

Telium® and its associated tools

Telium® uses a full range of tools to incorporate security and manage terminals in the field.



Security management

Telium® uses several security devices to generate authentic software, introduce confidential information and maintain equipment.

Built on public-key infrastructure, Telium® not only guarantees software authenticity, it also rejects unauthorised software.

The security processor uses simple but secure means to incorporate confidential data.

Terminal Management System (TMS)

The TMS ensures dynamic system management by:

- Selectively downloading applications
- Sending messages to users
- Setting parameters remotely
- Managing the system using individual ID for each terminal

Application development as easy as 1, 2, 3

The Software Development Kit (SDK) used with Telium® is designed to reduce the time necessary to develop applications and simplify programming and maintenance. Written in C, applications can be quickly created and tested. They are directly integrated in the multi-application structure.

A wide range of software modules makes it easier for developers to fashion their applications. These include EMV modules, communication protocols (ISO 8583, SPDH, etc), and so on.

Each terminal that uses Telium® has a simulator that completes development solutions.



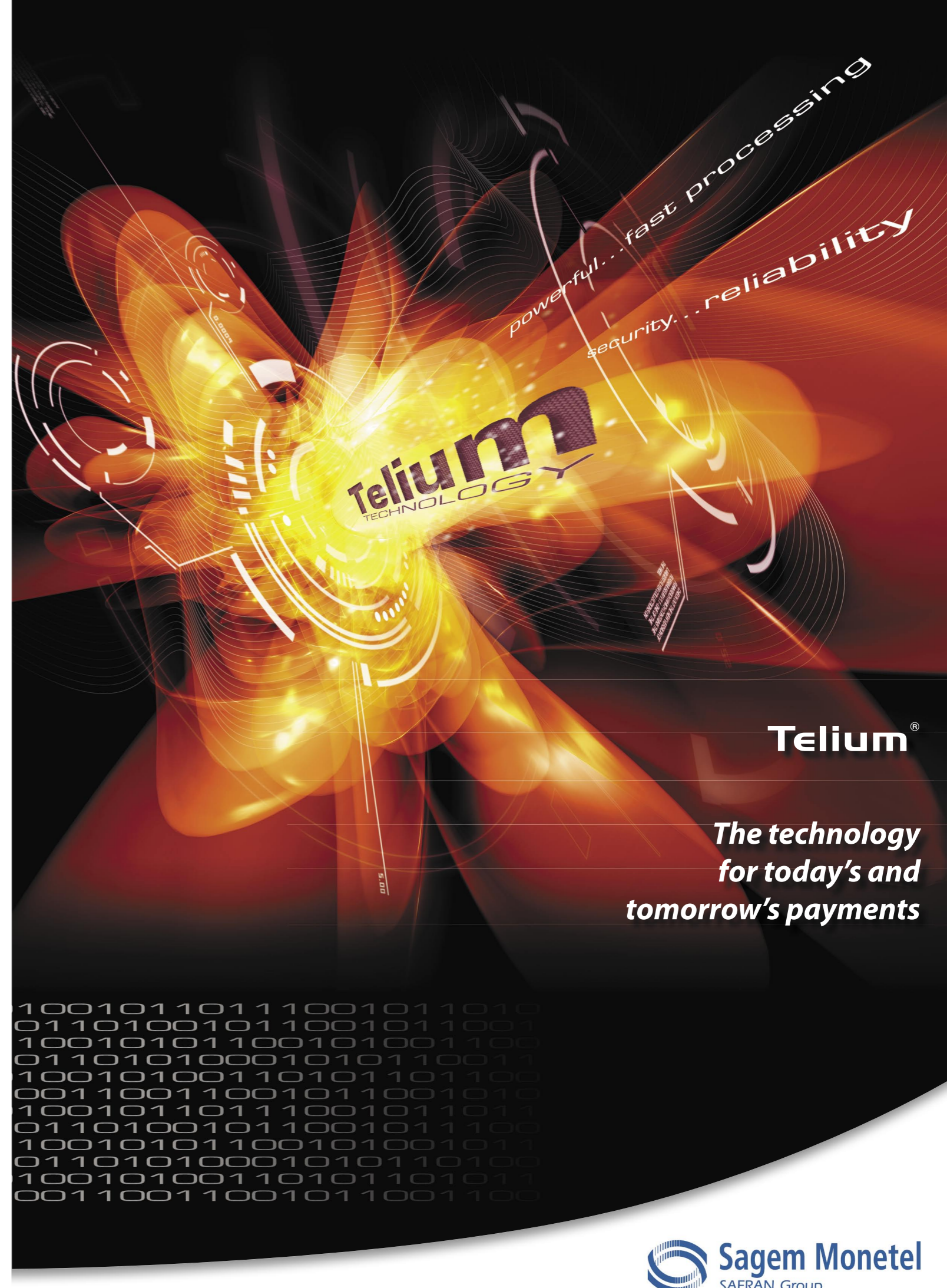
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Telium
TECHNOLOGY

powerful... fast processing
security... reliability

Telium®

**The technology
for today's and
tomorrow's payments**

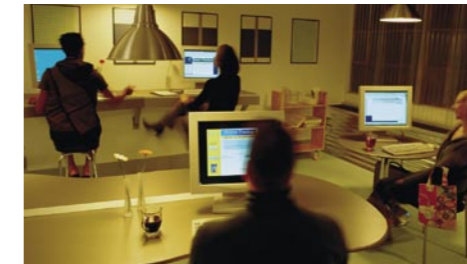


- Smart card payment
 - Healthcare
- Multiple applications
 - EMV migration
 - IP/Ethernet
 - SECURITY



Quicker transactions

Telium® is designed to meet customer needs for quick and efficient transactions. A Risc 32-bit ARM9 microprocessor, running at 180 MHz, ensures that transactions can be carried out in record time. A Risc 32-bit security coprocessor controls the use of the DES, 3DES or RSA security algorithms. In addition to this exceptional processing capacity, Telium® has multiple high-speed means of communication. Its modem is a V32 Bis that can easily be upgraded to a faster model. Furthermore, its USB and Ethernet (10M bits/s) ports facilitate integration in the point of sales by using quick and effective hook-ups.



Fully integrated in its environment

Telium® uses the most effective means to interface with other machines. Serial interfaces or USB connections (master and slave) facilitate linking the terminal to either cash registers or PCs or Macs. An Ethernet port and an integrated IP protocol allow access to local and distant networks. MMC or compact flash memory supports provide a large amount of memory that can easily be transferred to another machine. Finally, Telium® integrates the best wireless transmission—Bluetooth®, GSM, GPRS, etc.

Telium® is engineered to meet the challenges of electronic banking in the 21st century. Efficient security mechanisms protect it from fraud, and powerful processors reduce the transaction time. Moreover, EMV smart cards are processed in compliance with strict international guidelines. New means of communication are also included to ensure electronic transactions benefit from existing technologies. Telium® handles all types of transactions with the utmost security. Telium® technology can be used for any electronic transactions, whether it's debiting and crediting, recharging telephone cards, the electronic purse function or customer loyalty programmes.

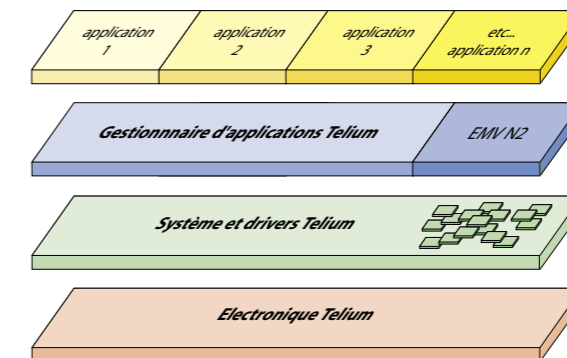
Security at all angles

Security is at the heart of Telium®'s design. Not only does it fulfil strict security requirements such as VISA PED, its security coprocessor protects sensitive data and controls the keyboard, display and smart card reader. Fraudulent intrusion detection can be triggered to erase confidential information and jam the terminal. The software integrity is guaranteed at all times. Authenticity of all loaded/downloaded software is verified using public-key authenticating methods.



Ready for EMV migration

Telium® is ready for EMV migration. EMV Co. has certified its smart-card couplers. Applications can use an EMV level 2 certified kernel. A complete set of efficient tools is available with the Telium® SDK (Software Development Kit) to develop EMV certified applications.



Outstanding reliability

Sagem Monetel engineers used the most innovative electronic-integration technology possible when designing Telium®. It does the work of an entire electronic card with just a few components. This technological prowess is part of what makes Telium so reliable.

Multi-application possibility

Telium® has been engineered to meet the ever-increasing need for more and more applications on the same Memory Management Unit (MMU). The Memory Management Unit ensures the integrity of the applications by allocating memory space for each application. In addition to this, the software is built around an application manager that controls all applications.

