



Platforms in Partnership with

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Micron® Memory Support for Renesas® Platforms

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		Internal	Micron External Memory												
			NOR		NAND						DRAM				
Micron Memory	Product	Flash Embedded in Renesas Controller	Serial NOR, Xccela™	Parallel NOR	SLC NAND	e.MMC	UFS	SSD	μSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM
	Family		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48
	Voltage		1.8V, 3.3V	3.3V	1.8V, 3.3V	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	UFS 3.1	SATA 6 Gb/s PCIe Gen 3	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	128GB–256GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb
Renesas Products	System on Chips (SOCs) Aligned with Micron Memory														
	R-Car S4	–	✓			✓ e.MMC 5.0	✓	✓ (PCIe)	✓		✓ (3200 Mb/s, 32 bits)				
	R-Car H3, M3, E3, H3e, H3Ne, M3e, M3Ne, E3e	–	✓			✓ e.MMC 5.0		✓ (SATA)	✓	✓	✓ 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: SATA 2ch	✓	✓ H2, M2: 4 ports, E2: 2 ports			✓ 1600 Mb/s, H2, M2: 32 bits x 2ch E2: 32 bits x 1ch		
	R-Car V3U		✓ 2ch: MT25Q, 1ch: MT35X, MT25T			✓ e.MMC 5.0					✓ 4266 Mb/s, 128 bits				
	R-Car V3H2, 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	✓	✓	✓ e.MMC 4.41			✓				✓ 1600 Mb/s, 32 bits x 1ch		
	R-Car D3, D3e	–	✓ 2ch: MT25Q, 1ch: MT35X, MT25T		✓	✓							✓ 1866 Mb/s, 16 bits x 1ch		
	R-Car D1	–	✓		✓	✓ (e.MMC 4.41)				✓			✓		
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		Internal	External Memory												
			NOR		NAND					DRAM					
Micron Memory	Product	Flash Embedded in Renesas Controller	Serial NOR, Xccela™	Parallel NOR	SLC NAND	e.MMC	UFS	SSD	µSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM
	Family		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48
	Voltage		1.8V, 3.3V	3.3V	1.8V, 3.3V	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	UFS 3.1	SATA 6 Gb/s PCIe Gen 3	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	128GB–256GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb
Renesas Products	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	
	RH850/ U2A16	16MB max. (code) + 512KB (data)				✓									
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		Internal	External Memory												
			NOR		NAND						DRAM				
Micron Memory	Product	Flash Embedded in Renesas Controller	Serial NOR, Xccela™	Parallel NOR	SLC NAND	e.MMC	UFS	SSD	µSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM
	Family		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48
	Voltage		1.8V, 3.3V	3.3V	1.8V, 3.3V	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	UFS 2.1, UFS 3.1	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	2GB–128GB	32GB–256GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb
Renesas Products	Microprocessors (MPUs) Aligned with Micron Memory														
	RZ/V2M, V2L	–	✓ V2L: Xccela 100 MHz QSPI SDR/DDR 66/50 MHz			✓ e.MMC 4.51			✓	✓	✓ (V2M: 3200 Mb/s, x32 1ch)	✓ (V2L: 1600 Mb/s, x16 1ch)	✓ (V2L: 1600 Mb/s, x16 1ch)		
	RZ/A2M	–	✓ Xccela: 132 MHz QSPI: x1, 55 MHz		✓	✓ e.MMC 4.51			✓	✓					✓
	RZ/A1H, A1M, A1LU, A1LC, A1L	–	✓ A1H, A1M: QSPI SDR 50 MHz, 1/2ch A1LU, A1L: QSPI SDR 66 MHz 1ch	✓	✓	✓ e.MMC 4.41			✓	✓					✓
	RZ/G2H, G2M, G2N, G2E	–	✓ G2H,M,N: QSPI DDR 160 MHz MAX x4/x8 G2E: QSPI DDR 150/160 MHz MAX x4/x8			✓ e.MMC 5.0, HS400		✓ G2H, G2N: SATA Gen3	✓	✓	✓ 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 x 1ch	✓ 1333 Mb/s x16 x 1ch		
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		Internal	External Memory													
			NOR		NAND						DRAM					
Micron Memory	Product	Flash Embedded in Renesas Controller	Serial NOR, Xccela™	Parallel NOR	SLC NAND	e.MMC	UFS	SSD	μSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM	
	Family		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48	
	Voltage		1.8V, 3.3V	3.3V	1.8V, 3.3V	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	UFS 2.1, UFS 3.1	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	2GB–128GB	32GB–256GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb	
Renesas Products	Microprocessors (MPUs) Aligned with Micron Memory															
	RZ/G1H, G1M, G1N, G1E	–	✓ QSPI SDR 48.75 MHz MAX, 1ch	✓		✓ e.MMC 4.41		✓ G1H, G1M, G1N: SATA Gen3	✓	✓			✓ DDR3: G1H: 1600Mb/s x32 x 2ch G1E: 1333Mb/s x32 x 1ch DDR3L: G1M: 1600Mb/s x32 x 2ch G1N: 1600Mb/s x32 x 1ch			
	RZ/T1, T1-M	–	✓	✓						✓					✓ T1: 32-bit bus	
	RZ/N1D, N1S, N1L	–	✓ MT25Q		✓	✓			✓	✓			✓ N1D only	✓ N1D only		
	Microcontrollers (MCUs) Aligned with Micron Memory															
	RX700, RX600	4MB MAX code + 64KB data	✓ QSPI, SDR 60 MHz			✓ e.MMC 4.51				✓	✓					✓ 60 MHz MAX 80MHz for RX72M, x8/x16/x32
	RX200, RX100	1MB MAX code + 8KB MAX data	No external memory interface (except eUSB for RX111/113/230/231)													
R-IN32M3, M4	–	✓ x1/x2/x4, SDR, 50 MHz	✓													
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			Internal	External Memory											
			NOR		NAND					DRAM					
Micron Memory	Product	Flash Embedded in Renesas Controller	Serial NOR, Xccela™	Parallel NOR	SLC NAND	e.MMC	UFS	SSD	μSD/SD	eUSB	LPDDR4/4X	DDR4	DDR3/3L	DDR2	SDR SDRAM
	Family		MT35X, MT25T, MT25Q	MT28EW, MT29FW	MT29F	MTFC	MTFC	MTFD	MTSD	MTED	MT53	MT40	MT41	MT47	MT48
	Voltage		1.8V, 3.3V	3.3V	1.8V, 3.3V	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	UFS 2.1, UFS 3.1	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	2GB–128GB	32GB–256GB	>64GB	>8GB	2GB–32GB	4Gb–64Gb	8Gb–16Gb	1Gb–8Gb	512Mb–2Gb	64Mb–256Mb
Renesas Products	Microcontrollers (MCUs) Aligned with Micron Memory														
	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	256KB MAX code + 8KB MAX data	✔ QSPI							✔					
	RE01-1500KB, RE01-256K	1.5MB MAX code	✔ QSPI							✔ 1500KB					
	RA2, RA4, RA6, RA8	1MB MAX code + 64KB MAX data	✔ QSPI/Xccela			✔ RA6: eMMC 4.51			✔	✔					
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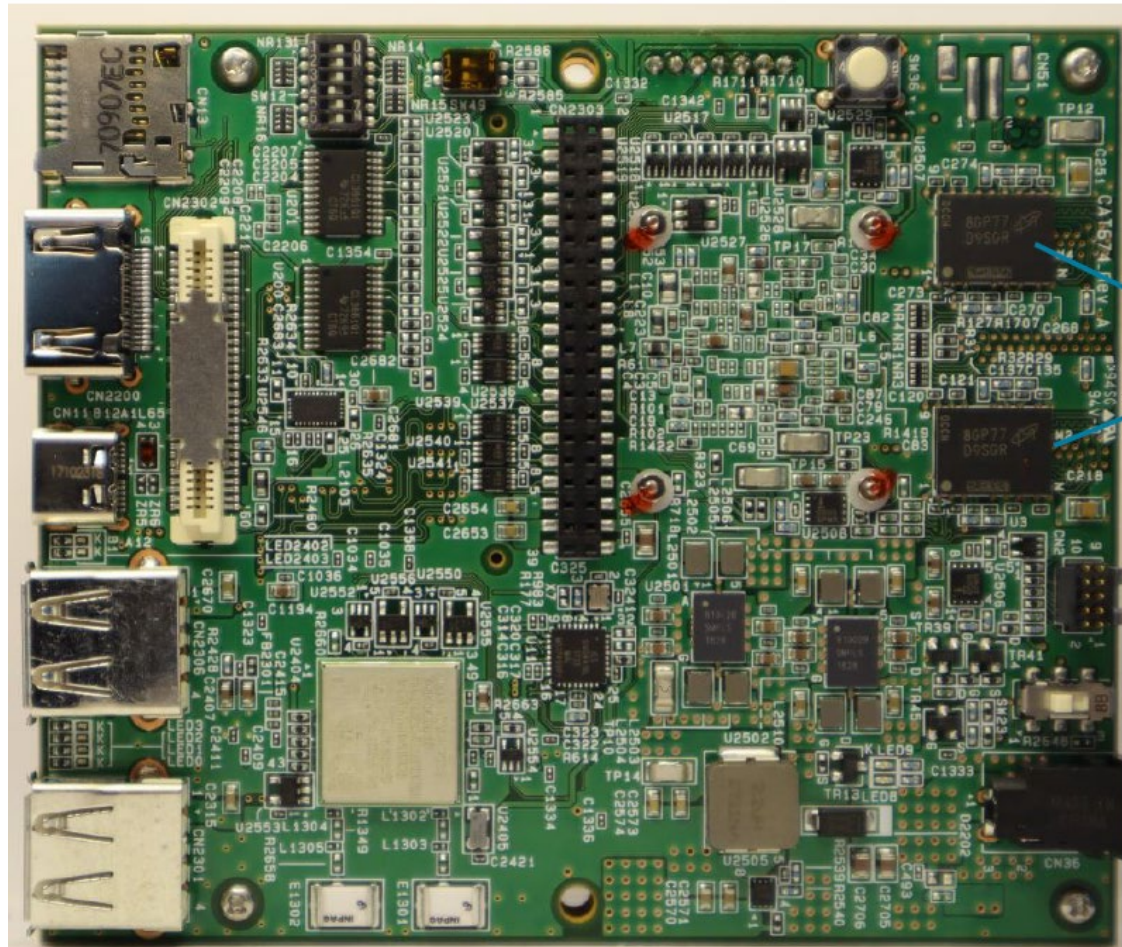
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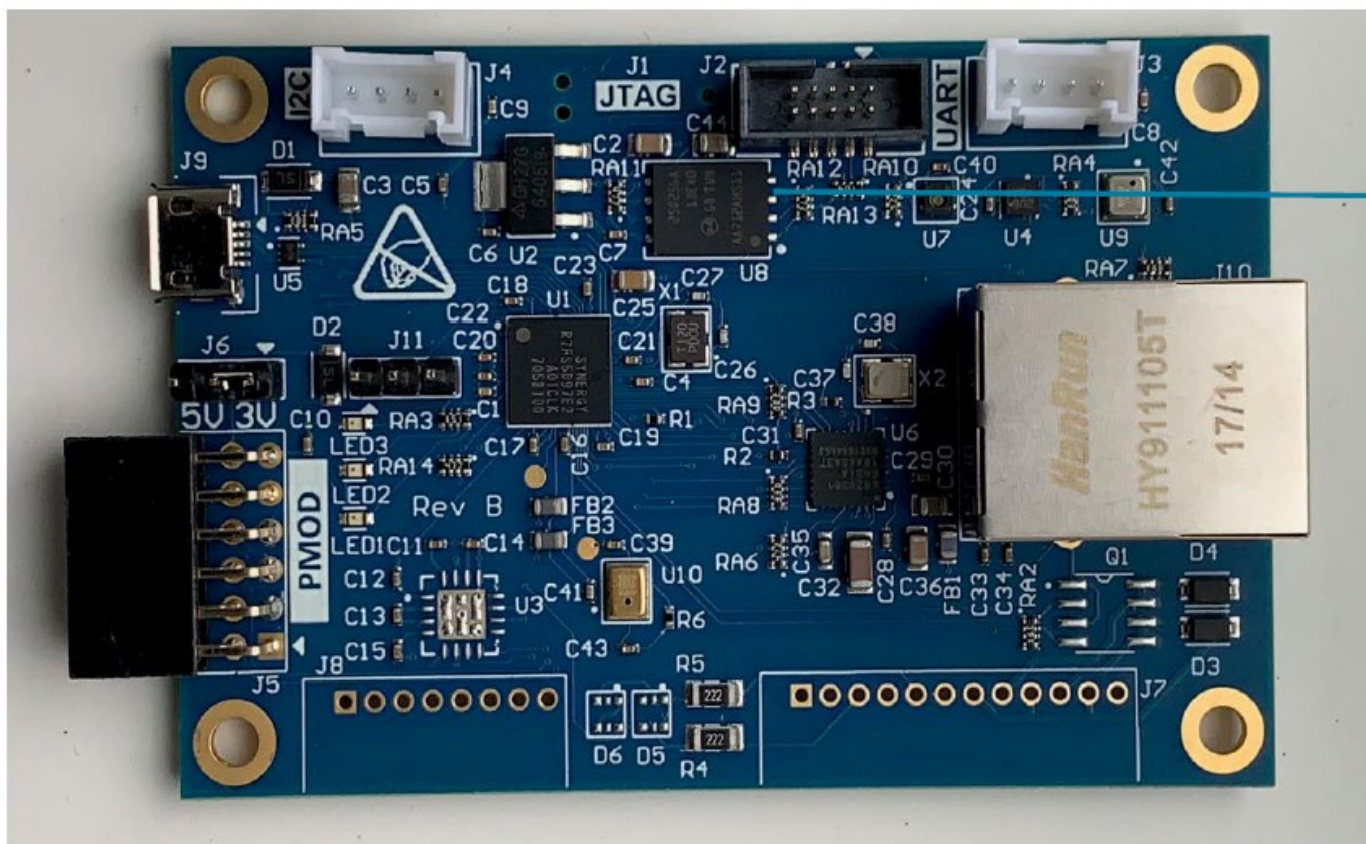


RZ/G2E Board – Top Side



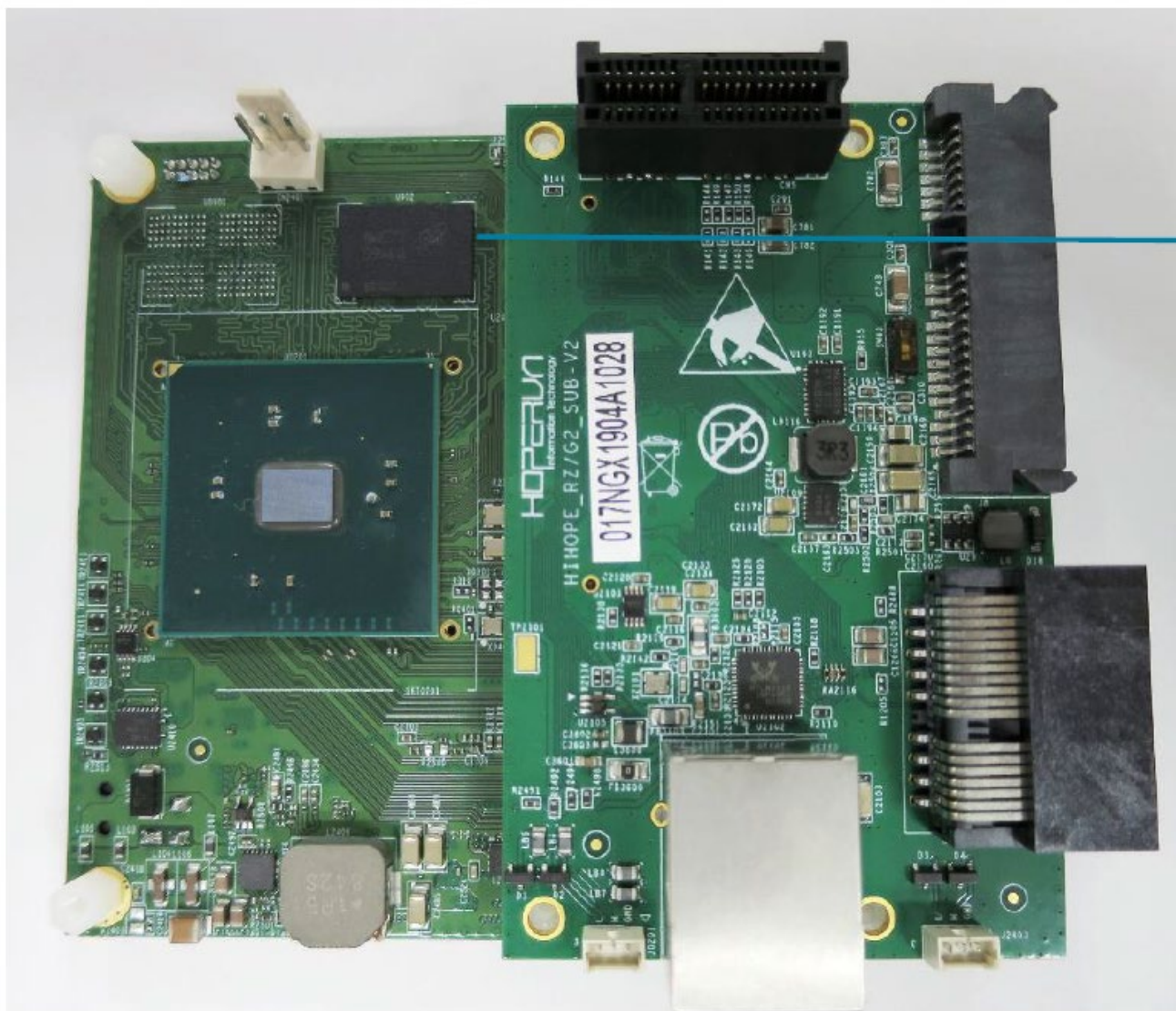
2GB total
Qty 4
4Gb DDR3
components

Synergy AE-CLOUD1 Platform



256Mb
Quad SPI
NOR

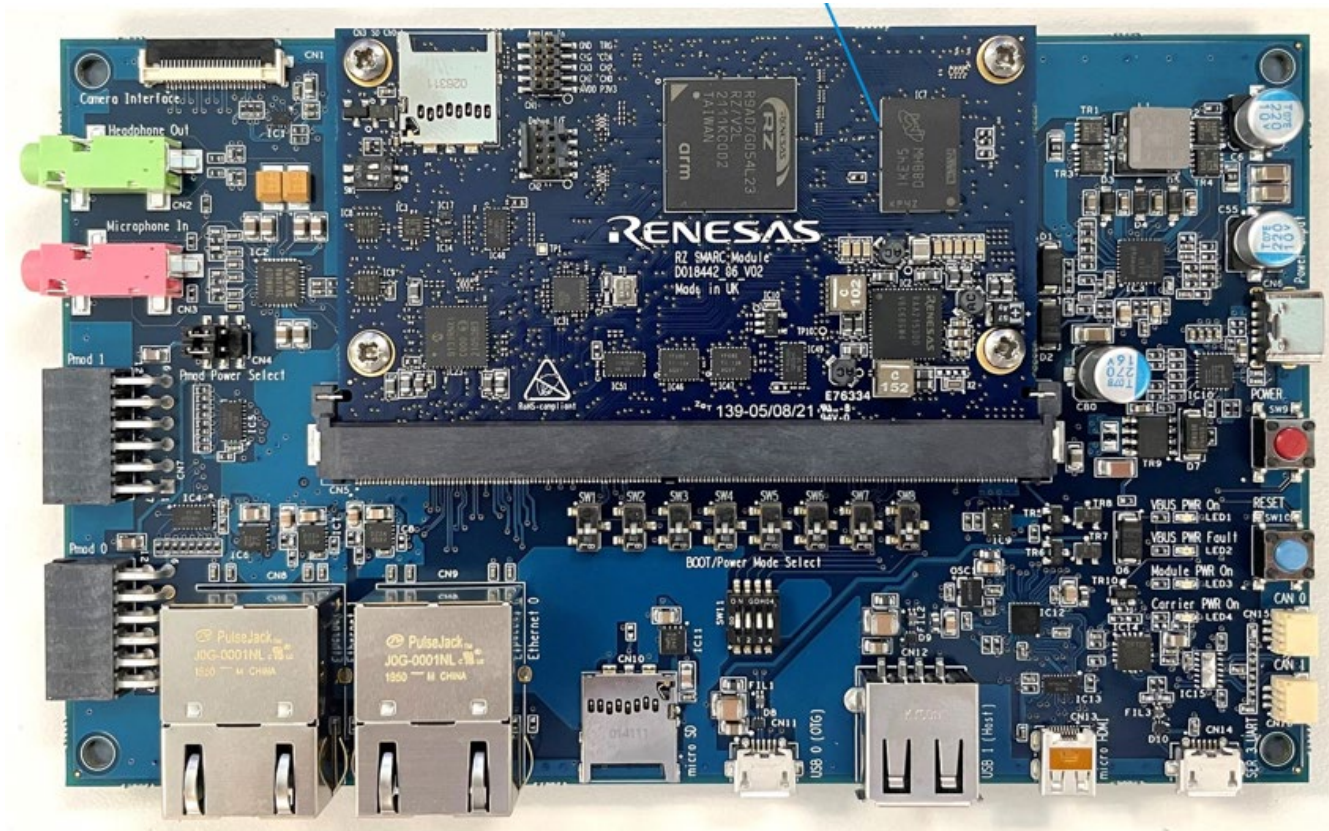
RZ/G2N Board



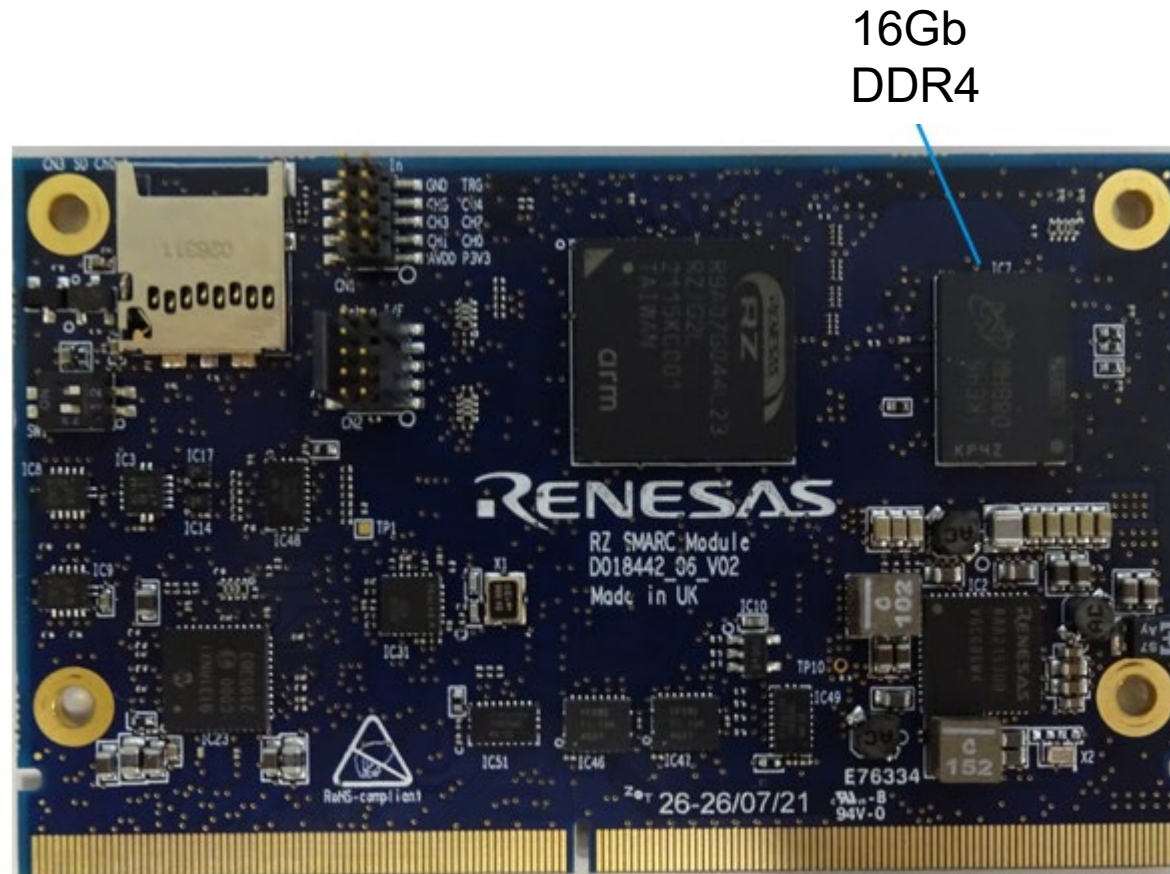
32GB
LPDDR4

RZ/V2L EVK Board – Top Side

16Gb
DDR4



RZ/G2L Board – Top Side



RZ/G2L Board – Bottom Side

512Mb
Quad SPI NOR

64GB
e.MMC



