RTC		x1 (<18uW@3.3V mode, <3uW@1.2V mode)	
IrDA		x1	
SPI		x2	
GPIO		Up to 96 bits (16 dedicated pins)	
PWM		x8	
XTAL		12MHz (for system) and 32.768KHz (for RTC)	
Clock Generator		4 configurable clock sources	
Operating Voltage		Core: 1.2V	
		I/O: 1.5V (for DDR3) and 3.3V	
Package		TFBGA361 (19x19)	
		Ball Pitch: 0.65mm	
		Dimension: 13mm x 13mm	
Power Consumption		1.0W	1.4W

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