MICROPROSS IS NOW NATIONAL INSTRUMENTS

MP300 SC2

The most complete test hardware for test of contact smart cards and (U-)SIM components

The MP300 SC2 Advantage

The MP300 SC2 is the most complete test tool on the market when it comes to the simulation of secure elements used in the context of banking, or mobile transactions. Furthermore, its embedded spy feature help to establish a diagnosis in the solving of interoperability issues.

1. **Slot for Spy probe (external spy feature)**
2. **Slot for SIM format**
3. **Slot for ID-1 format card**
4. **Plug for synchonisation with external devices**

GLOBALPLATFORM PTCRB PCS Type Certification Review Board ISO EMVCo QUALIFIED

"Our aim is to check mobile payment conformance in term of transaction performance from the SIM card to the effective contactless payment terminal going through the CLF. MP300 SC2 with MP300 ACL1 sniffer allow to duplicate what is happening from the internal flow inside the mobile to the in air protocol capture, this within the same viewer GUI and full EMVCo automated demodulation."

Provider of innovative, secure and easily adoptable payment device enabling solutions - Dominique Dreher - Partner

The Ideal Tool

Available test

Electrical tests

- - Voltage measurement (burst mode)
- - Current measurement (burst mode)
- - Generation of S2 current (IIH,IIL)
- - Generation of current spikes

Logical tests

- - Simulation of all ISO 7816 T=0 & T=1 test cases
- - Support of all ETSI TS 102.694-1, ETSI TS 102.695-1 and ETSI TS 102.695-3 test cases
- - Generation of current spikes

Application Fields

- Compliance testing
- Qualification
- Deep electrical testing

Available accessories

- Software licence for additionnal protocols (SWP, DCLB, I2C, NFC-Wi, …)
- Software licence for SWP electrical tests
- Spy Flex probes:ID1, SIM (2FF), micro SIM (3FF), nano SIM (4FF)
- Measurement probes (with oscilloscope plugs)
- Active probe for SWP communication

Key Points

- Protocol analysis of exchanges happening following the ISO/IEC 7816-3 and -4, SWP/SHDLC/HCI, USB-IC and USB 2.0 protocols
- Support I2C, SPI
- Detailed graphical representation of the spied exchanges
- All protocols can be spied simultaneously
- Possibility to perform physical measurement (current and voltage oscilloscope-like display)
- Numerous possibilities of protocolary testing (response times, wrong CRC, parity errors)
- Physical customisation of the emulated smart card
- Presence of numerous business oriented interpreters, including SWP/SHDLC/HCI, EMV, GSM, 3G, LTE, NFC-IP1, NFC-Forum, for a better understanding of all spied exchanges.
- Full support of ETSI TS 102.694-1, ETSI TS 102.695-1 and ETSI TS 102.695-3 (including electrical tests), validated by the GCF/PTCRB

BUSINESS AREAS

Telecom | Banking | E-health | M2M | Contact micro-Module | USB Stick | NFC enabled U-SIM

Supported protocols

ISO/IEC 7816-3	
T=0 and T=1 protocols:	100% implemented, managed by firmware and FPGA, accelerated by hardware
USB 2.0	
Available speeds:	Low speed, full speed
Classes:	ISO/IEC 7816-12, mass storage, custom protocols
SWP (ETSI TS 102 613 and TS 102 622)(optionnal)	
SWP transmission: Assisted by hardware	
LLC layers support: ACT, CLT and S-HDLC realised by firmware	
Secure element specific protocols (optionnal)	
I2C (Standard, fest, high speed moes)	
SPI	
Raw mode: implementation of custom protocols and support of out of standard chips	

Test suites available

ISO 7816-3 (ATR, T=0, T=1)
GlobalPlatform
EMVCo L1 (electrical & protocol)
SWP/HCI (ETSI TS 102.694-2, ETSI TS 102.695-2)

Spy feature

Accuracy:20ns	
Signals displayed	All 8 pins + SWP S1, S2 + USB + triggers
	Logical state change, bytes, change of conditions, analog measurements

NI Services and Support

- Maintenance contracts :
  - Firmware/software updates
  - Hardware repair
  - Onsite customer support
  - Replacement tool
- Technical support located in Asia, Europe and Americas
- Training courses customizable :
  - knowledge level based
  - Time constraints
  - Topics of interest
- Debug and pre-certification of contact and contactless devices

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