



Product Selection Table for RFID ICs

More information available at www.emmicroelectronic.com

Part #	Standard Compliance	Read Only Memory [bit]	Read Write [user] memory [bit]	Anticollision	Resonant capacitor [pF]	Security	Data Rate [kbits/s]	Application Segments											Comments
								Logistics Supply Chain Tracking & Tracing	Security & Access Control	Library	Laundry	Anti-Counterfeit	Animal	Public Transportation	e Documents	Pairing			
Low Frequency Transponder ICs																			
EM4200	ISO 11784 / 11785 EM4100 / EM4102	128	-		75 / 250		2, 4	X	X	X		X	X	X			Replacement of EM4100, EM4102, EM4005 and EM4105		
EM4205 / 4305	ISO 11784 / 11785 BDE waste mgmt	64	416		210 / 250 / 330	32 bit password lock bits	2 up to 16		X	X			X	X		X	Multi protocol, multi purpose High security pigeon races		
EM4450		64	1024		170	32 bit password	2, 4		X	X									
Low Frequency Reader IC Products																			
EM4095	Multi-protocol Multi-purpose						up to 8	X	X	X	X	X	X			X	Cost optimised solution with minimum external components		
Demo Readers - Development kit		Description																	
EMDB409	ISO11784 / 11785	EM4095 LF Development Kit for 125 kHz products															EM4095 reference design for quick reader development		
High Frequency Transponder ICs																			
EM4033	ISO 15693 / 18000-3	64	-	RTF: slotted aloha	23.5		6.62 26.69	X	X	X	X	X					Cost optimized solution for UID based applications		
EM4133	ISO 15693 / 18000-3	64	304	RTF: slotted aloha	23.5 / 97	32 bit password lock bits	6.62 26.69	X		X		X					Memory access password protected		
EM4233SLIC	ISO 15693 / 18000-3	64	1024	RTF: slotted aloha	23.5 / 97	32 bit password lock bits	6.62 26.69	X			X		X			X	Compliant with existing systems Password protected AFI/EAS 60 years data retention		
EM4233-2K	ISO 15693 / 18000-3	64	1664	RTF: slotted aloha	23.5 / 97	Mutual Authentication	6.62 26.69	X		X	X		X				For multi application with high secure memory management		
High Frequency Reader IC Products																			
EM4094	ISO 14443 A&B, NFC ISO 15693						up to 424	X	X	X	X	X	X			X	Multi protocol and cost optimized HF reader solution		
EM4294	ISO 14443 A&B, NFC ISO 15693 ISO7816 Class A, B		40kBytes			Cryptos EM4233 & 3'DES	up to 424	X	X	X	X	X	X		X	X	Multi protocol reader solution with crypto co-processor and authentication key management		
Demo Readers - Development kit		Description																	
EMDB408	ISO 14443 A&B ISO 15693	EM4094 HF Development Kit for 13.56 MHz products															Crypto EM4233	up to 424	EM4094 reference design for quick reader development
EMDB410	ISO 14443 A&B ISO 15693	EM4294 Development Kit for high secured 13.56MHz products															Cryptos EM4233 & 3'DES	up to 424	EM4294 reference design for quick reader development
Dual Interface / Contactless Smart Card Products																			
EM4830RF	ISO 14443 Type A ISO 14443 Type B	UID up to 11 bytes	up to 130k Bytes Flash memory for OS and application data	RTF: slotted aloha	17 / 27	DES / 3DES	106 up to 847			X					X	X	Fast time to market and high flexibility at product personalization level offered by the Flash memory for OS and application data		
EM4830DUAL	ISO 14443 Type A ISO 14443 Type B ISO7816 Class A, B	UID up to 11 bytes	up to 130k Bytes Flash memory for OS and application data	RTF: slotted aloha	17 / 27	DES / 3DES	106 up to 847			X					X	X			
High Frequency Reader IC Products																			
EM4294	ISO 14443 A&B, NFC ISO 15693 ISO7816 Class A, B		40kBytes			Cryptos EM4233 & 3'DES	up to 424	X	X	X	X	X	X		X	X	Multi protocol reader solution with crypto co-processor and authentication key management		
Development tools		Description																	
EMX4830	ISO 14443 A&B ISO 15693 ISO7816 class A, B	EM Contact/Contactless Emulator															3 * DES	106 up to 847	Keil Software Environment
Ultra High Frequency & Microwave Products																			
EM4123	IP-X Tag Talk Only (TTO)	64	-	TTO: free running			up to 256	X					X				Simplest communication protocol. Cost optimized solution for UID based applications		
EM4324	EPC Class 1 Gen 2 ISO 18000-6C	64	720	RTF: slotted aloha		32 bit password	up to 640	X	X				X				Battery Assisted Passive (BAP) with passive back-up mode Several tens of meters read range		
EM4325	EPC Class 1 Gen 2 ISO 18000-6C ISO 18000-6D (TOTAL)	64	4096	RTF: slotted aloha / TOTAL: free running if no ePC communication		32 bit password	up to 640	X	X								Battery Assisted Passive (BAP) for superior reading range. Embedded Temperature sensor with alarm detection Programmable 4-bit I/O, SPI interface for external uC/sensors		
UHF Encoder/Decoder Reader IC Products																			
EM4298	EPC Class 1 Gen 2 ISO 18000-6C/D						up to 640	X	X				X			X	Multi-protocol UHF Baseband Processor		
Demo Readers - Development kit		Description																	
EMDB411	IP-X / ISO18000-6C	EM4298 Development Kit for UHF products															EM4298 reference design for quick reader development		
EMDB412	IP-X / ISO18000-6C	EM Development Kit for UHF products																	
Analog Front End for Active Transponders																			
EM4083	Multi-protocol		432				up to 64		X	X							3D long range AM receiver		
Low Frequency Reader IC Products																			
EM4095	Multi-protocol						up to 8	X	X	X	X	X	X			X	Cost optimised solution		
Demo Readers - Development kit		Description																	
EMDB403		EM4083 Development Kit																	

Development kits contain PC Software, firmware source code in C language, PCB Gerber files, hardware schematics, user's manual and application notes

TTO : Tag Talk Only
RTF : Reader Tag First
TOTAL : Tag Only Talk After Listening

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