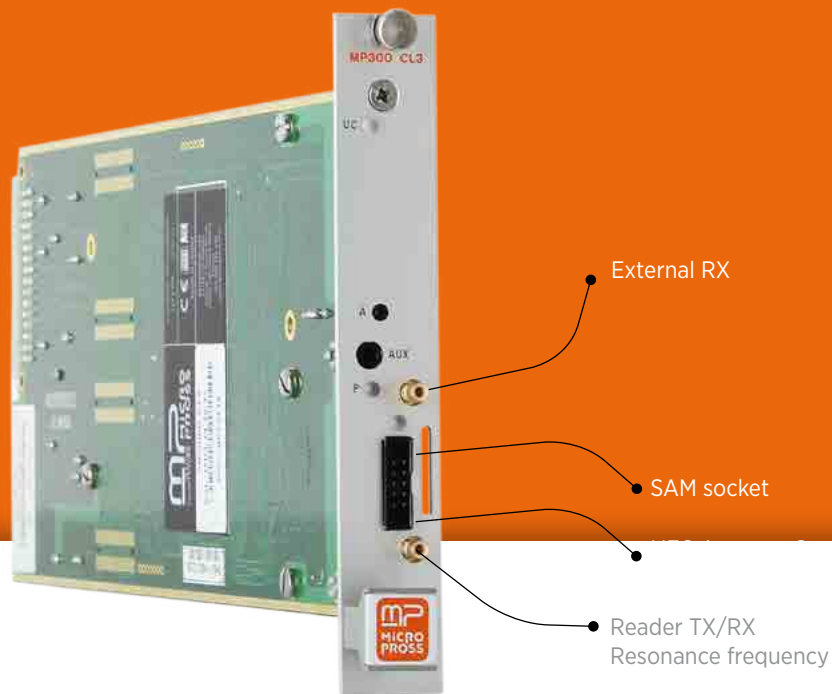# MP300 CL3

A PRODUCTION TESTER FOR ALL TYPES OF CONTACTLESS OBJECTS (smartcards, micromodules, inlays, smartcards readers, NFC devices, WPC Base stations and mobile devices)

- External RX
- SAM socket
- Reader TX/RX Resonance frequency

SUPPORTED PROTOCOLS:

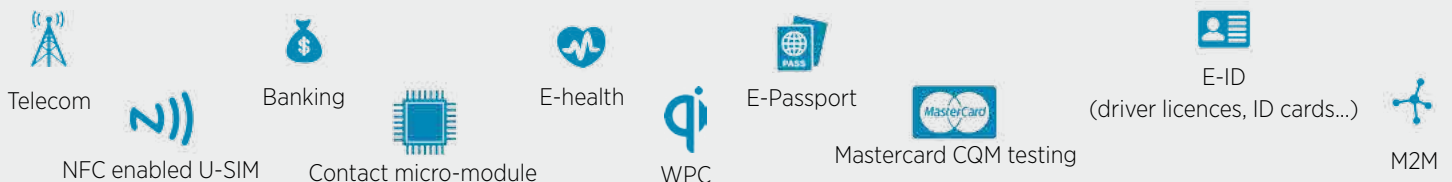- ISO 14443 A/B
- Innovatron™
- ISO 15693
- Mifare™
- Felica™
- WPC (Qi)

APPLICATION FIELDS:

- Personalization
- Pre-personalization
- OS loading
- Production test of NFC devices
- Production test of WPC products

SUPPORTED TESTS:

- Resonance frequency/Q factor
- Complex impedance (L, R, C)
- Hmin measurement
- Chip load-modulation
- Input sensitivity detection
- Accurate definition of test parameters
- Coverage of both card and reader mode of NFC devices
- Simulation of WPC mobile device and base stations

Business areas

| Telecom | Banking | E-health | E-Passport | E-ID (driver licences, ID cards…) |

NFC enabled U-SIM · Contact micro-module · WPC · Mastercard CQM testing · M2M

KEY POINTS

- Compatible with ISO/IEC 14443-3 and -4, ISO/IEC 15693, Mifare™, FeliCa™, Innovatron™ specifications
- Full management of the T=CL protocol
- Supports the highest bitrates (up to 848kbps by default, up to 6.8Mbps with the VHBR option)
- All physical parameters adjustable (field strength, carrier frequency, modulation index, rise and fall time of the modulation, ...)
- Advanced logical test features (response time measurement, modulation (positive/negative), short time between two commands, ...)
- Advanced electrical measurement features: chip impedance, resonance frequency, Q factor of a smartcard, load modulation of a chip
- Supports both terminal and smartcard simulation: the tool tests all modes of a NFC device using the same test antenna
- Supports test of WPC compatible devices in production, in conjunction or independently from the NFC interface.

SUPPORTED PROTOCOLS

▸ **ISO/IEC 14443-3 (proximity cards) (Type A/B)**	
Supported data rates	106, 212, 424, 848 kbps
	Asymetrical data rates supported
	VHBR DSK 2 PSR

▸ **B' (Innovatron™)**

▸ **ISO/IEC 15693 (vicinity cards)**	
Supported communication speeds	Low & high data dates, 1 out of 4 & 1 out of 256

▸ **ISO 18000-3 Mode 1**

▸ **Mifare ™**	
Types supported	Classic, Light, Ultra Light, Ultra Light C, ...

▸ **FeliCa ™ optionnal through a hardware add-on**	
Available data rates	212 and 424 kbps

▸ **NFC Forum modes**
Peer2Peer, Listening, Polling

▸ **NFC Forum tags**	
Types supported	Tag types 1,2,3,4

▸ **ISO 18092 (NFC-IP1)**	
Modes supported	Active/passive mode, in both Initiator/Target variantes

▸ **WPC (Qi)**
Simulation of Mobile device, and Base station

▸ **Raw mode : implementation of custom protocols and support of out of standard chips**

PROGRAMMABLE PARAMETERS

PHYSICAL PARAMETERS
Field strength, modulation index, rise&fall times
LOGICAL PARAMETERS
Type A pause, FWT, type B framing, communication speed

AVAILABLE TESTS

ELECTRICAL TESTING
Resonance frequency measurement / Q factor
Complex impedance (chip/antenna)
Magnetic field measurement
Measurement of the power generated by the Base Station