



Philips Semiconductors' 16-bit SmartXA Smart Card Controller Family

16-bit

	Security Controller	Crypto Controller				Flash Controller
Product Features	P16WS032	P16WA032	P16WC032	P16WC064	P16WX064	P16WFxxx
CPU	16-bit SmartXA2	enhanced 16-bit XA	16-bit SmartXA2	16-bit SmartXA2	16-bit SmartXA2	16-bit SmartXA2
ROM [byte]	128 K	48 K	128 K	128 K	128 K	128 K
RAM total [byte]	4 K	2.5 K	4 K	5 K	5 K	5 K
RAM accessible by FameX [byte]	—	544	1056	1056	1056	1056
EEPROM [byte]	32 K	32 K	32 K	64 K	64 K	32 K
Flash [byte]	no	no	no	no	no	64 K
Security Features						
Crypto-engine	no	32-bit FameX	32-bit FameX	32-bit FameX	32-bit FameX	32-bit FameX
RSA 1024-bit (SF)	-	400 ms @ 5 MHz	400 ms @ 5 MHz	400 ms @ 5 MHz	400 ms @ 5 MHz	400 ms @ 5 MHz
DES-Engine	DES3 < 110µs	no	DES3 < 110µs	DES3 < 110µs	DES3 < 110µs	DES3 < 110µs
Exception sensors	V, f, T	V, f, T	V, f, T	V, f, T	V, f, T	V, f, T
MMU	yes, enhanced	yes	yes, enhanced	yes, enhanced	yes, enhanced	yes, enhanced
Hardware Firewall	yes	yes	yes	yes	yes	yes
Additional Product Information						
USB	no	no	no	no	yes, V1.1	yes, V1.1
UART	acc. to ISO 7816	acc. to ISO 7816	acc. to ISO 7816	acc. to ISO 7816	acc. to ISO 7816	acc. to ISO 7816
UART DMA	yes	no	yes	yes	yes	yes
Supply voltage [V]	2,7 ... 5,5	2,7 ... 5,5	2,7 ... 5,5	2,7 ... 5,5	2,7 ... 5,5	2,7 ... 5,5
Ext. Clock [MHz]	1 ..6	1 ..8	1 ..6	1 ..6	1 ..6	1 ..6
Temperature range [C]	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85	-25 ... +85
Packaging	wafer, module	wafer, module	wafer, module	wafer, module	wafer, module	wafer, module
16-bit Timer	two	two	two	two	two	two
True Random Number Generator	acc. to FIPS 140-1	acc. to FIPS 140-1	acc. to FIPS 140-1	acc. to FIPS 140-1	acc. to FIPS 140-1	acc. to FIPS 140-1
CRC16 Calculation HW	yes	no	yes	yes	yes	yes
Evaluation and Certification						
Hardware Evaluation	TNO (planned)	TNO (planned)	TNO	TNO (planned)	TNO (planned)	TNO (planned)
Certification	CC EAL 5 (planned)	CC EAL 5 (planned)	CC EAL 5 (planned)	CC EAL 5 (planned)	CC EAL 5 (planned)	CC EAL 5 (planned)

Note: Certain memory configurations may be subject to change

