

0.18µm

## Philips' 16-bit SmartXA Security and PKI Controllers

Product Features	Security Controller		PKI Controller		USB Controller	
	P7SC073	P7SC145	P7CC073	P7CC145	P7CU073	P7CU145
CPU	16-bit SmartXA2	16-bit SmartXA2	16-bit SmartXA2	16-bit SmartXA2	16-bit SmartXA2	16-bit SmartXA2
ISO Contact Interface	ISO 7816	ISO 7816	ISO 7816	ISO 7816	ISO 7816	ISO 7816
USB Interface					USB 2.0 (Low Speed)	USB 2.0 (Low Speed)
ROM [byte]	256 K	256 K	256 K	256 K	256 K	256 K
RAM total [byte]	6 K	6 K	7 K	7 K	7 K	7 K
RAM accessible by FameX [byte]	-	-	1056	1056	1056	1056
EEPROM [byte]	72 K	144 K	72 K	144 K	72 K	144 K
<b>Security Features</b>						
Crypto-Engine 32-Bit	-	-	FameX	FameX	FameX	FameX
RSA 1024-bit (SF)*	-	-	270ms	270ms	270ms	270ms
DES-Engine	DES3 < 110 µs	DES3 < 110 µs	DES3 < 110 µs	DES3 < 110 µs	DES3 < 110 µs	DES3 < 110 µs
Exception Sensors	V, f, T, Light	V, f, T, Light	V, f, T, Light	V, f, T, Light	V, f, T, Light	V, f, T, Light
Memory Management Unit	yes, enhanced	yes, enhanced	yes, enhanced	yes, enhanced	yes, enhanced	yes, enhanced
Hardware Firewall	yes	yes	yes	yes	yes	yes
<b>Additional Product Information</b>						
UART for implemented interfaces	yes	yes	yes	yes	yes	yes
UART DMA	yes	yes	yes	yes	yes	yes
CRC-Engine	yes	yes	yes	yes	yes	yes
JAVA VM Support	SmartXAccelerator	SmartXAccelerator	SmartXAccelerator	SmartXAccelerator	SmartXAccelerator	SmartXAccelerator
GSM Power Control Mode	yes	yes	yes	yes	yes	yes
Supply voltage [V]	1.62 ... 5.5	1.62 ... 5.5	1.62 ... 5.5	1.62 ... 5.5	1.62 ... 5.5	1.62 ... 5.5
External Clock [MHz]	1 ... 6	1 ... 6	1 ... 6	1 ... 6	1 ... 6	1 ... 6
Temperature Range [°C]	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85
EEPROM page mode granularity [byte]	1 ... 128	1 ... 128	1 ... 128	1 ... 128	1 ... 128	1 ... 128
16-bit Timer	2	2	2	2	2	2
True Random Number Generator	yes, according to FIPS140-2 / AIS31	yes, according to FIPS140-2 / AIS31	yes, according to FIPS140-2 / AIS31	yes, according to FIPS140-2 / AIS31	yes, according to FIPS140-2 / AIS31	yes, according to FIPS140-2 / AIS31
Delivery Type Wafer	sawn/unsawn	sawn/unsawn	ssawn/unsawn	sawn/unsawn	sawn/unsawn	sawn/unsawn
Delivery Type Module	contact	contact	contact	contact	contact	contact
<b>Evaluation and Certification</b>						
3 <sup>rd</sup> Party Hardware Evaluation	yes	yes	yes	yes	yes	yes
Security Certificates **	VISA	VISA	VISA	VISA	VISA	VISA
<b>Software</b>						
Secure Cryptolibrary	yes	yes	yes	yes	yes	yes

\* Straight Forward

\*\* Common Criteria (CC), Mastercard, VISA, ZKA evaluations planned depending on application requirements