

Transponder Matrix

Overview of technologies supported by ELATEC RFID readers and modules

Standard reader configuration supports over 60 RFID technologies

ELATEC functional extensions **Further RFID technologies** Apple NFC support* V option** P option **I** option supports custom private keys for G-Prox, HID Prox HID iCLASS and other Apple in combination with the technologies, Indala, ioProx, technologies A option Nexwatch A option access to passes stored in Apple mobile devices via **NFC**

Unless otherwise agreed with ELATEC, each ELATEC RFID reader/module is delivered with a standard firmware version that might be older than the latest firmware developed by ELATEC. The standard firmware version of an ELATEC reader/module can be changed using the ELATEC AppBlaster tool. Alternatively, you can also download or request a specific firmware version on the ELATEC website.

This transponder matrix gives an overview of all RFID technologies supported by ELATEC RFID readers and modules running with the **firmware version 4.64**.































^{*}For Apple licensees only and eligible implementers. Please contact ELATEC for details.

^{**}The V option is only available in combination with the A option.



Overview of ELATEC product families of RFID readers/modules

Devices with NXP frontend

TWN4 MultiTech 2 series	LF	HF / NFC	BLE	SAM slot(s)	HID iCLASS SE processor**	Frontend
TWN4 MultiTech 2	•	•	•	1 to 2***	Plugged in	PN5180
TWN4 MultiTech 2 HF		•		1	Plugged in	PN5180
TWN4 MultiTech 2 HF PCSC		•		1	Plugged in	PN5180
TWN4 MultiTech 2 LF HF	•	•		2	Plugged in	PN5180
TWN4 MultiTech 2 LF*	•			1	n/a	PN5180
TWN4 MultiTech 2 M	•	•	•	1 to 2***	Plugged in	PN5180
TWN4 MultiTech 2 M HF		•		1	Plugged in	PN5180
TWN4 MultiTech 2 M LF HF	•	•		2	Plugged in	PN5180
TWN4 MultiTech 2 M LF*	•			1	n/a	PN5180
TWN4 MultiTech 3 series						
TWN4 MultiTech 3 M	•	•	•	1	Plugged in	PN5180
TWN4 MultiTech 3 M LF HF	•	•		1	Plugged in	PN5180
TWN4 MultiTech 3 M LF*	•			1	n/a	PN5180
TWN4 Mini series						
TWN4 MultiTech HF Mini		•		0	Plugged in	PN512
TWN4 MultiTech Nano series						
TWN4 MultiTech Nano M	•	•		0	Plugged in	PN5180
TWN4 MultiTech series						
TWN4 MultiTech*	•	•		2	Plugged in	PN512
TWN4 MultiTech M*	•	•		2	Plugged in	PN512
TWN4 MultiTech SmartCard series						
TWN4 MultiTech SmartCard*	•	•		2	Plugged in	PN512
TWN4 Palon Compact series						
TWN4 Palon Compact M	•	•	•	1	Plugged in	PN5180
TWN4 Palon Compact M Light	•	•		1	Plugged in	PN5180
TWN4 Palon Compact Panel	•	•	•	1	Plugged in	PN5180
TWN4 Palon Compact Panel Light	•	•		1	Plugged in	PN5180
TWN4 Palon Compact Wall	•	•	•	1	Plugged in	PN5180
TWN4 Palon Compact Wall Light	•	•		1	Plugged in	PN5180
TWN4 Palon Square series						
TWN4 Palon Square M LF HF	•	•		2	Plugged in	PN5180
TWN4 Slim series						
TWN4 Slim	•	•	•	1	Embedded or plugged in	PN5180
TWN4 Slim JP		•	•	1		PN5180
TWN4 USB Front Reader series						
TWN4 USB Front Reader	•	•	•	1	Plugged in	PN5180

^{*}EOL: These products have been discontinued. Please refer to the corresponding Product Discontinuation Notifications (PDN) at www.elatec-rfid.com/int/elatec-end-of-lifecycle-products for more information.

^{**}Optional (relevant for product configuration with I option only).

^{***}Devices equipped with a BLE module of 1st generation have two free SAM slots, whereas devices equipped with a BLE module of 2nd generation only have one free SAM slot.



Devices with LEGIC frontend

TWN4 MultiTech 2 LEGIC series	LF	HF / NFC	BLE	SAM slot(s)	HID iCLASS SE processor**	Frontend
TWN4 MultiTech 2 LEGIC	•	•	•	1	Plugged in	SM-4200***
TWN4 MultiTech 2 LEGIC LF HF	•	•		2	Plugged in	SM-4200***
TWN4 MultiTech 2 LEGIC M	•	•	•	1	Plugged in	SM-4200***
TWN4 MultiTech 2 LEGIC M LF HF	•	•		2	Plugged in	SM-4200***
TWN4 MultiTech 3 LEGIC series						
TWN4 MultiTech 3 LEGIC M	•	•	•	1	n/a	SM-4200
TWN4 MultiTech 3 LEGIC M LF HF	•	•		1	n/a	SM-4200
TWN4 MultiTech LEGIC series						
TWN4 MultiTech LEGIC*	•	•		2	n/a	SM-4200***
TWN4 MultiTech LEGIC M*	•	•		2	n/a	SM-4200***
TWN4 MultiTech Nano LEGIC series						
TWN4 MultiTech Nano LEGIC 42 M	•	•		0	n/a	SM-4200
TWN4 MultiTech Nano LEGIC 63 M	•	•	•	0	n/a	SM-6300
TWN4 MultiTech SmartCard LEGIC						
series						
TWN4 MultiTech SmartCard LEGIC 42*	•	•		2	n/a	SM-4200
TWN4 MultiTech SmartCard LEGIC M*	•	•		2	n/a	SM-4200
TWN4 Palon Compact LEGIC series						
TWN4 Palon Compact LEGIC M	•	•	•	1	n/a	SM-4200
TWN4 Palon Compact LEGIC M Light	•	•		1	n/a	SM-4200
TWN4 Palon Compact LEGIC Panel	•	•	•	1	n/a	SM-4200
TWN4 Palon Compact LEGIC Panel Light	•	•		1	n/a	SM-4200
TWN4 Palon Compact LEGIC Wall	•	•	•	1	n/a	SM-4200
TWN4 Palon Compact LEGIC Wall Light	•	•		1	n/a	SM-4200
TWN4 Palon One LEGIC series						
TWN4 Palon One LEGIC M LF HF*	•	•		1	n/a	SM-4200
TWN4 Slim LEGIC series						
TWN4 Slim LEGIC	•	•	•	1	n/a	SM-6300
TWN4 USB Front Reader LEGIC series						
TWN4 USB Front Reader LEGIC	•	•	•	1	n/a	SM-4200

^{*}EOL: These products have been discontinued. Please refer to the corresponding Product Discontinuation Notifications (PDN) at www.elatec-rfid.com/int/elatec-end-of-lifecycle-products for more information.

^{**}Optional (relevant for product configuration with I options only).

^{***}Product derivates with LEGIC SM-4500 frontend are available on request.



ELATEC multi-frequency RFID readers/modules (LF/HF)

All multi-frequency readers/modules of the following series: **Devices with NXP frontend** All multi-frequency readers/modules of the following series: **Devices with LEGIC frontend**

TWN4 MultiTech, TWN4 MultiTech 2, TWN4 MultiTech 3, TWN4 MultiTech Nano, TWN4
MultiTech SmartCard, TWN4 Palon Compact, TWN4 Palon Square, TWN4 Slim, TWN4 USE

TWN4 MultiTech 2 LEGIC, TWN4 MultiTech 3 LEGIC, TWN4 MultiTech LEGIC, TWN4 MultiTech Nano LEGIC, TWN4 MultiTech SmartCard LEGIC, TWN4 Palon Compact LEGIC, TWN4 Palon Compact

			Palon Compact, TWN4 Palon Sq			N4 MultiTech SmartCard LEGIC, 1	
			Front Reader		TWN4 Palon One LEG	GIC, TWN4 Slim LEGIC, TWN4 US	SB Front Reader LEGIC
		standard	P option	PI options ¹⁾	standard	P option	PI options ¹⁾⁴⁾
	HID MIFARE Classic SE			•			•
	HID MIFARE DESFire SE			•			•
	HID SEOS			•			•
	LEGIC Advant	UID only	UID only	UID only	•	•	•
	NTAG2xx	OID OILIY	OID OILLY	OID OILLY	<u>-</u>		
		<u> </u>	•	•	•	•	•
	NXP MIFARE Classic	•	•	•	•	•	•
	NXP MIFARE Classic EV1	r/w enhanced security	r/w enhanced security				
	TOTAL MILL ORGSSIC EV I	features on request	features on request				
	NXP MIFARE DESFire EV1	•	•	•	•	•	•
		Supported as part of the	Supported as part of the				
	NXP MIFARE DESFire EV2/EV3	EV1 downward compatibility	EV1 downward compatibili				
		Supported as part of the	Supported as part of the				
¥.	NXP MIFARE DESFire Light	EV1 downward compatibility	EV1 downward compatibili				
ISO 14443A	NO MEADE M.	LV I downward compatibility	LV I downward compatibili				
4	NXP MIFARE Mini	•	•	•	•	•	•
8	NXP MIFARE Plus S	•	•	•	•	•	•
	NXP MIFARE Plus X	•	•	•	•	•	•
	AND MEADE O	r/w in transparent data	r/w in transparent data				
	NXP MIFARE Smart MX	exchange mode	exchange mode				
	NXP MIFARE Ultralight	•	•	•	•	•	
	•					<u>_</u>	
	NXP MIFARE Ultralight C		•	•	•	•	•
	NXP MIFARE Ultralight EV1	r/w enhanced security	r/w enhanced security				
		features on request	features on request				
	CL E44D35	r/w in transparent data	r/w in transparent data				
	SLE44R35	exchange mode	exchange mode				
		r/w in transparent data	r/w in transparent data				
	SLE66Rxx (my d-move)	exchange mode	exchange mode				
	Tonoz	exchange mode	exchange mode				
	Topaz		•				
	Calypso	r/w in transparent data	r/w in transparent data				
		exchange mode	exchange mode				
	Calypso Innovatron protocol	r/w in transparent data	r/w in transparent data	r/w in transparent data			r/w in transparent data
	Calypso innovation protocol	exchange mode	exchange mode	exchange mode			exchange mode
m		r/w in transparent data	r/w in transparent data				
43	CEPAS	exchange mode	exchange mode				
4	CTS	•			gg		
ISO 14443B		LIID	LIIDI	LUDI-	LUDI-	IIIDI-	LUD
22	Pico Pass	UID only	UID only				
	SRI4K	•	•	•			•
	SRI512	•	•	•			•
	SRIX4K	•	•	•			•
	SRT512	•	•	•			•
		r/w in transparent data	r/w in transparent data				
	EM4x33				·	exchange mode	•
		exchange mode	exchange mode	exchange mode	exchange mode		exchange mode
	EM4x35	r/w in transparent data	r/w in transparent data				
		exchange mode	exchange mode				
	HID iCLASS Legacy/SR/SE			•			•
ISO 15693	ICODE SLI	•	•	•	•	•	•
156	LEGIC Advant	UID only	UID only	UID only	•	•	•
0	M24LR16/64	•	• ,	•	•	•	•
92	MB89R118/119	2)	2)	2)	-	-	-
					LUD 1	LUID 1	105
	Pico Pass	UID only	UID only				
	SRF55Vxx (my d-vicinity)	r/w in transparent data	r/w in transparent data				
	S. a. SSVAX (my a violing)	exchange mode	exchange mode				
	Tag-it	•	•	•	•	•	•
	NFC Forum Tag type 1	•	•	•			•
ISO 18092 / ECMA-340	NEC Forum Tog type 2	•	•	•	•	•	•
	NEC Forum Tog time 2						
	NFC Forum Tag type 3	•	•	•	•	•	•
	NFC Forum Tag type 4	•	•	•	•	•	•
O O	NFC Forum Tag type 5	•	•	•	•	•	•
<u>S</u> 5			UID + r/w public area	UID + r/w public area			
<u> </u>	Sony FeliCa	UID + r/w public area	OID + I/W public area	OID . I/W public area			
	Sony FeliCa			· '		AV2 only, requires one free	AV2 only, requires one fre
	•	AV2 only, requires one free	AV2 only, requires one free SAM slot for MIFARE SAM				
180	Sony FeliCa LEAF	AV2 only, requires one free SAM slot for MIFARE SAM	AV2 only, requires one free SAM slot for MIFARE SAM	AV2 only, requires one free SAM slot for MIFARE SAM	AV2 only, requires one free SAM slot for MIFARE SAM	SAM slot for MIFARE SAM	AV2 only, requires one fre SAM slot for MIFARE SAI
	•	AV2 only, requires one free					

¹⁾Requires one free SAM slot for HID iCLASS SE processor.

²⁾Not supported by TWN4 MultiTech and TWN4 MultiTech SmartCard series.

³⁾Some ELATEC readers/modules have one free SAM slot only and cannot support LEAF and the I option at the same time. Refer to the respective product data sheets or to the overview above for more information.

⁴⁾Only available with readers/modules of the TWN4 MultiTech 2 LEGIC series, except devices with LEGIC frontend SM-4500.



ELATEC multi-frequency RFID readers/modules (LF/HF)

All multi-frequency readers/modules of the following series: All multi-frequency readers/modules of the following series: Devices with NXP frontend Devices with LEGIC frontend TWN4 MultiTech, TWN4 MultiTech 2, TWN4 MultiTech 3, TWN4 MultiTech Nano, TWN4 MultiTech TWN4 MultiTech 2 LEGIC, TWN4 MultiTech 3 LEGIC, TWN4 MultiTech LEGIC, TWN4 MultiTech SmartCard, TWN4 Palon Compact, TWN4 Palon Square, TWN4 Slim, TWN4 USB Front Reader Nano LEGIC, TWN4 MultiTech SmartCard LEGIC, TWN4 Palon Compact LEGIC, TWN4 Palon One LEGIC, TWN4 Slim LEGIC, TWN4 USB Front Reader LEGIC standard P option PI options¹⁾ standard P option PI options1)2) AWID Hash value only Hash value only Hash value only Cardax Hash value only Hash value only Hash value only CASI-RUSCO Deister Hash value only FM4050 FM4100 EM4102 FM4150 only emulation of 4100/4102 FM4200 EM4305 EM4450 EM4550 G-Prox Hash value only Hash value only Hash value only Hash value only HID 1326 Prox II HID 1336 DuoProx II HID 1346 ProxKey III HID 1386 ISO Prox II HID 1391 Micro Prox HID Prox Without encryption Without encryption Without encryption HITAG 1/2/S Without encryption Without encryption Without encryption ICT IDTECK Indala ioProx ISONAS Keri Miro Hash value only Nedap Hash value only Nexwatch Pyramid 0.5 T5557 T5567 T5577 TITAN (EM4050) UltraProx UNIQUE ZODIAC

¹⁾Requires one free SAM slot for HID iCLASS SE processor.

²⁾Only available with readers/modules of the TWN4 MultiTech 2 LEGIC series, except devices with LEGIC frontend SM-4500.

^{**125} kHz technologies require a local test and import license from the Russian Ministry of Trade and Industry (MINPROMTORC). This license has to be in place before ELATEC can accept any order to be shipped to Russia.



ELATEC single-frequency RFID readers/modules (HF)

March Marc			TWN4 Multi TWN4 Multi TWN4 Multi TWN4 Multi TWN4 :	ch 2 HF PCSC Fech 2 M HF Fech HF Mini Slim JP
HID MERARE DESPIES SE IEGIC Advant NEW PLANSE Classic NEW PLANSE Classic EV1 NEW PLANSE Classic EV1 NEW PLANSE Classic EV1 NEW PLANSE Classic EV1 NEW PLANSE CLESSINE V2V1 NEW PLANSE CLESSINE V			standard	I option ¹⁾
HID SECS LEGIC Advants UID only UID on				
LEGIC Advant UD only NPA MFARE Classic NPA MFARE Classic NPA MFARE Classic NPA MFARE Classic EVI NPA MFARE Classic EVI NPA MFARE DESPire Light NPA MFARE EVI SWARM N				
NATACEX NPM WIRARC Lasses U NPM WIRARC Lasses				-
WEY MEAR Classic EV1 rive enhanced scorptly features on request the enhanced scorpt features on request the international scorpt features on request for in international scorpt features on request features. In the scorpt features on request the international scorpt features on request features on re			UID only	UID only
NVP MIRAPE Classic EV1 five enhanced security features on request vive enhanced security features on request vive enhanced security features on request vive enhanced security features or request vive enhanced compatibility supported as part of the EVI downward compatibility supported as part of the EVI downward compatibility supported as part of the EVI downward compatibility vive enhanced security features or vive enhanced features vive enhanced request vive enhanced request vive enhanced security features or request vive enhanced vive enhanced security features vive enhanced vive enhanced			•	•
NEW MIRAPE DESPire EV1 NEW MIRAPE DESPire EV2EVS supported as part of the EV1 downward compatibility supported as part of			•	•
NOT MITARE DESPIE (V2PX) supported as part of the EV idenomeral compatibility. NOT MITARE DESPIE (Light supported as part of the EV idenomeral compatibility supported as part of the EV idenomeral compatibility. NOT MITARE Units. NOT MITAR			r/w enhanced security features on request	r/w enhanced security features on request
NOT MIFARE DESFIRE Light supported as part of the EVI downward compatibility supported as exchange mode in win transparent date exchange mode		NXP MIFARE DESFire EV1	•	•
NOV MIFFARE Plans X NOV MIFFARE Plans MX NOV MIFFARE Plans MX NOV MIFFARE Plans MX NOV MIFFARE Plans MX NOV MIFFARE Untralight NOV MIFFARE Untralight C1 NOV MIFFARE Untralight	₹	NXP MIFARE DESFire EV2/EV3	supported as part of the EV1 downward compatibility	supported as part of the EV1 downward compatibility
NOV MIFFARE Plans X NOV MIFFARE Plans MX NOV MIFFARE Plans MX NOV MIFFARE Plans MX NOV MIFFARE Plans MX NOV MIFFARE Untralight NOV MIFFARE Untralight C1 NOV MIFFARE Untralight	443	NXP MIFARE DESFire Light	supported as part of the EV1 downward compatibility	supported as part of the EV1 downward compatibility
NPY MIFARE Plank X NPY MIFARE Plank X NPY MIFARE Plank X NPY MIFARE Plank MX NPY MIFARE Plank MX NPY MIFARE Utralight NPY MIFARE Utralight C NP	14	NXP MIFARE Mini	•	•
NOP MIFARE Untaight NoP MIFAR	<u> </u>	NXP MIFARE Plus S	•	•
NXP MIRARE Ultralight		NXP MIFARE Plus X	•	•
NXP MIRARE Ultralight		NXP MIFARE Smart MX	r/w in transparent data exchange mode	r/w in transparent data exchange mode
NXP MIRARE Ulralight EVT			•	•
NXP MIFARE Ulralight EV1		NXP MIFARE Ultralight C	•	•
SLE4RRS			r/w enhanced security features on request	r/w enhanced security features on request
SLE66Rxx (my d-move) rilw in transparent data exchange mode rilw in tran				
Topaz				
Calypso			•	•
Calypso Innovatron protocol r/lw in transparent data exchange mode r/lw in transparent data exch			r/w in transparent data exchange mode	r/w in transparent data exchange mode
SRIAK	<u>(</u>			
SRIAK	1) Z			, ,
SRIAK	₩ ₩	CTS	•	•
SRIAK	85.5 44		UID only	UID only
SRIS12 SRIVAK SRIS1512 SRIS151	5 6	-	· · · · · · · · · · · · · · · · · · ·	•
SRIX4K	<u> </u>			
SRT512				
EM4x33			<u>-</u>	
EM4x35			r/w in transparent data exchange mode	r/w in transparent data exchange mode
HID iCLASS Legacy/SR/SE			· • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·
CODE SLI			174 in danoparont data oxonango modo	•
LEGIC Advant			•	
NFC Forum Tag type 2 NFC Forum Tag type 3 NFC Forum Tag type 4 NFC Forum Tag type 4 NFC Forum Tag type 5 Sony FeliCa UID + read/write public area UID + read/write public	393			
NFC Forum Tag type 2 NFC Forum Tag type 3 NFC Forum Tag type 4 NFC Forum Tag type 4 NFC Forum Tag type 5 Sony FeliCa UID + read/write public area UID + read/write public	15		OID OILLY	OID OIIIY
Pico Pass UID only UID only SRF55Vxx (my d-vicinity) r/w in transparent data exchange mode r/w in transparent data exchange mode Tag-it • • NFC Forum Tag type 1 • • NFC Forum Tag type 2 • • NFC Forum Tag type 3 • • NFC Forum Tag type 4 • • NFC Forum Tag type 5 • • Sony FeliCa UID + read/write public area UID + read/write public area	<u> </u>		2)	2)
SRF55Vxx (my d-vicinity) r/w in transparent data exchange mode r/w in transparent data exchange mode Tag-it NFC Forum Tag type 1 NFC Forum Tag type 2 NFC Forum Tag type 3 NFC Forum Tag type 3 NFC Forum Tag type 4 NFC Forum Tag type 4 NFC Forum Tag type 5 Sony FeliCa UID + read/write public area				
Tag-it			•	,
NFC Forum Tag type 1				
NFC Forum Tag type 2 • • • • • • • • •		·		
NFC Forum Tag type 3 NFC Forum Tag type 4 NFC Forum Tag type 5 Sony FeliCa UID + read/write public area UID + re				
Sony FeliCa UID + read/write public area UID + read/write public area	92 /			
Sony FeliCa UID + read/write public area UID + read/write public area	180 AA.:			
Sony FeliCa UID + read/write public area UID + read/write public area	8 5		•	•
			LIID + roadburite sublic area	IID + read/write public error
		•	•	•
LEAF AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ Card AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ ONLY, requires one tree SAM Slot for MIFARE SAM AVZ ONLY, re			AVZ Only, requires one free SAM SIOLIOF MILTARE SAM AVZ CARD	AVZ UTILY, TEQUITES OTTE TIER SAIN SIOL TOT INTERACE SAIN AVZ CATO

¹⁾Requires one free SAM slot for HID iCLASS SE processor.
2)Supported, except by TWN4 Mini readers.
3)Some ELATEC readers/modules have one free SAM slot only and cannot support LEAF and the I option at the same time. Refer to the respective product data sheets or to the overview above for more information.



ELATEC single-frequency RFID readers/modules (LF)

	TWN4 Mult TWN4 Mult	iltTech 2 LF iTech 2 M LF iTech 3 M LF
AVAIID	standard	P option
AWID	•	
Cardax	Hash value only	Hash value only
CASI-RUSCO	•	
Deister	Hash value only	Hash value only
EM4050	•	•
EM4100	•	•
EM4102	•	•
EM4150	•	•
EM4200	Only emulation of 4100/4102	Only emulation of 4100/4102
EM4305	•	•
EM4450	•	•
EM4550	•	•
G-Prox		Hash value only
HID 1326 Prox II		•
HID 1336 DuoProx II		•
HID 1346 ProxKey III		•
HID 1386 ISO Prov II		•
HID 1391 Micro Prox HID Prox HITAG 1/2/S		•
HID Prox		•
HITAG 1/2/S	Without encryption	Without encryption
TICT TICT	• "	•
IDTECK	•	•
Indala		•
ioProx		•
ISONAS	•	•
Keri	•	•
Miro	•	•
Nedap	Hash value only	Hash value only
Nexwatch	,	•
Pyramid	•	•
Q5	•	•
T5557	•	•
T5567	•	•
T5577	•	•
TITAN (EM4050)	•	•
UltraProx	•	•
UNIQUE	•	
ZODIAC	•	

^{**125} kHz technologies require a local test and import license from the Russian Ministry of Trade and Industry (MINPROMTORC). This license has to be in place before ELATEC can accept any order to be shipped to Russia.



Apple technologies supported by ELATEC RFID readers/modules*

	Apple Value Added Services (VAS)**	Apple Access passes***
TWN4 MultiTech	•	•
TWN4 MultiTech M	•	
TWN4 MultiTech 2	•	•
TWN4 MultiTech 2 M	•	
TWN4 MultiTech 2 LF HF	•	•
TWN4 MultiTech 2 M LF HF	•	
TWN4 MultiTech 2 HF	•	
TWN4 MultiTech 2 M HF	•	
TWN4 MultiTech 3 M	•	
TWN4 MultiTech 3 M LF HF	•	
TWN4 MultiTech Nano M	•	
TWN4 Palon Compact M	•	
TWN4 Palon Compact M Light	•	
TWN4 Palon Compact Panel	•	
TWN4 Palon Compact Panel Light	•	
TWN4 Palon Compact Wall	•	
TWN4 Palon Compact Wall Light	•	
TWN4 Palon Square M LF HF	•	
TWN4 Slim	•	
TWN4 USB Front Reader	•	
TWN4 MultiTech HF Mini	•	
TWN4 MultiTech Core	•	

Apple VAS and Access passes both include the Enhanced Contactless Protocol (ECP) 2.0.

Please note:

Apple VAS and Access passes can be tested on request on other ELATEC RFID readers/modules of the TWN4 family. For best convenience reasons and best performance, no other RFID technology (LF, HF) should be enabled in parallel to Apple technologies. For system integrators and PCB module design-in, Apple may require additional testing and proof that the final product meets all Apple requirements for VAS and Access passes.

^{*}For Apple licensees only and eligible implementers. Please contact ELATEC for details.

**Requires the ELATEC AV options.

^{***}Requires the ELATEC A option.



Appendix

Terminology

Term	Explanation
(Apple) Access pass	Contactless NFC passes can be stored in an Apple mobile device (iOS). ELATEC uses the term "Access pass" for this type of passes. Access passes are stored in a secure environment on iOS devices. There are different storage formats of Access passes. ELATEC readers with Access pass support also use the underlying ECP 2.0 protocol. Access passes must not be confused with VAS passes.
ECP / ECP 2.0	Stands for "Enhanced Contactless Polling" protocol. ECP is a low-level contactless protocol defined by Apple, extending parts of the ISO 14443 specifications, to ensure best performance when detecting Apple mobile devices using NFC.
RFID reader/module	For ELATEC products, the term "RFID module" refers to OEM PCBs, i.e. the bare electronic board. These devices are intended to be integrated into a final (host) product by system integrators and device vendors. The term "RFID reader" is used for final devices, i.e. including a housing, connectors and / or cabling, and of course an RFID module.
Transponder	The term "transponder" is an association of "transmitter" and "responder". "RFID tag" and "RFID label" are common synonyms used for "transponder". Basically, an RFID transponder consists of a chip that contains information transmitted to an RFID reader through electromagnetic waves. A transponder can have different forms, like a card, a key fob or even a smartphone. The term "transponder" can also refer to any type of contactless-enabled smart cards.
VAS	Stands for "Value-Added Services". Apple VAS is an Apple wallet solution for many loyalty use-cases. Users can load so-called VAS passes into their wallet on their mobile devices (iOS). Most can be read visually (barcode, QR code). NFC-based VAS passes are available as well. Readers with VAS support can read these VAS passes. Technically, the ECP 2.0 protocol is used when reading VAS passes.

ELATEC GmbH
Zeppelinstr. 1
82178 Puchheim
Germany
P +49 89 552 9961 0
F +49 89 552 9961 129
E-Mail: info-rfid@elatec.com
Website: elatec.com

ELATEC Systems GmbH
Schwieberdinger Str. 44
71636 Ludwigsburg
Germany
P +49 7141 309736 0
E-Mail: info-rfid@elatec.com

Website: elatec.com

ELATEC Inc.
1995 SW Martin Hwy
Palm City • FL 34990
USA
P +1 772 210 2263
F +1 772 382 3749
E-Mail: americas-info@elatec.com
Website: elatec.com

ELATEC Technology (Shenzhen) LLC
918, Main Building, Tian An Cyber Times
Tower, No. 6, Tairan Fourth Road, Tian 'an
Community, Shatou Neighborhood
Futian District • Shenzhen • China
P/F +86 755 2394 6014
E-Mail: apac-info@elatec.com
Website: elatec.com

ELATEC reserves the right to change any information or data in this document without prior notice. ELATEC declines all responsibility for the use of these products with any other specification but the one mentioned above. Any additional requirement for a specific customer application has to be validated by the customer themselves at their own responsibility. Where application information is given, it is only advisory and does not form part of the specification. Disclaimer: All names used in this document are registered trademarks of their respective owners.