

TECH GLOSSARY

3G – Third Generation, stands for new networking technologies used in mobile communications.

ASIC – Application Specific Integrated Circuit. Logic IC constructed for a specific application and implemented on an integrated circuit.

BLUETOOTH – Technology for wireless voice and data transmission over short distances.

Chip Card – Plastic card with built-in memory chip or microprocessor, can be combined with personal identification number (PIN).

CDMA – Code Division Multiple Access. Process used in mobile communications systems, allowing several users simultaneous access to a transmission channel. Advantage: optimal utilization of available transmission bandwidth.

CMOS – Complementary Metal Oxide Semiconductor Technology. Technology used to produce microchips with low power usage and high level of integration.

DECT – Digital Enhanced Cordless Telecommunications. Uniform European standard for wireless digital communications systems.

DRAM – Dynamic Random Access Memory. Widely-used memory chip technology based on high level integration and consequently low price. Examples of DRAM chips: SDRAM, DDR DRAM, Rambus or in logic ICs embedded DRAM. (See “RAM”)

Ethernet – Network for high-speed communications for application limited to local areas (covering several 10s of meters to 10 km).

Flash Memory – A kind of non-volatile memory. Its contents are preserved, even if the power supply is switched off.

GPRS – General Packet Radio Service. New generation of mobile communications of the 2.5 Generation for higher data transmission capacities (up to 115 KB/s) in GSM networks.

GPS – Global Positioning System. Radio-based location identification and positioning process via direct reception of radio signals.

GSM – Global System for Mobile Communication. The most widely used digital mobile communications standard in the world.

IC/ICs – Integrated Circuit(s). Electronic component parts on the basis of semiconductor materials such as silicon; numerous, with each other connected components such as transistors and diodes can be integrated into an IC.

ISDN – Integrated Services Digital Network. On-line type of connections, integrating telecommunications services such as telephone, fax or data transmissions into one single network.

LAN – Local Area Network (Local network). Data communications network limited to an extremely limited physical space, for example within one building.

MAN – Metropolitan Area Network. Data communications network for a relatively limited area, for example a city.

Megabit (Mbit) – About one million bits. A bit is a unit for measuring information or for calculation purposes, which assumes one of two values, for example “right”/“wrong” or “0”/“1”.

Megabyte (MB) – About one million bytes. A byte is a unit of measurement for information units in data processing devices. A byte corresponds to 8 bit.

Memory – Synonym for RAM and ROM (see “RAM”, “ROM”). Can apply to every device, which stores data in machine-readable form.

Microcontroller – A microprocessor integrated into a single IC combined with memory and interfaces, functioning as an embedded system. The most complex logical integrated circuits can be implemented in a microcontroller and controlled per software.

Micrometer/Micron – Metric linear measure, corresponding to the millionth part of a meter. Symbol: μm (Micron). Example: the diameter of a single hair of a person is 0.1 micrometer.

PDA – Personal Digital Assistant. An electronic address book, appointment calendar and notebook, most recently available in combination with cellular phones; synchronized with the PC.

RAM – Random Access Memory (Direct access memory). Data memory known as main or primary memory, containing programs and data from external memory sources. It loses data without power supply. Examples: SRAM and SGRAM. (See “DRAM”)

ROM – Read-only Memory. Digital, non-volatile data memory, in which data can be permanently stored even without power supply.

Semiconductor – A crystalline material, which demonstrates electrical conductivity upon warming, increasing the level of conductivity with rising temperature. Semiconductors are, for example, silicon, germanium or gallium-arsenide. The term is also applied to ICs made of this material.

Silicon – Material with semi-conducting characteristics. Silicon is widely used in the semiconductor industry as a basic raw material (silicon wafers).

Telematic – Invented term derived from Telecommunication and Informatic. Generic term for the integration of voice, data and visual communications technologies.

UMTS – Universal Mobile Telecommunications System. Designed to be the future global digital standard for mobile communications. UMTS enables data transmission of up to 2 Mbit/s – 200 times the rate of current systems.

Volatile Memory – Memory which loses the information stored in it when power supply is switched off.

Wafer – Disc made of a semiconductor material such as silicon, with a diameter of up to 300 mm. In the production of ICs, it is cut out of a single crystal and forms the substrate of integrated circuits.

WAN – Wide Area Network. Data communications network for a large geographic area.

xDSL – x Digital Subscriber Line. Generic term for various technical concepts for broadband, digital data transmission via existing copper telephone lines. Depending on the configuration, the “x” stands for ADSL, SDSL or VDSL.