



## GemClub-Memo

Product Information

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### Introduction

Combining the benefits of the low-cost Memory cards, and the communication protocol of Microprocessor cards, the GemClub-Memo is the most advanced technology in the Memory cards market.

GemClub-Memo has been winning the confidence of application developers since 1998. GemClub-Memo is the proven and the secure Memory technology in the smart card market, with more than 10 million cards in the field and 100 live applications such as:

- Reward (loyalty, Voucher, Pre-paid...)
- Public (Transportation, driving license, health care, fleet cards),
- Electronic purse (in closed payment schemes),
- Access control (logical or physical).

The GemClub-Memo complies with the international standards:

- ISO / IEC 7816-4,
- PC/SC protocol,

Thanks to the above unique features, GemClub-Memo allows fast and secure application deployment, either at the point of sale or "over the Internet".

### Key Benefits

**Easy to develop new applications, Easy to implement, Easy to use:**

- GemClub-Memo is able to provide you with what you need in terms of **Data Storage capacity with 3 levels of security**:
  - Free memory space protected by PIN,
  - Structured Memory in two independent applications protected by their own PIN
  - Two independent applications protected by their own PIN and by a mutual Reader / Card authentication.
- As the communication protocol is **ISO compliant (T=0)**, there is no need for specific or proprietary drivers.
- **In-house personalization** (outside Gemplus' perso centers) is allowed, reducing cost of inventory management and shortening delivery lead time.

**Enjoy the existing terminal infrastructure:**

- **At the Point of Sale (POS):**  
Thanks to the T=0 protocol, the GemClub-Memo can be accepted by any EMV terminals, opening the door to the banking infrastructure.
- **Internet access (over the internet):**  
GemClub-Memo is PC/SC compliant, allowing the usage of any PC/SC readers without any modification of your application on the PC, which is not the case with synchronous Memory Cards.
- **Furthermore**, GemClub-Memo is widely supported by the main industry players (System integrators, Loyalty providers...), more than 25 end-to-end solutions are available from Gemplus or from Gemplus' partners worldwide.

**Interoperability & stability to protect your investment:**

- GemClub-Memo allows quick card rollout thanks to its interoperability with the international standards and with the existing infrastructure.



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## GemClub-Memo Technical Specifications

### General Features

- Protocol: T=0,
- ISO 7816-4,
- Protected by secret codes (up to 3 secret codes),
- In-house personalization allowed,
- Anti tearing,
- CTC = Card Transaction Counter
- Automatic Backup,
- Mutual authentication Reader / Card.
- Baud up to 9, 6 Kbps @ 3,55 MHz,
- Total EEPROM size: up to 256 Bytes (2Kbits) depending on the selected mode.

### Memory Management

2 options to manage the memory:

- Issuer Mode:
  - EEPROM Size: **227 Bytes**
  - Embedded rules deactivated,
  - 1 global Secret Code (PIN).
- User Mode:
  - EEPROM Size: **163 Bytes**
  - Embedded rules activated,
  - 1 global Secret Code (PIN),
  - 2 local Secret Codes (PIN).

## Ordering Options

### Card Body Ordering Options

- PVC with options (Signature panel, Hologram, Magnetic stripe...) or
- ABS Standard,

### Electrical Ordering Options

- Issuer Mode,
- User Mode.

## Contact

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