NFC Tester

MP500 TCL3

ni

A high-performance tester for contactless devices such as smart cards, NFC devices, readers, and more.

As a functional follow-up to the MP300 TCL2, the MP500 TCL3 simulates terminal and smartcard functionality and features numerous possibilities for signal customization. This high-performance tester includes an internal oscilloscope, AWG, and VNA as well as supports ISO 14443A/B, FeliCa™, Mifare™, and ISO 15693. In addition, you can perform advanced conformance test and debugging.

Key Features

- Operates under Linux Operating System
- Performs both terminal and smart card simulation tasks
- Support of ISO 14443, ISO 15693, ISO 18092, Mifare™,FeliCa™ protocols
- Support NFC-IP1 and –IP2 specifications, in all modes (active, passive, initiator, target)
- Support of all NFC Forum defined test cases (analog,digital, LLCP, SNEP) and NFC P2P mode
- Adjustment feature of all physical parameters (field strength, carrier frequency...)
- Presence of an arbitrary waveform generator, for accurate signal definition
- Support of active load modulation tests
- Ideal tool for EMD measurement and generation
- Spy feature, with graphical display of the spied exchanges
- Advanced measurement features (complex impedance,resonance frequency...)
- Presence of a VNA, for qualitative resonance frequency measurement

The Ideal Tool for NFC Testing

01 Supported Protocols

- ISO 14443 A/B
- ISO 15693
- NFC-IP1 /IP2 (active/passive)
- FeliCa™
- Innovatron™
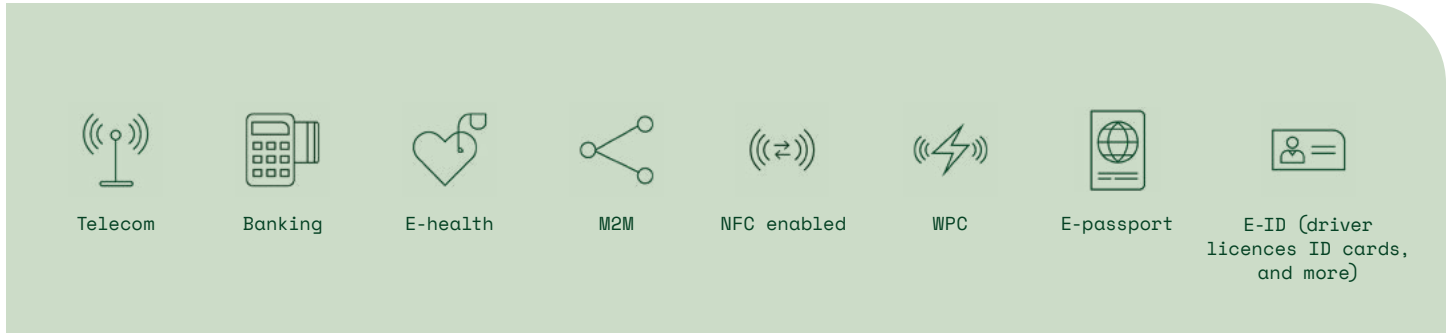- Mifare™

02 Supported Tests

- Resonance frequency/Q factor-complex impedance (L, R, C)
- Hmin measurement
- Accurate definition of test parameters
- Timing measurement
- Protocol verification (parity error, CRC, and more)
- Anti tearing test
- All normative tests (ISO, ICAO, EMVCo, and more)

03 Available Options

- Misc. Communication antennas (terminal simulation, tag simulation, resonance frequency measurement)
- Normative test benches (ISO 10373-6,10373-7, EMVCo, NFC Forum, and more)
- Contactless Test Station

04 Test Suites

- ISO 10373-6 and ISO 10373-7 (analog/digital)
- NFC-IP1 and IP2 (analog/digital)
- EMVCo L1 PICC & PCD (analog/digital)
- NFC Forum (analog/digital/LLCP/SNEP)
- Qi for transmitters and receivers (low power/medium power)

Working with NI as a long-time partner help us to accelerate our development and to offer to the market innovative products. Indeed the NI testing equipment always provide groundbreaking features. At Infineon, we have especially integrate the MP500 TCL3 for its VHBR features and its versatile testing capabilities.

Walter Pachler
Infineon

Business Areas

| Telecom | Banking | E-health | M2M | NFC enabled | WPC | E-passport | E-ID (driver licences ID cards, and more) |

Application Fields

- Characterisation of contactless smart cards and readers
- Protocol debug
- Personalisation
- Pre-personalisation OS loading

SUPPORTED PROTOCOLS	
ISO/IEC 14443-3 (PROXIMITY CARDS) (TYPE A/B)	
Supported data rates	106, 212, 424, 828 kbps` Asymetrical data rates supported VHBR supported
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™	
FeliCa™	
NFC Forum modes : Peer2Peer, Listening, Polling	
NFC Forum tags (Tag types 1,2,3,4)	
ISO 18092 (NFC-IP1)	
Modes supported	Active/passive mode, in both Initiator/Target variantes
Raw mode : implementation of custom protocols and support of out of standard chips	

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

Contact your account manager, call us or email us
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