TELECOMS

SIMply M2M

WHEN THE COFFEE MACHINE AT HOME ORDERS
NEW COFFEE PADS ON ITS OWN ONE OF THESE DAYS ...

... it's neither a science fiction movie nor magic. Machine-to-Machine (M2M) communication has come into play. The automatic exchange of information between end devices and machines, dispensers or vehicle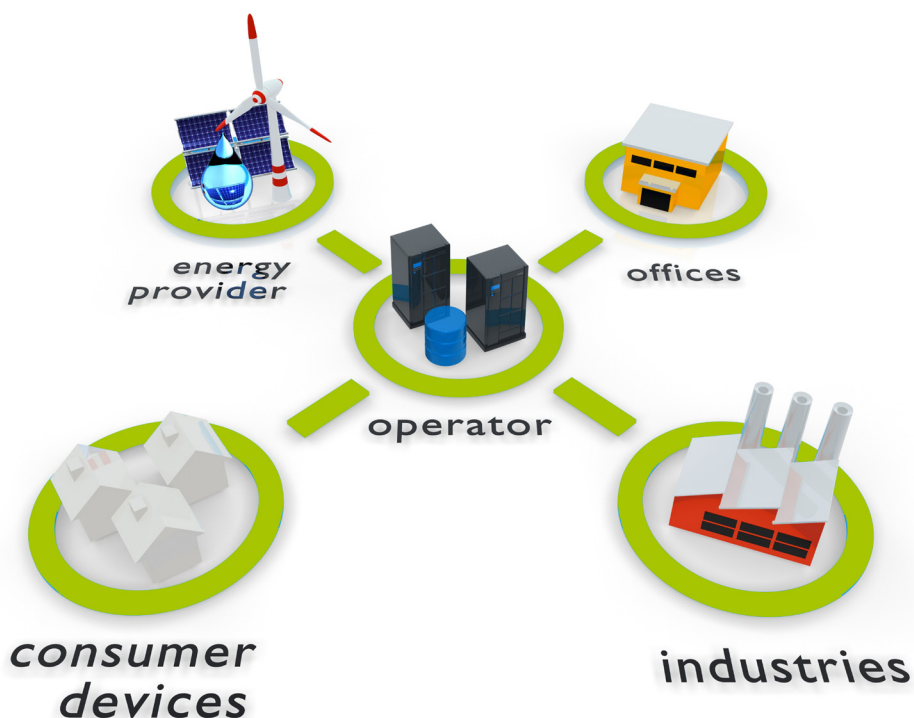s links information and communication technology, thus forming a network of intelligent objects - the „Internet of Things".

Intelligent? - Yes, thanks to a SIM card that makes communication between machines possible and secure.

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M2M SIM CARDS CAN WITHSTAND EXTREME ENVIRONMENTAL CONDITIONS

- Extreme temperatures like in a Weather station in the icy Arctic

- Strong vibrations as in a Wind turbine on the stormy North Sea

- High humidity if the card is operating in an Electricity meter in summery Southern France

Morpho has therefore set up its product range in such a manner that we can offer a product to all market segments that exactly meets the needs of the market and the customers. There are standard, advanced and premium products.

energy provider

offices

operator

consumer devices

industries

M2M STANDARD

Morpho's M2M standard products address applications with standard environmental performance and lifetime expectations of office and consumer devices, like Tablet Computers, Cameras and Digital Photo frames. The products of this segment are available in several form factors and already widely used in the market.

KEY FEATURES

- Standard and improved temperature range

- Lifetime up to five years

- Available in the form factors: 2FF, 3FF, MFF2

- Optional with an enhanced memory management to extend the lifetime of the product

M2M ADVANCED

The products of the advanced segment address industrial applications that demand an environmental performance in compliancy of the ETSI M2M specification. Such products are available in different temperature ranges and designed to meet the rough requirements and extended lifetime expectations of industrial applications, like metering systems, health care and vending machines.

KEY FEATURES

- Extended temperature range

- Extended lifetime

- Available in the form factors: 2FF and MFF2

- Enhanced memory management

- Compliant to the latest ETSI M2M specification

M2M PREMIUM

The premium segment is addressing very demanding use cases in terms of environmental performance, quality and mechanical stability that are usually requested in automotive applications. The products are qualified for an external temperature range for up to 105°C and come along with additional certification and documentation.
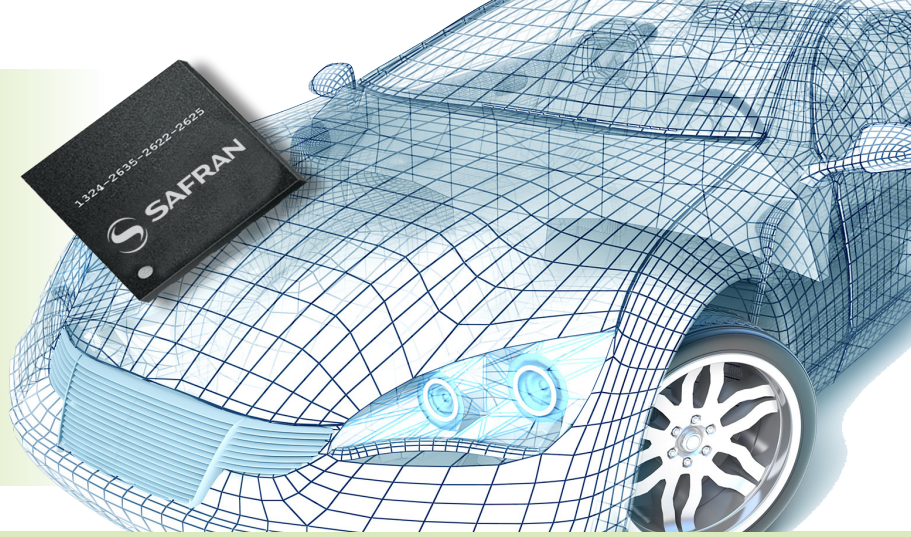
KEY FEATURES

- Extended temperature range

- Extended lifetime

- Available in the form factor MFF2

M2M SOLUTIONS SUITE

MORPHO'S M2M SOLUTIONS SUITE TAILORED FOR THE SPECIFIC NEEDS OF M2M MARKETS

- DEVICE LOCK
- REFRESH
- M2M MULTI-IMSI
- TAP (NETWORK MONITORING)
- PNP
- ePNP

DEVICE LOCK

▸ **Locks the subscription to the device and/or groups of devices**
▸ **If the device changes the application can detect this and lock the accounts access to the network**
▸ **It supports a "First See" mode and can personalize itself to the first device that the solution is being used for**
  • Ease of production
  • Automated personalization

REFRESH

M2M devices pose a unique problem
  • An OTA update is sent to a file
    Examples of the types of update:
    - Roaming lists
    - SMSC settings
    - Forced attachment to the network
      (network issue)
  • The update without a Refresh will not occur till the device is power cycled
▸ **The Refresh applet resolves this issue**
  • The Refresh applet receives an OTA command
  • It then issues a Refresh request to the device
  • This forces the device to re-read the affected file

M2M MULTI-IMSI

▸ **When M2M devices are delivered, they are delivered all over the world**
  • Accounts need to exist that are local for each M2M solution market/deployment
    - How do you know where the solution will be installed?
    - Why should you have multiple card inventory for each country?
▸ **Morpho has the following solutions**
  • Network Triggered Multi-IMSI
  • Automatic Multi-IMSI
  All tested and supporting M2M with reduced SIM Toolkit feature set

TAP
(TOTAL ANALYSIS PACKAGE)

▸ **M2M solution installations need to be monitored - Why?**
  • Loss of network
  • Loss of service
  • Failed network connections
  • Coverage issues
  • Device/terminal problems and profiling
▸ **TAP is a solution that can do this monitoring**
  • It can monitor groups of accounts or single devices
  • It produces reports and analysis with web analysis front end

PNP
(PREFERRED NETWORK PRIORITY)

▸ **M2M devices are installed in a roaming environment**
  • Control of the roaming partners becomes more important, i.e. the rates being charged in roaming between partners effects profits directly
▸ **PNP steers the devices to the roaming partners and thus providing the best revenue for the operator**
  • Controls preference
  • Rejects un-preferred partners
  • But: Static application which is effective on power cycle, i.e. it needs to wakeup before it is effective (no real time monitoring of attached network)

ePNP
(EVOLVED PREFERRED NETWORK PRIORITY)

Several M2M solutions might need control of roaming in Real Time. To cover these requirements Morpho goes one step further and offers ePNP

▸ **ePNP - the dynamic version of the PNP application**
  • It can control the network attached to and disconnect if required
  • It can shut down data connections

SOLUTIONS

KEY MISSIONS, KEY TECHNOLOGIES, KEY TALENTS

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