

M2M - Machine to Machine Communication

Company profile

MC Technologies is a leading European provider of innovative solutions for:

- ❑ Machine-to-machine (M2M) communications through a mobile wireless data terminal for business applications
- ❑ Custom-made wiring harnesses
- ❑ Sales and distribution of electro-mechanical components and modules from selected and certified partners

Through more than 60 years of experience in the TK marketplace, we offer

- ❑ Competent advice from experienced personnel
- ❑ Rapid and professional handling of all commercial and logistic processes
- ❑ Extensive service concept for our products and technical solutions

Business sector M2M

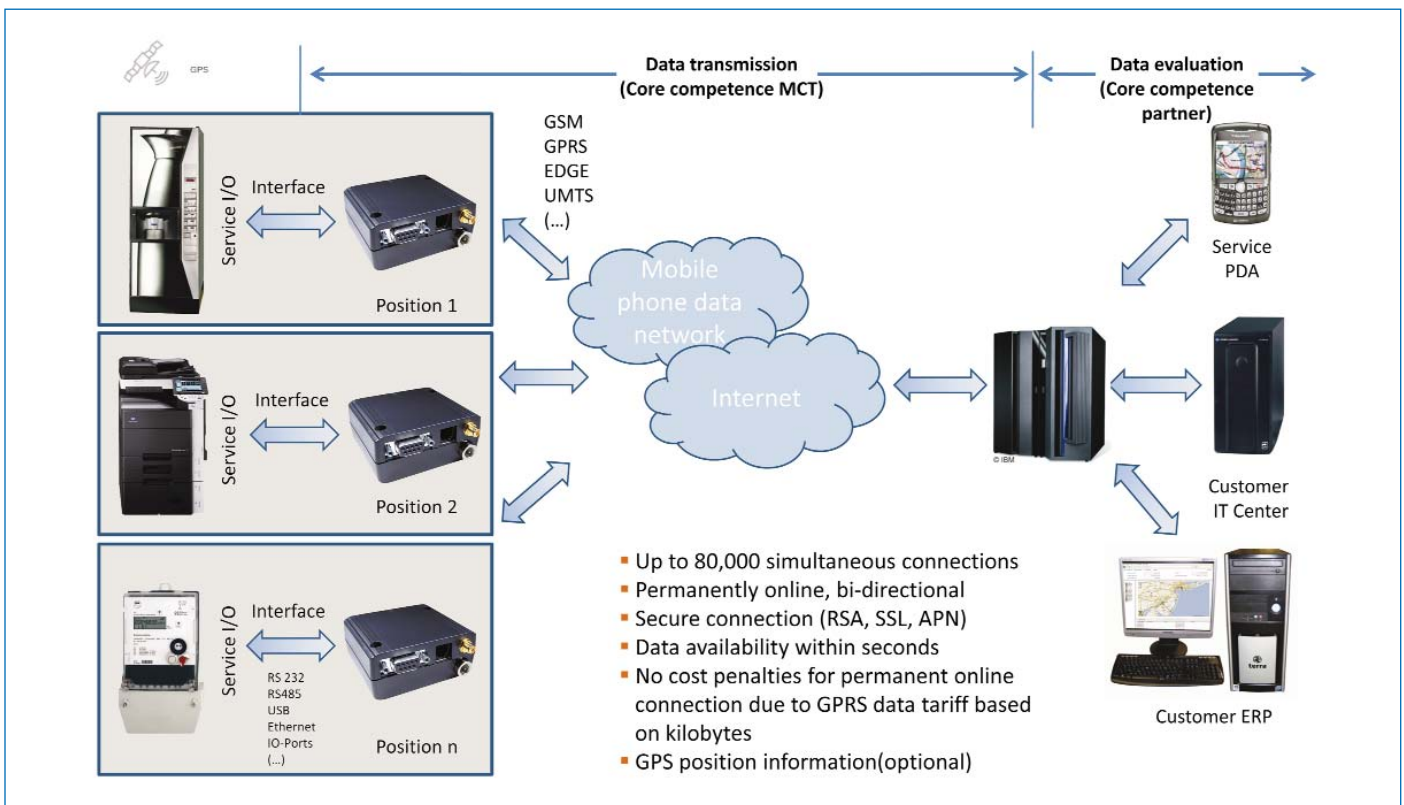
- ❑ MC Technologies is a major supplier of wireless applications and wireless modules in Europe.
- ❑ More than 230,000 wireless modules were sold in 2009.
- ❑ The product portfolio includes embedded wireless software, embedded wireless modules, and application software.
- ❑ In addition, our R&D department can help you to integrate our wireless technology in your own custom turnkey solution.
- ❑ In addition, MC Technologies can provide top quality of 1st and 2nd level support.

Key applications

- ❑ Automation & Control (copying and franking machines, pumps, elevators, etc.)
- ❑ Smart Metering (remote meter reading for power utilities)
- ❑ Vending (Remote servicing, remote control and telemetry for vending machines)
- ❑ Track & Trace (logistics and fleet management, traffic telematics, container tracking)
- ❑ MC Technologies/Inside M2M have developed a universally applicable data transfer solution for M2M applications and can provide expert advice for transferring data via the mobile phone data network.

Advantages

- ❑ **Efficiency:** With our technology, a single server can maintain and monitor up to 80,000 simultaneous wireless data connections
- ❑ **Speed:** A status check of tens of thousands of vending machines or printers etc. takes only a few minutes
- ❑ **Reduced data volume:** Data pre-processing in the intelligent terminal considerably reduces the data payload; data transfer costs are typically <5 €/month per terminal
- ❑ **Location independent:** The mobile phone data network is available practically everywhere and allows nearly any machine to be monitored. Plug&Play installation without needing cables
- ❑ **Return on Invest (ROI):** within one business year



M2M Applications



Track & Trace for vehicles and mobile equipment

Description:

- Transfer of GPS position data from a vehicle to a central office or transport headquarters through a mobile wireless data terminal
- Transfer of additional information to a central office (driver ID, status information, etc.)
- Transfer of control commands and information to the vehicle (ignition on/off, order confirmation, etc.)

Applications:

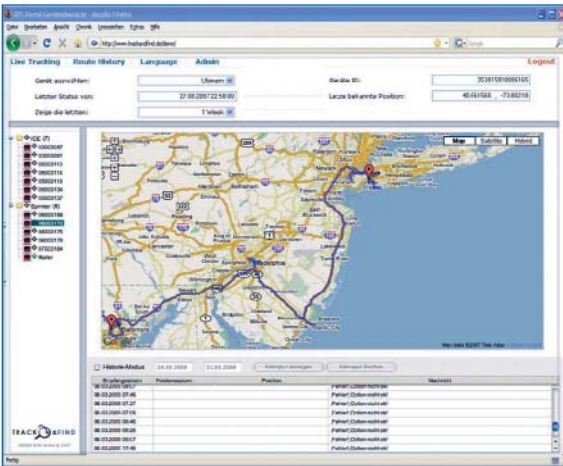
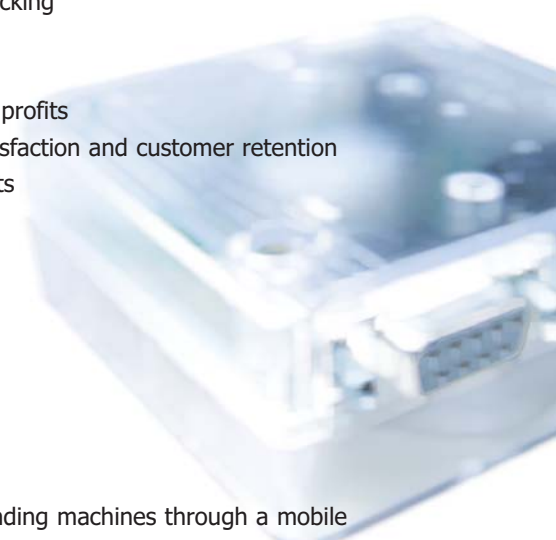
- Route and transport order planning, order processing
- Fleet management and passenger information systems
- Electronic driver's logbook

Objectives:

- Theft protection and tracking
- Route optimization

Advantages:

- Increased turnover and profits
- Increased customer satisfaction and customer retention
- Protection of investments



Vending

Description:

- Online telemetry for vending machines through a mobile wireless data terminal
- Monitoring of correct function and sales / stock level
- Remote control of vending machines

Applications:

- Vending machines for drinks and food
- Vending machines for other products
- Reverse vending systems for returnables

Objectives:

- Immediate notification of faults and malfunctions
- Automatic sales statistics
- Allows online cashless payment in realtime

Advantages:

- Increased turnover and profits
- Optimization of corporate processes
- Protection against fraud and misuse
- Increased availability of the vending machine

M2M Applications

Remote control of decentral equipment

Description:

- Online access to equipment and machines through a mobile wireless data terminal
- Transfer of service reports and measurement data to a central office
- Transfer of control commands to the equipment

Applications:

- Equipment and plant with high service and maintenance costs
- Complex manufacturing processes
- Equipment pool

Objectives:

- Immediate and automatic notification of faults and malfunctions
- Automatic recording of consumables
- Real time transfer of measurement data
- Remote configuration

Advantages:

- Cost savings
- Optimization of corporate processes
- New or improved service level / service models
- Strategic competitive advantages
- Increased availability of the equipment and/or plant



Smart Metering

Description:

- Remote reading of electricity / gas / water / heat meters through a mobile wireless data terminal
- Remote maintenance and remote control for housing and real estate management, power utilities and industry

Applications:

- Energy and power equipment

Objectives:

- Fully automatic determination of load profiles
- Fully automatic billing systems
- Energy management

Advantages:

- Cost savings
- Improvement of efficiency
- Implementation of local regulations and energy efficiency guidelines



Events / Dates



Nürnberg, 02.03. - 04.03.2010
Visit us: Hall 12 - Booth 365



Hannover
02.03.-05.03.2010
We participate:
Vodafone Booth
Pavilion P32



19.04.-23.04.2010
Visit us:
Hall 7 Booth A46
Wireless Automation
joint booth

M2M Kompetenztag 2010
21.04.2010 / 13.00 - 21.00h

Robotation Academy
Fairground, Pavilion 36

Visitors will be offered practice-oriented presentations about „machine-to-machine communication via cellular networks“ from the perspective of users, GSM-providers and hard- and software-suppliers.

The application field of GPRS / EDGE / UMTS in the M2M sector is huge: the transfer of system data, transmission of alarm signals, control of machine-levels or the monitoring of vehicle fleets are just some examples of possible applications.

All experts are available for questions and discussion.

The participation is free.

We need your registration:
Phone +49 511 67 69 99 144

MC Technologies GmbH
Ahrensburger Str. 8
D-30659 Hannover
Tel. +49 511 67 69 99 - 0
Fax +49 511 67 69 99 - 150
info@mc-technologies.net
www.mc-technologies.net



M2M - Wireless Modules

We supply hardware and software for the entire sector of M2M communications:

- GSM data modules and accessories:
GPS, GSM, GPRS, EDGE, UMTS, HSDPA
- Development of custom solutions for industrial applications
- OEM products (GPRS-USB modem, Java terminal, Ethernet router, plug-in card for PC104 and PCI, etc.)
- Planning and execution of turnkey projects
- Antennas for special solutions; manufacture of cable harnesses



Highlights of our gsm modules:

- Java™-programmable (J2ME™)
- Digital, programmable I/Os (GPIOs)
- Ethernet interface
- RS232/-485/-422, USB 2.0 interfaces
- TCP/IP stack: TCP, UDP, HTTP, FTP, SMTP, POP3
- PC104 plug-in card (for embedded systems)
- PCI card (for desktop and industrial PCs)
- Industrial terminal for DIN top hat rails
- GSM/GPRS terminal (without case) for industrial applications

Application examples:

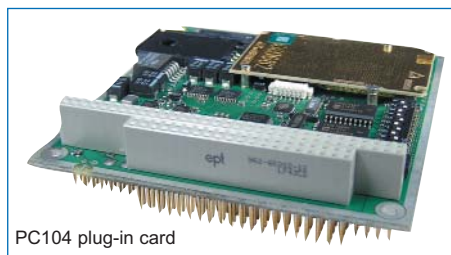
- Fleet management
- Telematics/traffic systems
- Building automation
- Power utilities
- Vending machines
- Safety technology
- Alarm / surveillance systems
- Production / automation
- ... and many more



GSM/GPRS terminal with GPIO adapter and portable antenna



LANPORT WAN ROUTER



PC104 plug-in card



PCI card



Industrial terminal for DIN top hat rails



UMTS/HSDPA terminal



Construction element manufacture



Manufacture of cable harnesses