

# MP300 C2

Production Range

The worldwide reference for contact technology test and personalization



- ✓ Fast smart card production reader
- ✓ Support of all ISO 7816 protocols and custom protocols
- ✓ Support of USB 2.0 protocol
- ✓ Accurate measurement features
- ✓ Advanced test functions
- ✓ Adjustable electrical and protocols parameters

## MP300 C2 Overview

If you need to ensure that the quality of your production reaches the best level, then the MP300 C2 is the tool you need.

Its numerous electrical features will help you to characterize all of the chips you need to produce before releasing them to your customers.

And, even better, thanks to the embedded Microsmart technology, you are sure that for your personalization or pre-personalization jobs you obtain the highest throughput possible, whether you are producing memory chips, CPU chips or USB devices.

Standard integrated in the most recognised production machines of the market, this tester has demonstrated over the years its great stability and legendary robustness in factories spread all over the world.

# MP300 C2

## ■ Protocols

### ISO/IEC 7816 - 3

T=0 and T=1 protocols implemented by firmware, communication managed by hardware

Support of synchronous cards (T2G, Eurochip, Sle4442, AT26CXX...) (communication assisted by hardware for highest performance)

### USB 2.0

(Low speed/full speed): ISO 7816-12, mass storage, custom,...

### Raw mode

Gives the possibility to exchange frames without any protocol encapsulation

### Support of out standard chips

Benefit from Micropross' experience in smart card programming

## ■ Programmable parameters

### Voltages

Vcc: 0 to 10V (step: 5mV)

Vol/Voh: 0 to 5V/1 to 7V (step: 5mV) (independent setting for C3)

Vil/Vih: 0.2 to 5V/1 to 6.8V (step: 5mV) (allows drivability checking)

### Frequency

Clock frequency: 10kHz to 20MHz (step: 10Hz)

Clock duty-cycle: 30% to 70%

### Pin States

All pins are independent from each other, and can be directly managed

### ISO 7816 Communication Parameters

Clock divider: from 1 to 4096 (bit sampling adjustable)

BGT, Initial ETU width on ATR reception (clock cycles)

BWT, CWT, EGT, RGT, WWT (ETUs)

Clock stop high/low state,  $t_{G}$ ,  $t_{H}$  adjustable (clock cycles)

Parity control: force to 0, 1, odd, even

Possibility to disable parity checking

Pull-up resistor adjustable (5k/22k $\Omega$ )

## ■ Optional devices

### Software

MVPi: Micropross Versatile Production interface

### Hardware

Custom design of programming heads

External smart card connector

## ■ Others

### Communication

USB 2.0

TCP/IP 10/100 Mb/s

### Development

Development in C, C++, VB, Java, .NET environments

## ■ Tests

### Open/Short test

(all pins, measurement of both diodes, forced current adjustable)

### Leakage current measurement

(all pins, 2 ranges: +/-5mA, +/-500uA (accuracy : +/-1uA))

### Voltage measurement

 (all pins, +/-10V (accuracy : 20mV))

Dynamic mode: we give you an analog like vision of the voltage on the pin you chose

Static mode: we give you the instant voltage value

### Current measurement

(all pins, 4 ranges: +/-100mA, +/-25mA, +/-5mA, +/-500uA)

Dynamic & static mode

### Force a current, measure a voltage

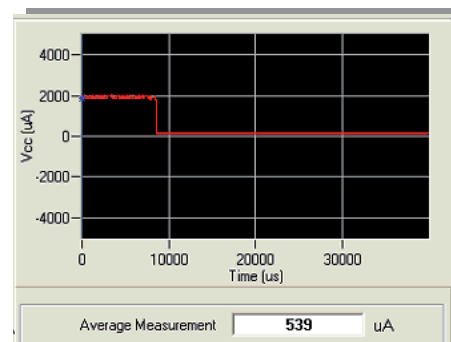
### Force a voltage, measure a current

### Anti tearing

Timing measurement of the response time of your chip

**Personalization assisted by hardware:** do not lose a microsecond while sending data to the chip thanks to the hardware assisted data sending mechanism

Ex: using the dynamic current measurement and standard provided software MPscope, see how long it takes for the chip to enter stand by mode



## ■ Modularity

You will find in the MP300 family the solution which will best fit your needs.

## ■ Open platform

Micropross products are designed for an easy integration. Applications can run on a host computer or in embedded mode. The device can be managed by usual programming languages. High speed and simplified communications are ensured with TCP/IP or UDP connections

## ■ Our service

We provide you not only a useful product but also an efficient technical support and our experience. Micropross is at your disposal for any user requirement.

Micropross is an ISO 9001 V 2000 certified company.

