Smart IDENTIFICATION

Silicon Enabled Comfort and Security à la Carte

www.infineon.com/security

Infineon technologies

Never stop thinking.

Contactless Memories

my-d™ vicinity

SLE 55Rxx

Product name	SRF 55V02P	SRF 55V10P	SRF 55V02S	SRF 55V10S	SLE 55R01
Product description	Plain memory, 2.5 kbit EEPROM	Plain memory, 10 kbit EEPROM	Security memory with authentication, 2.5 kbit EEPROM	Security memory with authentication 10 kbit EEPROM	Security memory with authentication, 160 Byte EEPROM
Interface	ISO / IEC 15693	ISO / IEC 15693	ISO / IEC 15693	ISO / IEC 15693	ISO / IEC 14443 (type A)
Memory organization	1 fixed sector	1 fixed sector	Up to 16 sectors fully configurable	Up to 16 sectors fully configurable	Up to 16 sectors fully configurable
Counter	Up to 65,536 units, support of anti-tearing	Up to 65,536 units, support of anti-tearing	Up to 65,536 units, support of anti-tearing	Up to 65,536 units, support of anti-tearing	Up to 65,536 units, support of anti-tearing
Operating frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
EEPROM – user	2 kbit	8 kbit	2 kbit	8 kbit	128 Byte
EEPROM – administration	0.5 kbit	2 kbit	0.5 kbit	2 kbit	32 Byte
Security features	Unique serial number, individual page locking	Unique serial number, individual page locking	Transport key, unique serial number, mutual authentication with 64-bit keys, hierarchical key management	Transport key, unique serial number, mutual authentication with 64-bit keys, hierarchical key management	Transport key, unique serial number, mutual authentication with 64-bit keys, hierarchical key management
Distance (read / write)	Typical 0 to 70 cm [1]	Typical 0 to 70 cm [1]	Typical 0 to 70 cm [1]	Typical 0 to 70 cm [1]	Typical 0 to 10 cm [1]
Data rate	26 kbit/s	26 kbit/s	26 kbit/s	26 kbit/s	106 kbit/s
Anticollision	Yes	Yes	Yes	Yes	Yes
Ambient temperature	–25 to +85°	–25 to +85°	–25 to +85°	–25 to +85°	–25 to +85°
Endurance	100,000	100,000	100,000	100,000	100,000
Retention time, at least	10 years	10 years	10 years	10 years	10 years
Delivery forms	Inlay 76*45 mm², inlay 45*45 mm², module MCC2, wafer	Inlay 76*45 mm², inlay 45*45 mm², module MCC2, wafer	Inlay 76*45 mm², inlay 45*45 mm², module MCC2, wafer	Inlay 76*45 mm², inlay 45*45 mm², module MCC2, wafer	Module MCC2, wafer
Tools	my-d™ vicinity kit	my-d™ vicinity kit	my-d™ vicinity kit	my-d™ vicinity kit	CR-EVA-kit
Applications	Item management, access control	Item management, access control	Item management, access control, chip sharing approach	Item management, chip sharing approach	Automatic fare collection, electronic purse, access control, identification

® Mifare® is a registered trademark of Philips Elektronics N.V.
1) depending on antenna configuration

Standard Mifare® /SLE 66R35

SLE 55R04	SLE 55R08	SLE 55R16	SLE 44R35S	SLE 66R35
Security memory with authentication, 770 Byte EEPROM	Security memory with authentication, 1,280 Byte EEPROM	Security memory with authentication, 2,560 Byte EEPROM	Intelligent 1 kByte EEPROM	Intelligent 1 kByte EEPROM
ISO / IEC 14443 (type A)	ISO / IEC 14443 (type A)	ISO / IEC 14443 (type A)	ISO / IEC 14443 (type A)	ISO / IEC 14443 (type A)
Up to 16 sectors fully configurable	Up to 16 sectors fully configurable	Up to 16 sectors fully configurable	16 fixed sectors	16 fixed sectors
Up to 65,536 units, support of anti-tearing	Up to 65,536 units, support of anti-tearing	Up to 65,536 units, support of anti-tearing	–	–
13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
616 Byte	1,024 Byte	2,048 Byte	768 Byte	768 Byte
154 Byte	256 Byte	512 Byte	256 Byte	256 Byte
Transport key, unique serial number, mutual authentication with 64-bit keys, hierarchical key management	Transport key, unique serial number, mutual authentication with 64-bit keys, hierarchical key management	Transport key, unique serial number, mutual authentication with 64-bit keys, hierarchical key management	Transport code, unique serial number, mutual three pass authentication with 48-bit keys	Transport code, unique serial number, mutual three pass authentication with 48-bit keys
Typical 0 to 10 cm [1]	Typical 0 to 10 cm [1]	Typical 0 to 10 cm [1]	Typical 0 to 10 cm [1]	Typical 0 to 10 cm and more [1]
106 kbit/s	106 kbit/s	106 kbit/s	106 kbit/s	106 kbit/s
Yes	Yes	Yes	Yes	Yes
–25 to +85°	–25 to +85°	–25 to +85°	–25 to +70°	–25 to +70°
100,000	100,000	100,000	100,000	100,000
10 years	10 years	10 years	10 years	10 years
Module MCC2, wafer	Module MCC2, wafer	Module MCC2, wafer	Module MCC2, wafer, bumped wafer	Module MCC8, MCC2, wafer, bumped wafer
CR-EVA-kit	CR-EVA-kit	CR-EVA-kit	CR-EVA-kit	CR-EVA-kit
Automatic fare collection, electronic purse, access control, identification	Automatic fare collection, electronic purse, access control, identification	Automatic fare collection, electronic purse, access control, identification	Automatic fare collection, electronic purse, access control, identification	Automatic fare collection, electronic purse, access control, identification

Dual-Interface / Contactless Controllers

SLE66CLXxxxP

Product name	SLE 66CL80P	SLE 66CL81P	SLE 66CLX320P	SLE 66CLX321P
Product description	Dual interface security controller	Pure contactless security controller	Dual interface security cryptocontroller	Pure contactless security cryptocontroller
User-ROM	72 kByte	72 kByte	136 kByte	136 kByte
EEPROM	8 kByte	8 kByte	32 kByte	32 kByte
RAM	2,304 Byte	2,304 Byte	4,352 + 700 Byte Crypto	4,352 + 700 Byte Crypto
CPU	16 bit	16 bit	16 bit	16 bit
Crypto coprocessor	–	–	1,100 bit modular arithmatic	1,100 bit modular arithmatic
HW-DES	Yes	Yes	Yes	Yes
Clock (int.)	1–15 MHz	1–15 MHz	1–15 MHz	1–15 MHz
Clock (ext.) contact-based	1–5 MHz	–	1–5 MHz	–
Operating voltage	2.7 V–5.5 V	2.7 V–5.5 V	2.7 V–5.5 V	2.7 V–5.5 V
Max. supply current	10 mA @ 15 MHz	10 mA @ 15 MHz	10 mA @ 15 MHz	10 mA @ 15 MHz
Max. sleep mode current (typ.)	100 µA	100 µA	100 µA	100 µA
Temperature range	CB: -25 to +85° CL: 15 to +70°	–15 to +70°	CB: -25 to +85° CL: 15 to +70°	–15 to +70°
Write / erase time (at 5 MHz)	4.5 ms (typ.)	< 4.0 ms (typ.)	4.5 ms (typ.)	< 4.0 ms (typ.)
EEPROM page programming	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte
MMU	Yes	Yes	Yes	Yes
Security features	Tamper-proof design, chip ID counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW	Tamper-proof design, chip ID counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW	Tamper-proof design, chip ID counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, asymmetric algorithms, hardware-supported (e.g. RSA, ECC)	Tamper-proof design, chip ID counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, asymmetric algorithms, hardware-supported (e.g. RSA, ECC)
Peripherals	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART, triple DES accelerator	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, triple DES accelerator	2 x 16-bit autoreloadtimer, PLL,interrupt, CRC, RNG, UART, triple DES accelerator	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, triple DES accelerator
Delivery forms	Module M8.4, bumped wafer, wafer	Contactless module MCC8, wafer	Module M8.4, bumped wafer, wafer	Contactless module MCC8, wafer
Applications	Banking, access control, transport, identification, multifunctional card	Banking, access control, transport, identification	Banking, Pay TV, PKI, security access, multifunctional card, identification, transport	Banking, security access, transport, identification
Certifications	CC EAL 5+ planned, Visa level 3 planned	CC EAL 5+ planned, Visa level 3 planned	CC EAL 5+ planned, Visa level 3 planned	CC EAL 5+ planned, Visa level 3 planned

Components for Contactless Terminals

SLF9XXX

Product name	SLF 9000N	SLF 9611
Product description	Contactless codec for proximity terminals	Security access module for SLE 55RXX
Interface	ISO / IEC 14443 (Type A & B)	ISO / IEC 7816
Memory organization	Terminal IC for contactless chip cards with multiplexed / demultiplexed 8-bit parallel interface	Enables high secure authentication between the terminal and the my-d™ chip card and handles cards communication with the background system. Furthermore offers the capability to manage security mechanism with the background system.
Operating frequency	13.56 MHz	–
Security features	Transparent for all data, programmable CRC and parity checks	Evaluation according to ITSEC E3, based on SLE 66CxxxP security controller, my-d™ 64-bit cryptographic algorithm, triple DES in HW for key diversification
Data rate	106 kbit/s	115 kbit/s
Anticollision	ISO / IEC 14443 Type A&B, deterministic and time slot with slot marker capability	–
Ambient temperature	–40 to +85°	–25 to +75°
Delivery forms	44-pin plastic leaded chip carrier (PLCC), LQFP or bare chip optional	ID-000 / ID1
Applications	Digital interface in stationary or handheld contactless reader / writer terminals or terminal modules	Security applications with key-based authentication

Contact-Based Security Memories

Product name	SLE 4406S Classic	SLE 4436 Eurochip 1	SLE 5536 Eurochip 2	SLE 6636 Eurochip 66	SLE 7736 Eurochip 77	SLE 4432 DataCarrier
Product description	Intelligent 128-bit EEPROM counter with security logic	Intelligent 237-bit EEPROM counter with security logic & high security authentication	Intelligent 237-bit EEPROM counter with security logic & high security authentication	Intelligent 237-bit EEPROM counter with security logic & high security authentication	Intelligent 237-bit EEPROM counter with security logic & high security authentication	Intelligent 256 Byte EEPROM with write-protect function
Counter	>20,000 count units	>20,000 count units, support of anti-tearing	>20,000 count units, support of anti-tearing	>20,000 count units, support of anti tearing	>20,000 count units, support of anti-tearing	–
ROM	24 bit	24 bit	24 bit	24 bit	24 bit	–
PROM	72 bit	177 bit	177 bit	177 bit	177 bit	32 bit
EEPROM	32 bit	32 bit	32 bit	32 bit	32 bit	256 Byte
Security features	Security logic, irreversible chip coding, transport code	High security authentication with 1 or 2 keys, security logic, irreversible chip coding, transport code	High security authentication with 1 or 2 keys, optional cipher block chaining, security logic, irreversible chip coding, transport code	High security authentication with 1 or 2 keys, optional cipher block chaining, security logic, irreversible chip coding, transport code dedicated CMOS security technology	High security authentication with 1 or 2 keys, optional cipher block chaining, card trash mechanism, security logic, irreversible chip coding, transport code, dedicated CMOS security technology	Byte protection, irreversible chip coding
Min. write / erase time	3 ms	3 ms	3 ms	3 ms	3 ms	2.5 ms
Operating voltage	5 V	5 V	5 V	5 V	3–5 V	5 V
Max. supply current	1 mA	5 mA	5 mA	1 mA (typ. 400 µA)	1 mA (typ. 300 μA/5 V VDD)	10 mA
Ambient temperature	–40 to +80°	–35 to +80°	–35 to +80°	–40 to +80°	–40 to +80°	–35 to +80°
Endurance	100,000	100,000	100,000	100,000	100,000	100,000
Retention time, at least	30 years	10 years	10 years	30 years	30 years	10 years
Delivery forms	Module M3, die	Module M3, die	Module M3, die	Module M3, die	Module M3, die	Module M3, die
Tools	EVA-kit	EVA-kit	EVA-kit	EVA-kit	EVA-kit	EVA-kit
Applications	Prepaid phone card	Prepaid phone card, vending	Prepaid phone card, vending	Prepaid phone card, vending	Prepaid phone card, vending	Health insurance, member card, electronic ticketing, loyalty

	SLE 4442 DataCarrier	SLE 4418 DataCarrier	SLE 4428 DataCarrier
	Intelligent 256 Byte EEPROM with write-protect function & security logic	Intelligent 1 kByte EEPROM with write-protect function	Intelligent 1 kByte EEPROM with write-protect function & security logic
	–	–	–
	–	–	–
	32 bit	1,024 bit	1,024 bit
	256 Byte	1,024 Byte	1,024 Byte
	security code, Byte protection, irreversible chip coding, transport code	Byte protection, irreversible chip coding	Security code, Byte protection, irreversible chip coding, transport code
	2.5 ms	5 ms	5 ms
	5 V	5 V	5 V
	10 mA	10 mA	10 mA
	–35 to +80°	–35 to +100°	–35 to +100°
	100,000	100,000	100,000
	10 years	10 years	10 years
	Module M3, die	Module M2, die	Module M2, die
	EVA-kit	EVA-kit	EVA-kit
	Health insurance, member card, electronic ticketing, loyalty	Health insurance, member card, electronic ticketing, loyalty	Health insurance, member card, electronic ticketing, loyalty

Security Controller Overview in EEPROM Sizes

EEPROM	0.5 KB	2 KB	4 KB			8 KB
Product name	**SLE 22C05S**	**SLE 44C20S**	**SLE 66C40S**	**SLE 66C42P**	**SLE 66C44PE**	**SLE 44C80S**
Product description	Security controller	Security controller	Security controller	Security controller	Security controller	Security controller
User-ROM	7.5 kByte	15 kByte	31.5 kByte	62 kByte	68 kByte	15 kByte
EEPROM	512 Byte	2 kByte	4 kByte	4 kByte	4 kByte	8 kByte
RAM	128 Byte	256 Byte	1,280 Byte	2,304 Byte	2,304 Byte	256 Byte
CPU	16 bit	8 bit	16 bit	16 bit	8/16 bit	8 bit
Crypto coprocessor	–	–	–	–	–	–
Clock (int.)	1–5 MHz	1–5 MHz	1–5 MHz	1–15 MHz	1–33 MHz	1–5 MHz
Clock (ext.)	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz
Operating voltage	2.7 V–5.5 V	2.7 V–5.5 V	2.7 V–5.5 V	2.7 V–5.5 V	1.8 V, 3.0 V, 5.0 V	2.7 V–5.5 V
Max. supply current (at 5 MHz, 5 V)	6 mA (3.0 mA typical)	10 mA (3.2 mA typical)	10 mA (3.2 mA typical)	10 mA (3.2 mA typical)	10 mA	10 mA (3.2 mA typical)
Max. sleep mode current (typical)	100 µA (20 µA)	100 µA (26 µA)	100 µA (26 µA)	100 µA	100 µA	100 µA (26 µA)
Ambient temperature	–25 to +85°	–25 to +85°	–25 to +85°	–25 to +85°	–25 to +70 (85°)	–25 to +85°
Write / erase time (at 5 MHz)	3.6 ms / 1.8 ms	3.6 ms / 1.8 ms	3.6 ms / 1.8 ms	4.1 ms (typ.)	< 2.9 ms	3.6 ms / 1.8 ms
EEPROM page programming	1 to 8 Byte	1 to 8 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 32 Byte
MMU	No	No	No	Yes	Yes	No
Security features	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency sensor, symmetric algorithms (e.g. DES)	Tamper-proof design, chip ID, counter measures against reverse engineering, sensor concept: voltage-, frequency sensor, symmetric algorithms (e.g. DES)	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency sensor, symmetric algorithms (e.g. DES)	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against reverse engineering, sensor concept: voltage-, frequency sensor, symmetric algorithms (e.g. DES) light-, temperature-, glitch sensor, active shield, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW
Peripherals	CRC	–	16-bit timer, CRC, RNG, interrupt	16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART	CRC, UART, RNT, 2 x 16-bit timers, interupt, DES	–
Delivery forms	Module M2, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die
Applications	Loyalty,gambling, membership, metering, healthcare, banking low level, identification, transport	Loyalty, gambling, membership, metering, healthcare, banking low level, identification, transport	Loyalty, gambling, membership, metering, healthcare, banking low level, identification, transport	Banking (debit – credit), E-Purse, Pay-TV, security access, healthcare	Payment, GSM, Pay-TV, security access, identification	Loyalty, gambling, membership, banking low level, healthcare, R-UIM, identification, transport, basic GSM, metering
Certifications	–	Visa level 2	Visa level 3, CAST	CC EAL 5+ planned, Visa level 3 planned, CAST	Planned: CC EAL 5 +, Visa, CAST, Proton	Visa level 2

				16 KB	
	SLE 66C82P	**SLE 66C84PE**	**SLE 66CX80PE**	**SLE 11C001S**	**SLE 66C162P**
	Security controller	Security controller	Security cryptocontroller	Security controller	Security controller
	62 kByte	68 kByte	96 kByte	31.5 kByte	70 kByte
	8 kByte	8 kByte	8 kByte	16 kByte	16 kByte
	2,304 Byte	2,304 Byte	3,004 Byte	1,280 Byte	2,304 Byte
	16 bit	8/16 bit	8/16 bit	16 bit	16 bit
	–	–	Yes	–	–
	1–15 MHz	1–33 MHz	1–33 MHz	1–5 MHz	1–10 MHz
	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz
	2.7 V–5.5 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	2.7 V–5.5 V	2.7 V–5.5 V
	10 mA @ 15 MHz	10 mA	10 mA	6 mA (3.0 mA typical)	10 mA @ 10 MHz
	100 µA	100 µA	100 µA	100 µA (20 µA)	100 µA
	–25 to +85°	–25 to +70 (85°)	–25 to +70 (85°)	–25 to +85°	–25 to +85°
	4.1 ms (typ.)	< 2.9 ms	< 2.9 ms	3.6 ms / 1.8 ms	4.5 ms (typ.)
	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte
	Yes	Yes	Yes	No	Yes
	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, sensor, symmetric algorithms (e.g. DES)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES) triple DES in HW, elliptic curves in HW	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, Sensor concept: voltage-, frequency-, glitch sensor, symmetric algorithms (e.g. DES)	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency sensor, symmetric algorithms (e.g. DES / AES)
	16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART	CRC, UART, RNG, 2 x 16-bit timers, interupt, DES	CRC, UART, RNG, 2 x 16-bit timers, DES, ACE	CRC	16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART
	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die
	Banking (debit – credit), E-Purse, Pay-TV, security access, GSM, USIM, Ext. healthcare	Payment, GSM, Pay-TV, security access, identification	Payment, GSM, Pay-TV, security access, identification, digital signature	Loyalty, gambling, membership,metering, banking low level, healthcare, basic GSM, R-UIM, identification, transport	Banking (debit – credit), E-Purse, security access, GSM, healthcare, multifunctional card, (SIM Tool Kit) RUIM
	CC EAL 5+ planned, Visa level 3, CAST	Planned: CC EAL 5 +, Visa, CAST, Proton	Planned: CC EAL 5 +, Visa, CAST, Proton, MultOS	–	Visa level 3, CAST

Security Controller Overview in EEPROM Sizes

	16 KB					
Product name	**SLE 66C164P**	**SLE 66CX160P**	**SLE 66C166PE**	**SLE 66C168PE**	**SLE 66CX162PE**	**SLE 66C161PE**
Product description	Security controller	Security cryptocontroller	Security controller	Security controller	Security cryptocontroller	Security controller
User-ROM	62 kByte	62 kByte	96 kByte	68 kByte	96 kByte	48 kByte
EEPROM	16 kByte	16 kByte	16 kByte	16 kByte	16 kByte	16 kByte
RAM	2,304 Byte	2,304 + 700 Byte Crypto	2,304 Byte	2,304 Byte	3,004 Byte	2,304 Byte
CPU	16 bit	16 bit	8/16 bit	8/16 bit	8/16 bit	8/16 bit
Crypto coprocessor	–	1,100 bit arithmetic	–	–	Yes	–
Clock (int.)	1–10 MHz	1–10 MHz	1–33 MHz	1–33 MHz	1–33 MHz	1–33 MHz
Clock (ext.)	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz
Operating voltage	2.7 V–5.5 V	2.7 V–5.5 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V
Max. supply current (at 5 MHz, 5 V)	10 mA @ 10 MHz	10 mA @ 10 MHz	10 mA	10 mA	10 mA	10 mA
Max. sleep mode current (typical)	100 µA	100 µA	100 µA	100 µA	100 µA	100 µA
Ambient temperature	–25 to +85°	–25 to +85°	–25 to +70° (85°)	–25 to +70° (85°)	–25 to +70° (85°)	–25 to +70° (85°)
Write / erase time (at 5 MHz)	4.5 ms (typ.)	4.5 ms (typ.)	< 2.9 ms (typ.)	< 2.9 ms (typ.)	< 2.9 ms (typ.)	< 2.9 ms (typ.)
EEPROM page programming	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte
MMU	Yes	Yes	Yes	Yes	Yes	Yes
Security features	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, elliptic curves in HW, asymmetric algorithms, hardware-supported (e.g. RSA)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES), elliptic curves in HW	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES) triple DES in HW	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors
Peripherals	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART, triple DES accelerator	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART, triple DES accelerator	CDRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	CDRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	CDRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	CDRC, UART, RNG, 2 x 16 bit timer, interrupt, DES
Delivery forms	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die
Applications	Banking (debit – credit), E-Purse, Pay-TV, M / E-commerce, security access, GSM, USIM, Ext. healthcare, multifunctional card	Banking (e-purse), Pay-TV, PKI, security access, GSM, R-UIM, multifunctional card	Payment, GSM, Pay-TV, security access, identification, dgital signatures	Payment, GSM, security access, identification	Payment, GSM, Pay-TV, security access, identification, digital signatures	GSM
Certifications	VISA Java, Proton Prisma, ITSEC E4 high, CAST	VISA Java, ZKA, Proton Prisma, ITSEC E4 high, MultOS V4/5, Mondex, CAST	Planned: CC EAL 5+, Visa, CAST, Proton, MultOS	Planned: CC EAL 5+, Visa, Proton, CAST	Planned: CC EAL 5+, Visa, Proton, MultOS, CAST	–

32 KB						64 KB
SLE 66C322P	**SLE 66C360PE**	**SLE 66CX322P**	**SLE 66CX360PE**	**SLE 66C324PE**	**SLE 66C321PE**	**SLE 66CX642P**
Security controller	Security controller	Security cryptocontroller	Security cryptocontroller	Security controller	Security controller	Security cryptocontroller
134 kByte	196 kByte	134 kByte	246 kByte	136 kByte	96 kByte	206 kByte
32 kByte	36 kByte	32 kByte	36 kByte	32 kByte	32 kByte	64 kByte
4,352 Byte	4,352 Byte	4,352 + 700 Byte Crypto	7,100 Byte	2,304 Byte	2,304 Byte	4,352 + 700 Byte Crypto
16 bit	8/16 bit	16 bit	8/16 bit	8/16 bit	8/16 bit	16 bit
–	–	1,100 bit arithmetic	–	–	–	1,100 bit arithmetic
1–10 MHz	1–33 MHz	1–15 MHz	1–33 MHz	1–33 MHz	1–33 MHz	1–15 MHz
1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz
2.7 V–5.5 V	1.8 V, 3.0 V, 5.0 V	2.7 V–5.5 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	1.62 V–5.5 V
10 mA @ 10 MHz	10 mA	10 mA @ 15 MHz	10 mA	10 mA	10 mA	10 mA @ 15 MHz
100 µA	100 µA	100 µA	100 µA	100 µA	100 µA	100 µA
–25 to +85°	–25 to +70° (85°)	–25 to +85°	–25 to +70° (85°)	–25 to +70° (85°)	–25 to +70° (85°)	–25 to +85°
4.5 ms (typ.)	< 2.9 ms (typ.)	4.1 ms (typ.)	< 2.9 ms (typ.)	< 2.9 ms (typ.)	< 2.9 ms (typ.)	4.1 ms (typ.)
1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, glitch sensor, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW, hardware-supported (e.g. RSA)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, elliptic curves in HW, asymmetric algorithms, hardware-supported (e.g. RSA), elliptic curves in HW	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES), triple DES in HW	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors, symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing-attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature sensors, life test function for sensors	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, elliptic curves in HW, asymmetric algorithms
2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART	2 x 16-bit autoreload timer, DES, interrupt, CRC, RNG, UART	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART, triple DES accelerator	2 x 16-bit autoreload timer, interrupt, CRC, RNG, UART, ACE, DES	CDRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	CDRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART, triple DES accelerator
Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die
Loyalty, gambling, membership, metering, banking low level, healthcare, basic GSM, R-UIM, identification, transport	GSM, security access, identification, multi-application card based on MultOS, Java or WinSC	Java-based card, banking (e-purse), Pay-TV, PKI, security access, GSM / USIM, R-UIM, multifunctional card	Banking (e-purse), Pay-TV, security access, GSM / USIM, R-UIM, identification, digital signature	GSM, security access, identification, multiapplication card, security access, Java or WinSC	GSM	Java-based card, banking (e-purse), Pay-TV, PKI, security access, GSM / USIM, R-UIM, multifunctional card
–	CC EAL 5+, Proton Prisma, ZKA, Visa Java, CAST	CC EAL 5+, Proton Prisma, ZKA, Visa Java, CAST	CC EAL 5+, Proton Prisma, ZKA, Visa Java, CAST	Planned: CC EAL 5+, Visa, CAST, Proton, MultOS, ZKA	–	CC EAL 5+ planned, CAST

SLE 66C644P	SLE 66C640P	SLE 66C680PE	SLE 66C682PE	SLE 66C681PE	SLE 66CX680PE
Security controller	Security controller	Security controller	Security controller	Security controller	Security cryptocontroller
206 kByte	134 kByte	246 kByte	196 kByte	136 kByte	246 kByte
64 kByte	64 kByte	68 kByte	68 kByte	68 kByte	68 kByte
4,352 Byte	4,352 Byte	6,400 Byte	4,352 Byte	4,352 Byte	7,100 Byte
16 bit	16 bit	8/16 bit	8/16 bit	8/16 bit	8 / 16 bit
–	–	–	–	–	–
1–15 MHz	1–10 MHz	1–33 MHz	1– 33 MHz	1–33 MHz	1–33 MHz
1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5 MHz	1–7.5MHz
1.62 V–5.5 V	2.7 V–5.5 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V	1.8 V, 3.0 V, 5.0 V
10 mA @ 15 MHz	10 mA @ 10 MHz	10 mA	10 mA	10 mA	10 mA
100 µA	100 µA	100 µA	100 µA	100 µA	100 µA
–25 to +85°	–25 to +85°	–25 to +70° (85°)	–25 to +70° (85°)	–25 to +70° (85°)	–25 to +70° (85°)
4.1 ms (typ.)	4.5 ms (typ.)	< 2.9 ms	< 2.9 ms	< 2.9 ms	< 2.9 ms
1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte	1 to 64 Byte
Yes	Yes	Yes	Yes	Yes	Yes
Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, symmetric algorithms (e.g. DES / AES), DES accelerator in HW, elliptic curves in HW	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency sensor, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature life test function for sensors, symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature life test function for sensors, symmetric algorithms (e.g. DES / AES)	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature life test function for sensors	Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature life test function for sensors, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW
2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART	2 x 16-bit autoreload timer, PLL, interrupt, CRC, RNG, UART	CRC, UART, RNG, 2x 16 bit timer, interrupt, DES	CRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	CRC, UART, RNG, 2 x 16 bit timer, interrupt, DES	CRC, UART, RNG, 2x 16 bit timer, interrupt, DES
Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die	Module M5, die
Banking (debit – credit), E-Purse, Pay-TV, M/E-commerce, security access, GSM, USIM, Ext. healthcare, multifunctional card	Healthcare, Basic GSM, R-UIM, identification, transport	Payment, GSM, Pay-TV, security access identification, digital signatures	GSM	GSM	Payment, GSM, Pay-TV, identification, digital signatures, multiapplication card based on MultOS, Java or WinSC multifunctional card
Planned: CC EAL 5+ Visa, CAST, Proton, MultOS, ZKA	–	Planned: CC EAL 5+, Visa, CAST, Proton, MultOS, ZKA	–	–	Planned: CC EAL 5+, Visa, CAST, Proton, MultOS, ZKA

Security Controller Overview in EEPROM Sizes

≧ 72 KB			
SLE 66CX1360PE	**SLE 88CX720P**	**SLE 88CFX4000P**	**SLE 88CFX4002P**
Security cryptocontroller	Security cryptocontroller	Security cryptocontroller	Security Cryptocontroller
246 kByte	240 kByte	80 kByte	240 kByte
136 kByte	80 kByte	400 kByte	400 kByte
7,100 Byte	8 kByte + 700 Byte crypto	16 kByte + 880 Byte Crypto	16 kByte + 880 Byte Crypto
8 / 16 bit	32 bit	32 bit	32 bit
Yes	1,100 bit arithmetic	1,408 bit arithmetic	1,408 bit arithmetic
1 to 33 MHz	Up to 55 MHz	Up to 66 MHz	Up to 66 MHz
1 to 7.5 MHz	1 to 10 MHz	1 to 10 MHz	1 to 10 MHz
1.8 V, 3.0 V, 5.0 V	2.7 V – 5.5 V	1.62 V – 5.5 V	1.62 V – 5.5 V
10 mA	2.5 mA	1.75 mA	1.75 mA
100 µA (100 µA)	100 µA (100 µA)	100 µA (100 µA)	100 µA (100 µA)
–25 to +70° (85°)	–25 to +85°	–25 to +85°	–25 to +85°
< 2.9 ms	4.1 ms (typ.)	2.3 ms (typ.)	2.3 ms (typ.)
1 to 64 Byte	1 to 64 Byte	1 to 128 Byte	1 to 128 Byte
Yes	Yes	Yes	Yes
Tamper-proof design, chip ID, counter measures against SEMA / DEMA, SPA / DPA, DFA and timing attacks, sensor concept: low and high voltage sensors, frequency sensors and filters, light-, glitch-, temperature life test function for sensors, symmetric algorithms (e.g. DES / AES), triple DES in HW, elliptic curves in HW	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, elliptic curves in HW, asymmetric algorithms, hardware-supported (e.g. RSA), bus encryption, dual rail logic	Tamper-proof design, chip ID, counter measures against reverse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, elliptic curves in HW, asymmetric algorithms, hardware-supported (e.g. RSA), bus encryption, dual rail logic	Tamper-proof design, chip ID, counter measures against everse engineering, SPA / DPA, DFA / EMA, memory encryption, sensor concept: voltage-, frequency-, light-, temperature-, glitch sensor, active shield, triple DES in HW, elliptic curves in HW, asymmetric algorithms, hardware-supported (e.g. RSA), bus encryption, dual rail logic
CRC, UART, RNG, 2x 16 bit timer, ACE, interrupt, DES	3x 16-bit autoreload timer, PLL, interrupt, RNG, UART, triple DES accelerator	3x 16-bit autoreload timer, PLL, interrupt, RNG, UART, triple DES accelerator	3x 16-bit autoreload timer, PLL, interrupt, RNG, UART, triple DES accelerator
Module M5, die	Module M5, die	Module M5, die	Module M5, die
Payment, GSM, Pay-TV, identification, digital signatures, multiapplication card based on MultOS, Java or WinSC	Java-based card, banking (e-purse), Pay-TV, PKI, security access, GSM / USIM, multifunctional card	Java-based card, banking (e-purse), Pay-TV, PKI, security access, GSM / USIM, multifunctional card	Java-based card, banking (e-purse), Pay-TV, PKI, security access, GSM / USIM, multifunctional card
Planned: CC EAL 5+, Visa, CAST, Proton, MultOS, ZKA	CC EAL 5+, CAST	Planned: CC EAL 5+, CAST	Planned: CC EAL 5+, CAST

Infineon Technologies sales offices worldwide*

Australia (AU)
Siemens Ltd.
885 Mountain Highway
Bayswater, Victoria 3153
☎ (+61) 3-97 21 12 11
Fax (+61) 3-97 21 72 75

Austria (AT)
Infineon Technologies Villach AG
Sales Office
Austria AG
Operngasse 20B/31
1040 Wien
☎ (+43) 1-5 87-70 70 0
Fax (+43) 1-5 87-70 70 20 0

Benelux (B) (NL)
Infineon Technologies Holding B.V.
Sales Division
Westblaak 32
3012 KM Rotterdam
☎ (+31) 10-2 17 68 00
Fax (+31) 10-2 17 68 19

Brazil (BR)
Infineon Technologies
South America Ltda.
Av. Mutinga, 3800 - predio 3
05110-901 Sao Paulo-SP
☎ (+55) 11-39 08-25 64
Fax (+55) 11-39 08-27 28

Canada (CN)
Infineon Technologies Corporation
340 March Road
Kanada, Ontario K2K 2E2
☎ (+1) 6 13-5 91-38 35
Fax (+1) 6 13-5 91-89 54

Germany (D)
Infineon Technologies AG
Völklinger Straße 4
40219 Düsseldorf
☎ (+49) 2 11-20 95 49 0
Fax (+49) 2 11-20 95 49 60

Infineon Technologies AG
Paderborner Straße 1
30539 Hannover
☎ (+49) 5 11-87 65 62 0
Fax (+49) 5 11-87 65 62 90

Infineon Technologies AG
Südwestpark 65
90449 Nürnberg
☎ (+49) 9 11-2 52 93 0
Fax (+49) 9 11-2 52 93 93

Infineon Technologies AG
Naegelsbachstrasse 26
91052 Erlangen
☎ (+49) 91 31-97 00-10
Fax (+49) 91 31-97 00-90

eupec GmbH
Max-Planck-Strasse 5
59581 Warstein
☎ (+49) 89 234-0
Fax (+49) 89 234-24694

Infineon Technologies AG
Siemensstraße 31 – 33
71254 Ditzingen/Stuttgart
☎ (+49) 7 15-61 79 19 0
Fax (+49) 7 15-61 79 19 90

Germany (D)
Infineon Technologies AG
Rosenheimer Straße 116
81669 München
☎ (+49) 89-23 40
Fax (+49) 89-23 42 46 94

China (CN)
Infineon Technologies
International Trade (Shanghai) Co., Ltd.
Beijing Representative Office
12th Floor, Quantum Plaza
No.27 Zhichun Road
Haidian District,
Beijing 100083,
Peoples Republic of China
☎ (+86) 10 82 35 61 18
Fax (+86) 82 35 54 74

Infineon Technologies
Hong Kong Ltd.
Hong Kong Office
302 Level 3 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Hong Kong
☎ (+8 52) 28 32 05 00
Fax (+8 52) 28 27 97 62

Infineon Technologies
International Trade (Shanghai) Co., Ltd.
No. 8, Lane 647, Songtao Road
Zhangjiang Hl-Tech Park
Pudong, Shanghai, China
Shanghai
☎ (+86) 21-63 61 26 18, -19
Fax (+86) 21-63 61 11 67

Infineon Technologies
International Trade (Shanghai) Co., Ltd.
Shenzhen Office
Room 1501-05, Block A
Tian An International Building
Renmin Nan Road
Shenzhen 518 001
☎ (+86) 7 55-2 28 91 04
Fax (+86) 7 55-2 28 02 17

Denmark (DK)
Infineon Technologies Nordic A/S
Herlev Hovedgade 201A
DK 2730 Herlev
☎ (+45) 44 50 77 00
Fax (+45) 44 50 77 01

Finland (FI)
Infineon Technologies Nordic OY
Visitor´s Address Linnouitustie 4A
P.O. Box 276
FIN-02601 Espoo
☎ (+3 58) 10-680 84 00
Fax (+3 58) 10-680 84 01

France (FR)
Infineon Technologies France SAS
39/47, Bd. Ornano
93527 Saint-Denis CEDEX 2
☎ (+33) 1-48 09 72 00
Fax (+33) 1-48 09 72 90

India (IN)
Infineon Technologies
India Pvt. Ltd.
10th Floor, Discoverer Building
International Technology Park
Whitefield Road
Bangalore 560 066, India
☎ (+91) 80 8 41 00-17, 18
Fax (+91) 80 8 41 00 12

Ireland (IE)
Infineon Technologies Ireland Ltd.
69 Fitzwilliam Lane
Dublin 2
☎ (+3 53) 1-79 99 500
Fax (+3 53) 1-79 99 501

Israel (IL)
Nisko Ltd.
2A, Habarzel Street
69710 Tel Aviv – Israel 69710
☎ (+9 72) 3-7 65 73 00
Fax (+9 72) 3-7 65 73 33

Italy (IT)
Infineon Technologies Italia S.r.l.
Via Vipiteno 4
20128 Milano
☎ (+39) 022 52 04-1
Fax (+39) 022 52 04-43 95

Japan (JP)
Infineon Technologies Japan K.K.
Takanawa Park Tower 8F/9F/12F/17F
3-20-14, Higashi-Gotanda,
Shinagawa-ku,
Tokyo 141-0022
☎ (+81) 3 54 49 64 11
Fax (+81) 3 54 49 64 01

Korea (KR)
Infineon Technologies Korea Co., Ltd.
Room No. 2 & 3, 9th floor
Daelim Acrotel
467-6 Dogok-Dong, Kangam-Gu
Seoul, Korea 135-971
☎ (+82) 23 46 00-900
Fax (+82) 23 46 00-901/902

Malaysia (MAL)
Infineon Technologies (M) SDN BHD
Krystal Point II
1-4-11/12, Lebuh Bukit Kecil 6
11900 Bayan Lepas
Penang. Malaysia
☎ (+60) 46 44 77 66
Fax (+60) 46 41 48 72

New Zealand (NZ)
Siemens Components
300 Great South Road
Greenland, Auckland
☎ (+64) 95 20 30 33
Fax (+64) 95 20 15 56

Pakistan (PK)
Siemens Pakistan
Engineering Co. Ltd
23 West Jinnah Avenue
P.O.B. 1129
Islamabad 44 000
☎ (+92) 51 21 22 00
Fax (+92) 51 21 16 10

Poland (PL)
Siemens SP. z.o.o.
ul. Zupnicza 11
03-821 Warszawa
☎ (+48) 22-8 70 91 50
Fax (+48) 22-8 70 91 5

Portugal (PT)
Siemens S.A.
OG Componentes Electronicos
Rua Irmaos Siemens, 1
Alfragide
2720-093 Amadora
☎ (+351) 1-4 17 85 90
Fax (+351) 1-4 17 80 83

Russia (RU)
INTECH electronics
ul. Smolnaya, 24a/1203
125 445 Moscow
☎ (+7) 0 95-4 51 97 37
Fax (+7) 0 95-4 51 86 08

Singapore (SG)
Infineon Technologies Asia
Pacific, Pte. Ltd.
25 New Industrial Road
KHL Building
Singapore 536 211
☎ (+65) 68 40 07 32
Fax (+65) 68 40 00 77

South Africa (ZA)
Siemens Components
P.O.B. 3438
Halfway House 1685
Gauteng
☎ (+27) 11 6 52-20 00
Fax (+27) 11 6 52-25 73

Spain (ES)
Siemens S.A.
Division Componentes
Ronda de Europa, 5
28760 Tres Cantos-Madrid
☎ (+34) 91-5 14 71 54
Fax (+34) 91-5 14 70 13

Sweden (SE)
Infineon Technologies Nordic AB
Box 46
164 93 Kista
☎ (+46) 8-7 03 59 00
Fax (+46) 8-7 03 59 01

Switzerland (CH)
Infineon Technologies
Switzerland AG
Badenerstraße 623
P.O.B. 1570
8048 Zürich
☎ (+41) 1-4 97 80 40
Fax (+41) 1-4 97 80 50

Taiwan (TW)
Infineon Technologies
Taiwan Ltd.
12F-1, No. 3-2 Yuan Qu Street
Nan Kang Software Park
Twain 115, R.O.C.
☎ (+8 86) 2-26 55 75 00
Fax (+8 86) 2-26 55 75 01-8

Turkey (GB)
Siemens Sanayi ve Ticaret A.S.
Yakacik Yolu No: 111
34861 Kartal, Istanbul - Türkei
☎ (+90) 21 64 59 28 51
Fax (+90) 21 64 19 31 90

United Kingdom (GB)
Infineon Technologies UK Ltd.
Infineon House
Fleet Mill
Minley Road
Fleet, Hampshire GU51 2RD
☎ (+44) 12 52-77 22 00
Fax (+44) 12 52-77 22 01

United States of America (US)
Infineon Technologies
North America Corp.
21800 Haggerty Road, Suite 112
Northville, MI 48167
☎ (+1) 2 48-3 74 08 90
Fax (+1) 2 48-3 74 25 01

Infineon Technologies
North America Corp.
2529 Commerce Drive
Kokomo, IN 46902
☎ (+1) 7 65-4 56 19 28
Fax (+1) 7 65-4 56 38 36

Infineon Technologies Corporation
1730 North First Street
San José, CA 95112
☎ (+1) 4 08-5 01 60 00
Fax (+1) 4 08-5 01 24 24

eupec Inc.
1050 Route 22
Lebanon, NJ 08833
☎ (+1) 90 8-2 36 56 21
Fax (+1) 90 8-2 36 56 20

Infineon Technologies
North America Corp.
1901 N. Roselle Rd., Suite
Schaumburg, IL 60195
☎ (847)884-70 09
Fax (847)884-75 99

Infineon Technologies
North America Corp.
2901 Dallas N. Tollway, Suite 370
Plano, TX 75093
☎ (972) 378-49 46
Fax (972) 403-97 89

Infineon Technologies
North America Corp.
238 Littleton Rd, Suite 200
Westford, MA 01886
☎ (978) 692-05 50
Fax (978) 692-2309

Infineon Technologies
North America Corp.
3700 West Parmer Lane, Suite 102
Austin, TX 78727
☎ (512) 341-71 27
Fax (512) 341-99 26

Infineon Technologies
North America Corp.
6170 Cornerstone Ct East, Suite 240
San Diego, CA 92121
☎ (858) 526-22 01
Fax (858) 526-22 02

Infineon Technologies
North America Corp.
485 Route 1 South
Iselin, NJ 08830
☎ (732) 855-92 00
Fax (732) 855-92 06

Infineon Technologies
North America Corp.
8203 Willow Place South, Suite 660
Houston, TX 77070
☎ (281) 774-05 55
Fax (281) 774-05 61

Infineon Technologies
North America Corp.
3000 CentreGreen Way
Raleigh, NC 27513
☎ (919) 677-27 00

* and representative offices

www.infineon.com

Ordering No. B116-H8309-X-X-7600
Printed in Germany
WS 10037.

Z&P 2002947