

Micron® Memory Support for Renesas® Platforms

		Internal	External Memory												
			NOR		NAND				DRAM						
Micron Memory	Product	Flash Embedded in Renesas Controller	Serial NOR, Xcelera™	Parallel NOR	SLC NAND	e.MMC	SSD	μSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM	
	Family		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48	
	Voltage		1.8V, 3.3V	3.3V	1.8V, 3.3V	3.3V	3.3V, 5V	–	3.3V, 5V	VDD1: 1.8V VDD2: 1.1V VDDQ: 1.1V/0.6V	1.2V	1.35V, 1.5V	1.8V	3.3V	
	Speed		50–200 MHz SDR/DDR	Async 70–105ns	ONFI 1.0/2.2	e.MMC 4.41, 4.51, 5.1	SATA 6 Gb/s	Class 10 (UHS-I U1)	USB 2.0, 3.1	3200–4266 Mb/s	3200 Mb/s	1600–2133 Mb/s	800 Mb/s	133–167 MHz	
	Width		x4, x8	x8, x16	x1, x2, x4 (SPI) x8 x16 (Parallel)	–	–	–	–	x32	x8, x16	x8, x16	x8, x16	x8, x16, x32	
	Density		128Mb–2Gb	128Mb–2Gb	1Gb–256Gb	4GB–128GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb	
System on Chips (SOCs) Aligned with Micron Memory															
Renesas Products	R-Car H3, M3, E3	–	✓	✓*	M3, E3	e.MMC 5.0	✓*	✓*	✓*	H3: 3200 Mb/s, 128 bits M3: 3200 Mb/s, 64 bits		E3: 1866 Mb/s, 32 bits			
	R-Car H2, M2, E2	–	MT25T, MT25Q	✓*		e.MMC 4.41	H2, M2: 2ch 3 Gb/s	✓*	H2: 4 ports, M2: 3 ports, E2: 2 ports			1600 Mb/s, H2: 32 bits x 2ch M2, E2: 32 bits x 1ch			
	R-Car V3U		2ch: MT25Q, 1ch: MT35X, MT25T			e.MMC 5.0				4266 Mb/s, 128 bits					
	R-Car V3H, V3M	–	2ch: MT25Q, 1ch: MT35X, MT25T	✓*		V3M: e.MMC 4.51, V3H: eMMC 5.0				V3H: 3200 Mb/s, 32 bits		V3M: 1600 Mb/s, 32 bits			
	R-CAR V2H	–	MT25T, MT25Q	✓*				✓*				1600 Mb/s, 32 bits x 1ch			
	R-Car D3	–	2ch: MT25Q, 1ch: MT35X, MT25T		✓*	✓*			USB 2.0				1866 Mb/s, 16 bits x 1ch		
	R-Car D1	–	✓*		✓*	(e.MMC 4.41)			✓*				✓		
Microcontrollers (MCUs) for Automotive Aligned with Micron Memory															
	RH850/ D1Mx, D1Lx	5MB MAX (code) + 8KB (data)	D1L1: x4 SDR (40 MHz) D1L2: x4 SDR (120 MHz)/ DTR (80 MHz) D1Mx, D1L2H: x8 SDR (120 MHz)/ DTR (80 MHz)										D1M2: 240 MHz, x16/ D1M2H: 240 MHz, x32	D1M1H: 80 MHz, x32	

*For additional details, please contact your local Micron sales representative.

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	Family	Serial NOR, Xccela™	Parallel NOR	SLC NAND	e.MMC	SSD	µSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM	
	Voltage	Flash Embedded in Renesas Controller	MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48
	Speed		1.8V, 3.3V	3.3V	1.8V, 3.3V	3.3V	3.3V, 5V	–	3.3V, 5V	VDD1: 1.8V, VDD2: 1.1V VDDQ: 1.1V/0.6V	1.2V	1.35V, 1.5V	1.8V	3.3V
	Width		50–200 MHz SDR/DDR	Async 70–105ns	ONFI 1.0/2.2	e.MMC 4.41, 4.51, 5.1	SATA 6 Gb/s	Class 10 (UHS-I U1)	USB 2.0, 3.1	3200–4266 Mb/s	3200 Mb/s	1600–2133 Mb/s	800 Mb/s	133–167 MHz
	Density		x4, x8	x8, x16	x1, x2, x4 (SPI) x8 x16 (Parallel)	–	–	–	–	x32	x8, x16	x8, x16	x8, x16	x8, x16, x32
			128Mb–2Gb	128Mb–2Gb	1Gb–256Gb	4GB–128GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb
Renesas Products														
Microprocessors (MPUs) Aligned with Micron Memory														
RZ/A2M	–	✓ Xccela: 132 MHz QSPI: x1/4/8, 33 MHz		✓*	✓*		✓*	✓*					✓*	
RZ/A1H, A1M, A1LU, A1LC, A1L	–	✓ QSPI, SDR/DDR, 50 MHz MAX, 2ch	✓	✓*	✓		✓*	✓*					✓*	
RZ/G2H, G2M, G2N, G2E	–	✓* QSPI, DDR, 160 MHz MAX, 2ch			✓* e.MMC 5.0, HS400	✓* G2H, G2N	✓*	✓*	✓* G2H: 3200 Mb/s x32 x 1ch G2M: 3200 Mb/s x32 x 2ch G2N: 3200 Mb/s x32 x 4ch		✓* G2E: 1856 Mb/s x32 x 1ch			
RZ/G2L, G2LC, G2UL	–	✓* G2L: QSPI, 50 MHz DDR, 66 MHz SDR, 100 MHz x8 G2LC: QSPI, 50 MHz DDR/ 66MHz SDR, 1ch			✓* e.MMC 4.51		✓*	✓*		✓* 1600 Mb/s x16 x1ch	✓* 1333 Mb/s x16 x1ch			
RZ/G1H, G1M, G1N, G1E, G1C	–	✓* QSPI, SDR, 97.5 MHz MAX, 1ch	✓*		✓* e.MMC 4.41	✓* G1H, G1M, G1N, G1E	✓*	✓*			✓* G1H: 1600Mb/s x32 x 2ch G1M: 1600Mb/s x32 x 2ch G1N: 1600Mb/s x32 x 1ch G1E: 1333Mb/s x32 x 1ch G1C: 1000Mbx x32 x 1ch			
RZ/T1, T1-M	–	✓*											✓* T1: 32-bit bus	
RZ/N1D, N1S, N1L	–	✓* MT25Q	✓*	✓*	✓*		✓*	✓*		✓* N1D only	✓* N1D only			
RZ/V2M	–			✓*	✓* e.MMC 4.51		✓*	✓*	✓* 3200 Mb/s x32 x 1ch					

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	Voltage		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48
	Speed		1.8V, 3.3V	3.3V	1.8V, 3.3V	3.3V	3.3V, 5V	–	3.3V, 5V	VDD1: 1.8V VDD2: 1.1V VDDQ: 1.1V/0.6V	1.2V	1.35V, 1.5V	1.8V	3.3V
	Width		50–200 MHz SDR/DDR	Async 70–105ns	ONFI 1.0/2.2	e.MMC 4.41, 4.51, 5.1	SATA 6 Gb/s	Class 10 (UHS-I U1)	USB 2.0, 3.1	3200-4266 Mb/s	3200 Mb/s	1600–2133 Mb/s	800 Mb/s	133–167 MHz
	Density		x4, x8	x8, x16	x1, x2, x4 (SPI) x8 x16 (Parallel)	–	–	–	–	x32	x8, x16	x8, x16	x8, x16	x8, x16, x32
	Density		128Mb–2Gb	128Mb–2Gb	1Gb–256Gb	4GB–128GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb
Renesas Products														
Microcontrollers (MCUs) Aligned with Micron Memory														
RX700, RX600	4MB MAX (code) + 64KB (data)	✓ QSPI, SDR 60 MHz			✓ e.MMC 4.41		✓	✓					✓ 60 MHz, MAX 80 MHz for RX72M, x8/x16/x32	
RX200, RX100	1MB MAX (code) + 8KB (data)	No external memory interface (except eUSB for RX111/113/230/231)												
R-IN32M3, M4	–	✓ x1/x2/x4 SDR 50 MHz	✓											
S7G2	4MB + 64KB	✓ QSPI			✓ e.MMC 4.51		✓	✓					✓ 60/120 MHz	
S5D3, S5D5, S5D9	2MB MAX (code) + 64KB MAX (data)	✓ QSPI			✓ e.MMC 4.51		✓	✓						
S3A1, S3A3, S3A6, S3A7	1MB MAX (code) + 16KB MAX (data)	✓ QSPI			✓ e.MMC 4.51		✓	✓						
S124, S128, S1JA	256MB MAX (code) + 8KB MAX (data)	✓ QSPI						✓						
RA2, RA4, RA6, RA8	1MB MAX (code) + 64KB MAX (data)	✓ QSPI/Xccela			✓ RA6: e.MMC 4.51		✓	✓						

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