

NXP NFC & contactless reader solutions

Product	Connected NFC tag solutions				NFC frontend solutions								NFC controller solutions								
	NTAG 213F	NTAG 216F	NTAG 1Pc 1k	NTAG 1Pc 2k	MFRCS22	MFRCS23	SLRC610	MFR630	MFR631	CLRC663	PN5120A0HN1	PN5120A0HN	PN5120A0ET	PN5180	PN532	PN533	PR533	PN7120	PR601 (incl. LPC1227)	PRH601 (incl. LPC1227)	
Product description	Passive NFC tag with field-detection output signal, 144 bytes	Passive NFC tag with field-detection output signal, 888 bytes	Passive NFC tag with IC interface, 888 bytes	Passive NFC tag with IC interface, 1906 bytes	Standard 3 V MIFARE front-end, v2.0	Standard 3 V ISO/IEC 14443 A/B front-end, v2.0	High-performance ISO/IEC 15693 front-end	High-performance MIFARE front-end	High-performance ISO/IEC 14443 A/B front-end	High-performance multi-protocol NFC front-end	Full NFC Forum-compliant front-end, 8-bit parallel interface, HVQFN32	Full NFC Forum-compliant front-end, 8-bit parallel interface, HVQFN40	Full NFC Forum-compliant front-end, TFPGA64	High-performance multi-protocol full NFC Forum-compliant front-end	NFC controller with integrated FW	USB NFC controller with integrated FW	USB NFC controller with integrated FW	Full NFC Forum-compliant controller with integrated FW and NCI interface	High-performance multi-protocol NFC controller with customizable FW	High-performance multi-protocol NFC controller with customizable FW	
Contactless / NFC functionality	Tag	Tag	Tag	Tag	Reader/writer	Reader/writer	Reader/writer	Reader/writer	Reader/writer	NFC reader/writer	NFC reader/writer, P2P, card emulation	NFC reader/writer, P2P, card emulation	NFC reader/writer, P2P, card emulation	NFC reader/writer, P2P, card emulation	NFC controller with integrated FW	USB NFC controller with integrated FW	USB NFC controller with integrated FW	Full NFC Forum-compliant controller with integrated FW and NCI interface	High-performance multi-protocol NFC controller with customizable FW	High-performance multi-protocol NFC controller with customizable FW	
Integrated microcontroller	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Integrated FW	Integrated FW	Integrated FW	Integrated FW	LPC1227 for customer code	LPC1227 for customer code	
Carrier frequency [MHz]	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56	13.56 and 0.125 ⁽⁵⁾	
Standards & protocols																					
NFC Forum compliance	Tag type 2	Tag type 2	Tag type 2	Tag type 2	-	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-	-	Yes	-	-	
Reader/writer	-	-	-	-	ISO/IEC 14443 A	ISO/IEC 14443 A/B	ISO/IEC 15693	ISO/IEC 14443 A	ISO/IEC 14443 A/B	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa, ISO/IEC 15693	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa	ISO/IEC 14443 A/B, FeliCa	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa, ISO/IEC 15693	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa, ISO/IEC 15693	ISO/IEC 18092, ISO/IEC 14443 A/B, FeliCa, ISO/IEC 15693, HITAG	
NFC tag type support	-	-	-	-	1, 2, 4	1, 2, 4	-	1, 2, 4 ⁽⁶⁾	1, 2, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	
ISO/IEC 14443 baudrate [kbit/s]	-	-	-	-	106/212/424/848	106/212/424/848	-	106/212/424/848	106/212/424/848	106/212/424/848	106/212/424	106/212/424	106/212/424	106/212/424	106/212/424	106/212/424	106/212/424/848	106/212/424/848	106/212/424/848	106/212/424/848	
FeliCa baudrate [kbit/s]	-	-	-	-	-	-	-	-	-	212/424	212/424	212/424	212/424	212/424	212/424	212/424	212/424	212/424	212/424	212/424	
MIFARE Classic support (license included)	-	-	-	-	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
ISO/IEC 15693 baudrate [kbit/s]	-	-	-	-	-	-	26.5/53	-	-	26.5/53	-	-	-	26.5/53	-	-	-	1.66/26.5	26.5/53	26.5/53	
EPC class-1 HF / ISO/IEC 18000-3M3	-	-	-	-	-	-	Yes ⁽⁴⁾	-	-	Yes	-	-	-	Yes	-	-	-	-	Yes	Yes	
EMVCo compliance	-	-	-	-	-	Yes ⁽⁴⁾	-	-	-	Yes ⁽⁴⁾	Yes ⁽⁴⁾	Yes ⁽⁴⁾	Yes ⁽⁴⁾	Yes ⁽⁴⁾	-	-	-	Yes ⁽⁴⁾	Yes ⁽⁴⁾	Yes ⁽⁴⁾	
Card emulation	Tag	Tag	Tag	Tag	-	-	-	-	-	-	Yes ⁽⁴⁾	Yes ⁽⁴⁾	Yes ⁽⁴⁾	Yes	Yes	-	-	Yes ⁽⁴⁾	Yes	Yes	
NFC tag type emulation	2	2	2	2	-	-	-	-	-	-	2, 3, 4 ⁽⁵⁾	2, 3, 4 ⁽⁵⁾	2, 3, 4 ⁽⁵⁾	1, 2, 3, 4, 5	2, 3, 4 ⁽⁵⁾	2, 3, 4 ⁽⁵⁾	-	-	-	-	
NFC tag type baudrate [kbit/s]	106	106	106	106	-	-	-	-	-	-	106/212/424	106/212/424	106/212/424	Up to 848	106/212/424	106/212/424	-	Up to 424	-	-	
Peer-to-peer (ISO/IEC 18092)	-	-	-	-	-	-	-	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	
Passive communication	-	-	-	-	-	-	-	-	-	Initiator	Initiator/target	Initiator/target	Initiator/target	Initiator/target	Initiator/target	Initiator/target	-	Initiator/target	Initiator	Initiator	
Active communication	-	-	-	-	-	-	-	-	-	-	Initiator/target	Initiator/target	Initiator/target	Initiator/target	Initiator/target	Initiator/target	-	Initiator/target	-	-	
Product features																					
Operating distance up to [mm] ⁽⁸⁾	100	100	100	100	70	70	160	120	120	120/160 ⁽⁹⁾	70	70	70	120/160 ⁽⁹⁾	70	70	70	70	120/160 ⁽⁹⁾	120/160 ⁽⁹⁾	
RF transmitter supply voltage [V]	-	-	-	-	3.6	3.6	3.3 to 5	3.3 to 5	3.3 to 5	3.3 to 5	3.6	3.6	3.6	5.5	3.6	2.5 to 3.6	2.5 to 3.6	3.1	3.3 to 5	3.3 to 5; 5.0 ⁽⁸⁾	
Transmitter supply current, typ [mA]	-	-	-	-	100	100	200	200	200	200	100	100	100	100	60	60	60	60	200	200	
Host interface	-	-	PC	PC	SPI, PC, RS232	SPI, PC, RS232	SPI, PC, RS232	SPI, PC, RS232	SPI, PC, RS232	SPI, PC, RS232	SPI, PC, RS232	SPI, PC, RS232, parallel	SPI, PC, RS232	SPI	SPI, PC, RS232	USB, RS232	USB, RS232	PC	SPI, PC, RS232	SPI, PC, RS232	
Supply voltage host interface [V]	-	-	1.8 to 3.6	1.8 to 3.6	2.5 to 3.6	2.5 to 3.6	3.3 to 5.0	3.3 to 5.0	3.3 to 5.0	3.3 to 5.0	2.5 to 3.6	2.5 to 3.6	2.5 to 3.6	1.8 and 3.3	2.5 to 3.6	RS232: 1.8 or 3.3 USB: 5	RS232: 1.8 or 3.3 USB: 5	1.8 or 3.3	3.3 to 5.0	3.3 to 5.0	
Idle mode current, typ [µA]	-	-	150	150	-	-	6	6	6	6	-	-	-	2.5	-	-	-	-	6	6	
Power-down mode current, typ [µA]	-	-	-	-	5	5	0.008	0.008	0.008	0.008	5	5	5	10	2	10	10	10.5	0.008	0.008	
Power-down mode with RF level detector on [µA]	-	-	-	-	-	-	-	-	-	-	10	10	10	-	25	30	30	20	-	-	
Low-power card detection mode [µA]	-	-	-	-	-	-	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	150	0.5	0.5	
Package	HXSON4	HXSON4	XQFN8	XQFN8	HVQFN32	HVQFN32	HVQFN32	HVQFN32	HVQFN32	HVQFN32	HVQFN32	HVQFN40	TFPGA64	HVQFN40, TFPGA64	HVQFN40	HVQFN40	HVQFN40	VFBGA49	LQFP100	LQFP100	
Temperature range [°C]	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-25 to +85	-25 to +85	-25 to +85	-30 to +85	-25 to +70	-25 to +70	
Energy harvesting	-	-	> 5 mA @ 2 V	> 5 mA @ 2 V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Field-detection signal output	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Security features																					
SAM support in X-mode	-	-	-	-	MIFARE SAM AV1 MIFARE SAM AV2	MIFARE SAM AV1 MIFARE SAM AV2	MIFARE SAM AV2.6	MIFARE SAM AV2.6	MIFARE SAM AV2.6	MIFARE SAM AV2.6	MIFARE SAM AV1 MIFARE SAM AV2	MIFARE SAM AV1 MIFARE SAM AV2	MIFARE SAM AV1 MIFARE SAM AV2	MIFARE SAM AV1 MIFARE SAM AV2	-	-	-	-	MIFARE SAM AV2.6	MIFARE SAM AV2.6	
MIFARE Classic security (CRYPTO1 HW)	-	-	-	-	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Authentication via ECC	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32-bit password protection	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Product support & ordering information																					
Product type	NTAG213F	NTAG216F	NT3H1101	NT3H1201	MFRCS2202HN1	MFRCS2302HN1	SLRC61002HN	MFR63002HN	MFR63102HN	CLRC66302HN	PN5120A0HN1/C2	PN5120A0HN	PN5120A0ET/C2	-	PN5321A3HN/106	PN5331B3HN/270	PR5331C3HN/C370	-	PR601HL/C1	PRH601HL/C1	
12NC single tray	-	-	-	-	9352 939 12151	9352 939 11151	9352 973 35151	9352 973 34151	9352 973 33151	9352 973 32151	9352 921 15151	9352 921 14551	9352 998 52151	-	9352 852 23551	9352 878 68551	9353 025 31551	-	-	-	
12NC multiple tray	-	-	-	-	9352 939 12157	9352 939 11157	9352 973 35157	9352 973 34157	9352 973 33157	9352 973 32157	9352 921 15157	9352 921 14557	9352 998 52157	-	9352 852 23557	9352 878 68557	-	9352 985 84557	9352 985 83557		
12NC reel	9353 015 88125	9353 000 51125	9353 028 42125	9353 028 43125	9352 939 12118	-	9352 973 35118	9352 973 34118	9352 973 33118	9352 973 32118	9352 921 15118	9352 921 14518	9352 998 52118	-	9352 852 23518	9352 878 68518	9353 025 31518	-	-	-	
Demo boards	NTAGFCL6 9353 045 64699 NTAGFCL5LED 9353 045 68699	NTAGFCL6 9353 045 64699 NTAGFCL5LED 9353 045 68699	OM5569/NT312A 9353 050 07699 OM5569/NT312C 9353 050 11699 OM5569/NT312D 9353 053 77699	OM5569/NT312A 9353 050 07699 OM5569/NT312C 9353 050 11699 OM5569/NT312D 9353 053 77699	PNEV512B 9352 981 99699	PNEV512B 9352 981 99699	SLEV610B 9352 981 53699	MFEV630B 9352 981 51699	MFEV631B 9352 981 52699	CLEV663 9352 960 56699 CLEV663B 9352 978 15699	PNEV512B 9352 981 99699	PNEV512B 9352 981 99699	PNEV512B 9352 981 99699	PNEV512B 9352 981 99699	OM5581 N5322502 9352 862 06699	OM5588 N5331U01 9352 865 87699 PREV533D 9352 981 96699	OM5588 N5331U01 9352 865 87699	-	PREV601M 9353 005 38699	PREV601 9352 998 73699	
Software	Android: MIFARE SDK	Android: MIFARE SDK	MIFARE SDK, Android app, controller FW example	MIFARE SDK, Android app, controller FW example	NFC Reader Library	NFC Reader Library	NFC Reader Library	NFC Reader Library	NFC Reader Library	NFC Reader Library	NFC Reader Library, card-emulation example	NFC Reader Library, card-emulation example	NFC Reader Library, card-emulation example	NFC Reader Library	HAL, NFC Forum reference implementation	HAL, NFC Forum reference implementation, USB PCSC driver	CCID supported drivers from Win8 and Linux	Linux driver	NFC Reader Library ⁽⁹⁾	NFC Reader Library	

Samples and demo boards are available on request, please contact a local NXP distributor.

(1) Single-chip package integrating CLRC663 and LPC1227 (2) Single-chip package integrating CLRC663, LPC1227, and HTRC110 (3) ISO/IEC 14443 A only (4) External RF booster required (5) No SW available for NFC tag type 3 emulation (6) Depending on antenna, coil size, tuning, and environment (7) 160 for ISO/IEC 15693 (8) 5.0 V supply for 125 kHz module (9) Software for 13.56 MHz functionality only

NXP standard reader IC solutions

Product	Standard reader IC solutions				
	CLRC632	MFRCS31	MFRCS30	MFRCS500	SLRC400
Product description	Standard multi-protocol reader solution	Standard ISO/IEC 14443 A/B reader solution	Standard MIFARE reader solution	The "original" MIFARE reader solution	Standard ISO/IEC 15693 reader solution
Contactless / NFC functionality	Standard reader	Standard reader	Standard reader	Standard reader	Standard reader
Integrated microcontroller	-	-	-	-	-
Carrier frequency [MHz]	13.56	13.56	13.56	13.56	13.56
Standards & protocols					
Reader/writer	ISO/IEC 14443 A/B, FeliCa, ISO/IEC 15693	ISO/IEC 14443 A/B	ISO/IEC 14443 A	ISO/IEC 14443 A	ISO/IEC 15693
NFC tag type support	1, 2, 4	1, 2, 4	1, 2, 4 ⁽¹⁾	1, 2, 4 ⁽¹⁾	-
ISO/IEC 14443 baudrate [kbit/s]	106/212/424	106/212/424	106/212/424	106	-
FeliCa baudrate [kbit/s]	-	-	-	-	-
MIFARE Classic support (license included)	Yes	Yes	Yes	Yes	-
ISO/IEC 15693 baudrate [kbit/s]	26.5/53	-	-	-	26.5/53
EPC Class-1 HF / ISO 18000-3M3	-	-	-	-	-
EMVCo compliance	-	-	-	-	-
Card emulation	-	-	-	-	-
NFC tag type emulation	-	-	-	-	-
NFC tag type baudrate [kbit/s]	-	-	-	-	-
Peer-to-peer (ISO/IEC 18092)	-	-	-	-	-
Passive communication	-	-	-	-	-
Active communication	-	-	-	-	-
NFC Forum compliance	-	-	-	-	-
Product Features					
Operating distance up to [mm] ⁽²⁾	100	100	100	100	150
RF transmitter supply voltage [V]	3.3 or 5.5	3.0 or 5.5	3.0 or 5.5	5	5
Transmitter supply current, typ [mA]	150				

NXP contact smartcard reader ICs

Product features	Analog interface											Analog & UART		Analog & UART & CPU
	TDA8020HL	TDA8023TT	TDA8024T	TDA8024TT	TDA8026ET	TDA8034AT	TDA8034HN	TDA8034T	TDA8035HN	TDA8037T	TDA8037TT	TDA8007BHL	TDA8029HL	
Analog interfaces	2	1	1	1	5	1	1	1	1	1	1	2	1	
ISO/IEC 7816 UART	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes	
ISO/IEC 7816 dedicated timers	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes	
Microcontroller core	-	-	-	-	-	-	-	-	-	-	-	-	80C51RB+	
ROM [kbyte] / RAM [byte]	-	-	-	-	-	-	-	-	-	-	-	-	16/768	
Host interface	IPC	IPC	I/O lines	I/O lines	IPC	I/O lines	I/O lines	I/O lines	I/O lines	I/O lines	I/O lines	8-bit parallel	Serial or IPC	
ESD protection on ISO/IEC 7816 pins [kV]	6	6	6	6	7	6	6	6	10	8	8	6	6	
Auxiliary protected lines for C4 and C8 contacts	-	2	2	2	2 ⁽¹⁾	-	2	-	2	2	2	2 x 2	-	
VCC card power supply [V]	3 and 5	1.8, 3, and 5	3 and 5	3 and 5	1.8, 3, and 5	3 and 5	1.8, 3, and 5	3 and 5	1.8, 3, and 5	3	3	1.8, 3, and 5	1.8, 3, and 5	
Card supply current @ 5 V VCC [mA]	2 x 55	55	80	80	55	65	65	65	65	-	-	55	65	
Card supply current @ 3 V VCC [mA]	2 x 50	55	65	65	55	65	65	65	65	65	65	55	50	
Card supply current @ 1.8 V VCC [mA]	-	35	-	-	35	-	65	-	35	-	-	35	30	
Card supply voltage @ 1.2 V VCC [mA]	-	-	-	-	-	-	-	-	-	-	-	-	-	
Card clock frequency max [MHz]	20	20	26	26	20	26	26	26	26	20	20	26	20	
Card activation time max [µs]	135	135	225	225	135	3500	3500	3500	3400	554	554	135	225	
Card deactivation time max [µs]	110	110	100	100	100	250	250	250	250	250	250	100	100	
Protocol support														
Synchronous card management	-	Yes	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Asynchronous protocol T=0 and T=1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Security features														
Voltage supervisor and over-current detection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Current protection on VCC, I/O, RST, CLK	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Additional product information														
Power-supply interface VDDI [V]	1.5 to 6.5	1.5 to 6.5	-	-	1.6 to 3.6	1.6 to 3.6	1.6 to 3.6	1.6 to 3.6	1.6 to 3.6	-	-	-	-	
Power-supply (VDD)	2.7 to 6.5	2.7 to 6.5	2.7 to 6.5	2.7 to 6.5	2.7 to 5.5	2.7 to 5.5	2.7 to 5.5	2.7 to 5.5	2.7 to 5.5	3.0 to 3.6	3.0 to 3.6	2.7 to 6.0	2.7 to 6.0	
Power-down current max [µA]	150	10	100	100	15	5	5	5	3	400	400	350	20	
Temperature range (°C)	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-25 to +85	-40 to +85	-25 to +85	
Package	LQFP32	TSSOP28	SO28	TSSOP28	TFBGA64	SO16	HVQFN24	SO16	HVQFN32	SO28	TSSOP16	LQFP48	LQFP32	
EMVCo compliance	Yes	Yes	-	-	Yes	Yes	Yes	Yes	Yes	Yes ⁽²⁾	Yes ⁽²⁾	Yes	Yes	
CISCO compliance	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	Yes	-	Yes	
Product support & ordering information														
Product type	TDA8020HL	TDA8023TT	TDA8024T	TDA8024TT	TDA8026ET	TDA8034AT	TDA8034HN	TDA8034T	TDA8035HN	TDA8037T	TDA8037TT	TDA8007BHL	TDA8029HL	
12NC single tray	9352 729 83151	-	-	-	9352 882 86551	-	9352 883 52151	-	9353 004 94151	-	-	-	9352 747 33151	
12NC multiple tray	-	-	-	-	9352 882 86557	-	9352 883 52157	-	9353 004 94157	-	-	-	-	
12NC reel	9352 729 83118	9352 988 14118	9352 713 42118	9352 991 52118	-	9352 713 76118	9352 883 52118	9352 883 49118	9353 004 94118	9353 015 17118	9353 015 01118	9352 875 02118	9352 747 33118	
12NC reel dry pack	-	-	9352 713 42518	-	9352 882 86518	-	-	-	-	-	-	-	-	
12NC bulk pack	-	-	-	-	-	9352 892 76112	-	9352 883 49112	-	-	-	-	-	
Demo boards	CAKE8020_07_D	-	OM9800/DCT8024T 9353 046 58699	OM9800/DCT8024TT 9353 046 59699	OM9800/DCT8026 9352 931 69599	CAKE8034_03_D	OM9800/DCT8034 9352 931 71599	CAKE8034_01_D	OM9800/DCT8035 9352 931 172599	CAKE8037_T	CAKE8037_TT	CAKE8007_01_D	OM9800/DCT8029-11D 9353 046 61699 OM9800/DCT8029-12D (IPC) 9353 046 62699	
Software support	Evaluation software with source code											CAKE8007MBA FW	ARMTDA8029 PC drives TDA8029 demo	

Samples and demo boards are available on request, please contact a local NXP distributor.
 (1) On slot 1 (2) 3 V only (3) Motherboard OM9800/MCT800 required for use with TDA demo boards

NXP MIFARE™ SAMs for reader systems

Product features	MIFARE SAM AV1	MIFARE SAM AV2	MIFARE SAM AV2.6
Memory			
Write endurance [cycles]	100 000	100 000	100 000
Data retention [yrs]	10	10	10
Secure key storage	Up to 128 key entries	Up to 128 key entries	Up to 128 key entries
SAM interface			
UART	ISO/IEC 7816, T=1	ISO/IEC 7816, T=1	ISO/IEC 7816, T=1
Frequency [MHz]	1 to 10	1 to 10	1 to 10
Baudrate [kbit/s]	9.6 to 1500	9.6 to 1500	9.6 to 1500
X-interface	MFRC523, MFRC522, PN512	MFRC523, MFRC522, PN512	CLRC663, MFRC630, MFRC631, SLRC610
Security			
Unique serial number [bytes]	7	7	7
Random number generator	Yes	Yes	Yes
Access keys	128 key entries	128 key entries	128 key entries
Access conditions	Per key entry	Per key entry	Per key entry
MIFARE Classic security	Supported	Supported	Supported
DES & DES3 security	MACing / encipherment	MACing / encipherment	MACing / encipherment
AES 128 security	MACing / encipherment	MACing / encipherment	MACing / encipherment
PKI	-	Signature / encipherment	Signature / encipherment
RSA	-	Signature / encipherment	Signature / encipherment
Packaging			
PCM1.1 module	P5DF072EV2/TOPD4090	P5DF081X0/T1AD2060S	P5DF081X0/T1AR1070S
HVQFN32 package	P5DF072EHN/TOPD4090	P5DF081HN/T1AD2060	P5DF081HN/T1AR1070
Product support & ordering information			
Product type	MIFARE SAM AV1	MIFARE SAM AV2	MIFARE SAM AV2.6
12NC PCM1.1	9352 856 21118	9352 931 25118	9352 968 39118
12NC HVQFN32	9352 857 04151	9352 931 21118	9352 968 33151
Demo boards	MFEV710 9352 941 66599 CLRD710 9352 941 65599	MFEV710 9352 941 66599 CLRD710 9352 941 65599	-
Software support	17173x NXP reader library, 18663x MIFARE Discover	17173x NXP reader library, 8663x MIFARE Discover	17173x NXP reader library, 18663x MIFARE Discover

Samples and demo boards are available on request, please contact a local NXP distributor.