

Characterize your contact and contactless smartcards, tags and NFC devices using one of Micropross premium testers

## MP300 TC3

Tester for smartcards, SIM, and SWP enabled U-SIM



### Key features

- Totally customisable contact smartcards tester
- Supports today's and tomorrow's protocols
- Comprehensive protocolary and electrical measurement functionalities
- Integrated spy function with detailed graphical display

### Supported protocols

- ISO/IEC 7816-3
- SWP (ETSI TS 102 613 and TS 102 622)
- USB 2.0 and -IC
- I2C
- Memory chips
- Custom protocols

### Spy function

- Unlimited spy session duration
- All contacts are presented to the screen
- Characters are decoded, no matter what the current speed is

### Adjustable parameters

- Voltages on each contacts (can be adjusted independently)
- Data rate
- Clock frequency and duty cycle
- Rise and fall time of signals
- Many more...

### Available tests

- Open short
- Current and voltage measurement
- Anti tearing
- Generation of glitches
- Timing measurement
- Framing modification
- Many more : the MP300 TC3 is a totally customisable tool

### Evolutivity

- The MP300 TC3 is based on a flexible hardware architecture, and can evolve to follow evolution of specifications
- The MP300 TC3 can be upgraded into a protocol analyser (ability to spy communication between a smartcard and an external host)
- The MP300 TC3 can receive as software update the support of the I2C protocol

## MP300 TCL2

The most complete tester for contactless smartcards, RFID tags and NFC objects



### Key features

- Fully customisable contactless smartcard reader
- Total coverage of all NFC modes
- Integrated spy feature
- Evolutivity into a contactless smartcard emulator
- Ideal tool for protocolary and RF testing
- Reference tester for NFC objects certification

### Supported protocols

- ISO/IEC 14443 A/B
- ISO/IEC 15693
- Mifare™ and FeliCa™
- EMVCo
- ISO/IEC 18092 (NFC-IP1 and -IP2)
- NFC Forum
- Custom protocols

### Tests available

- Protocolary testing (wrong CRC, response times measurement, framing, minimum FDT, parity error forcing, much more...)
- Smartcard resonance frequency measurement
- Chip impedance measurement
- Generation of Electro Magnetic Disturbances

### Spy feature

- Graphical display of spied exchanges
- Comprehensive protocol analysis against worldwide standards
- Possibility to measure response times, for performance testing

### NFC Forum defined operating modes coverage

- Tag mode (optional)
- Reader/writer mode
- Peer to peer mode

### ISO/IEC 18092 defined operating modes coverage

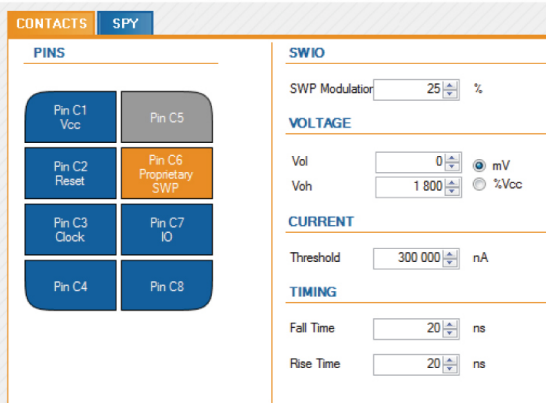
- Passive initiator
- Passive target (optional)
- Active initiator
- Active target

### Smartcard emulation mode (optional)

- Embedded engine for great respect of the timings
- Possibility to control the execution of test scenarii from a PC



## An unmatched flexibility

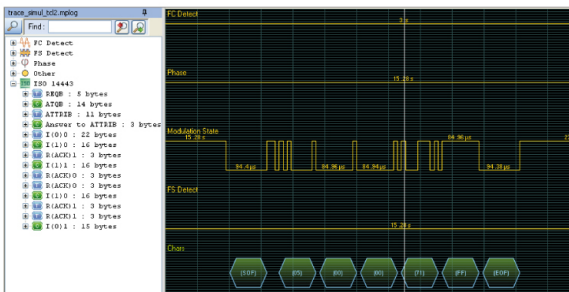


Our **terminal simulators** for laboratories allow our customers to **define with a great accuracy** the conditions under which tests will be performed.

The **Graphical User Interface** that is supplied with the hardwares, called MPManager, allows a convenient definition of those parameters.

Our **MP300 TC3** allows the definition of voltages to be applied on the pins (each pin can be defined independantly), the rise and fall time of the signals, and many more parameters. The **MP300 TCL2** offers the definition of physical parameters like field strength, modulation index (ASK), rise and fall time of the modulation.

## Graphical display of spied exchanges



Example of spy session.

The left of the screen displays which **exchanges have been performed**, with an interpretation based on a specific standard (ISO 14443, ISO 7816, HCI, EMV, ICAO, ...)

The right of the screen is the **graphical representation**, giving details about framing, response times, reaction to perturbations and much more...

## Edition of test scripts

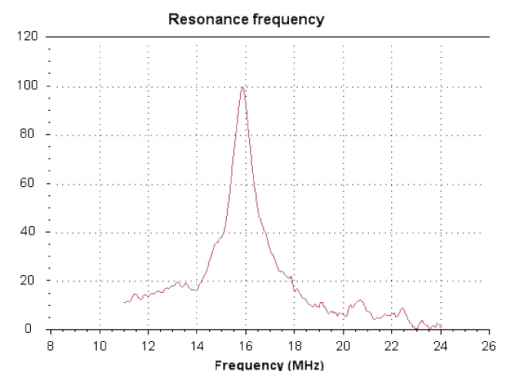
Line	Command	Parameters	Expected response	Return code
1	Select Card Type	Type A		
2	Power On			
3	Request	Request Type A		
4	Anticollision			
5	Send RATS	Bytes Nb: 2 - Command: E001		
6	Send PPS	CID: 1 - DRI: 848 - DSI: 848		
7	ISO14443:Select Data Rate	PCD->PICC: 848, PICC->PCD: 848		
8	ISO7816:Send APDU	Custom : A0CADF20-00		
9	ISO7816:Send APDU	Custom : 800E009E-01-55		
10	ISO7816:Send APDU	Custom : 8008009E-01-55		
11	Power Off			

No matter on which technology you are focused, you do not need any knowledge in programming to start testing your products.

MP Manager offers a **simple and intuitive user interface**, allowing you to define the test you are looking for.

A DLL driver is also supplied with our testers, exposing the full list of APIs, allowing you to integrate our testers inside your own test environment.

## Integrated automated tests



Our Terminal Simulators include all necessary hardware resources to make you able to perform tests to perfectly qualify your products.