

ATC1024-MV110, ATC4096-MP311 and ATC4096-MP312

## Powerful and secure identification on 13.56 MHz



- ✓ Pre-configured key material as a standard
- ✓ Communicate via ISO 14443 A and ISO 15693
- ✓ Use modern encryption algorithms
- ✓ LEGIC advant and MIFARE DESFire combined in one chip

## Smartcard IC with first-class security

The classic smartcard ICs for identification media such as smartcards, keys or watches. They are used in projects with increased security requirements. Thanks to standardized key management, reader and smartcard ICs communicate effortlessly and yet securely.

### Powerful smartcard ICs

LEGICs advant smartcard ICs offer powerful, reliable and security compliant quality for contactless RFID solutions. LEGICs perfectly coordinated interaction between smartcard IC and reader IC enables fast and seamless integration into a wide variety of applications.

### Security & encryption

Smartcard ICs come with pre-configured, confidential key material as a standard and can be customized to meet customer requirements.

LEGIC advant uses modern encryption methods and supports with the MTSC (Master-Token System-Control) a unique security and authorization solution with scalable security.

### Multi-application

LEGICs advant smartcard ICs are the optimal foundation for the combination of applications: from access control, time & attendance to cashless payment, printer management and e-ticketing. Third-party applications can also be integrated in the chip.

### Applications on the medium of your choice

With LEGIC advant, you have free choice of smartcard (badge), key fob or watch as an identification media. The flexible multi-application allows to combine up to 127 applications.

### Replacement for hybrid cards

Thanks to the combination of LEGIC advant and MIFARE DESFire in one chip, hybrid cards will be a thing of the past. The key material is already pre-installed.

## ATC1024-MV110

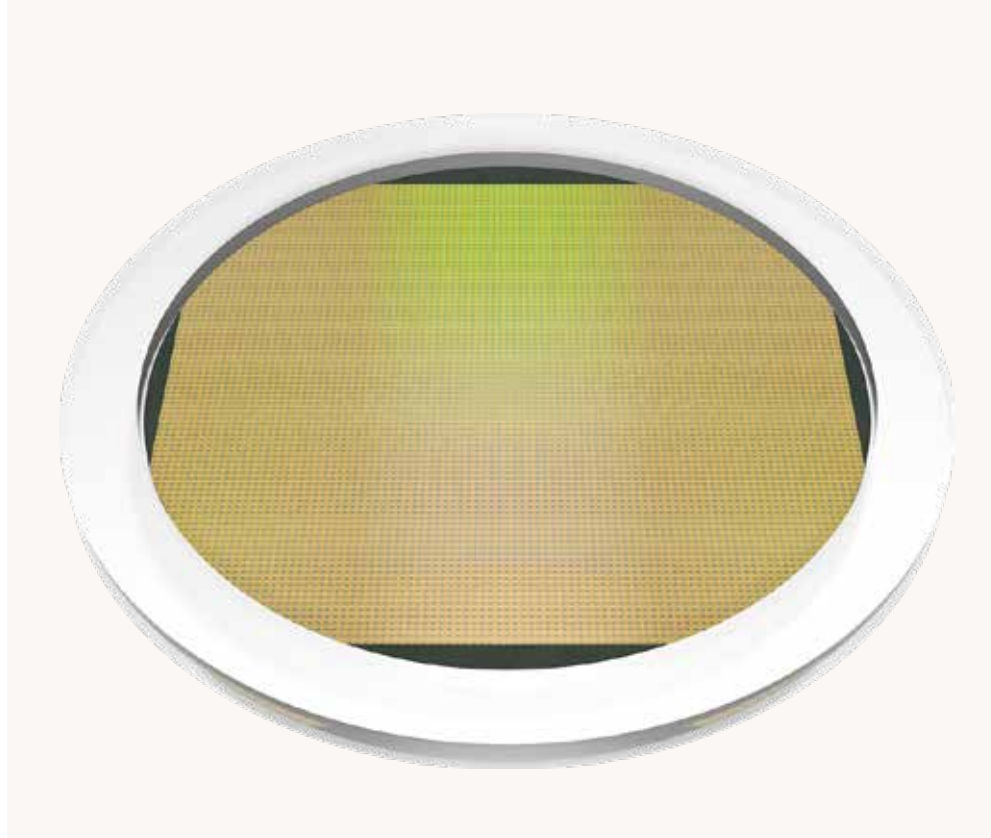
It is the solution for long reading distances. The chip with 1k byte memory communicates via ISO 15693 and is the smartcard IC for simple ID solutions.

## ATC4096-MP311

Ideal for high security requirements. The hardware is certified according to Common Criteria EAL4+ and communicates via ISO 14443 A. Up to 127 applications on one chip (4k byte memory).

## ATC4096-MP312

Based on the MIFARE DESFire EV2 chip, 3.3k byte of memory are reserved for DESFire applications. The chip is compatible with the NXP AppXplorer and has about 20% more reading distance than an EV1 chip.



### Technical data

	ATC1024-MV110	ATC4096-MP311	ATC4096-MP312
RF standard	ISO 15693	ISO 14443 A	ISO 14443 A
Memory size (Byte)	944	4096	advant 4096 / DESFire 3328
UID (Byte)***	8	7	7
Safe ID	Yes	Yes	Yes
Range**	up to 70 cm	up to 9 cm	up to 11 cm
Key management (per application)	Master-Token System-Control	Master-Token System-Control	Master-Token System-Control / NXP AppXplorer / LEGIC Key Service
Data transfer encryption	64 Bit key	3DES	3DES / AES-128 ****
Data storage encryption (per application)	3DES, DES, LEGIC encryption	AES (128/256 Bit), 3DES, DES, LEGIC encryption	AES (128/256 Bit), 3DES, DES, LEGIC encryption
Max. number of applications*	59	127	127 + (n x DESFire AID)
Memory segmentation	Dynamic	Dynamic	Dynamic
Application segment size	Variable	Variable	Variable
Data retention (min.)	10 years	10 years	10 years
EEPROM cycles (min.)	100,000	500,000	500,000
Baud rate (kbit/s)	up to 26.48	up to 424	up to 424
Delivery form	Wafer	MOA4 Modul, Wafer	MOB6 Modul, Wafer
Certified hardware platform	-	CC EAL4+	CC EAL5+

\* Memory size indications are nominal values. The actual max. number of applications depends on the memory requirements of applied applications

\*\* The max. reading range depends on the RF standard used, the requirements of national spectrum management authorities, reader application, antenna and transponder surroundings

\*\*\* Regardless of the platform used

\*\*\*\* Rolling key material pre-installed (for one-time, future modification)