

# Contactless Test Station



High-end technologies concentrated in ONE BOX

# The total package

**The time where setting up a test bench for performing contactless testing took as long as performing the test cases themselves is over.** Micropross, now NI offers to the market the Contactless Test Station (CTS), an all-in-one box capable of performing, without adding any additional hardware, all normative test cases, defined by organisations such as the ISO, the ICAO, the EMVCo, and the NFC Forum.

The Contactless Test Station contains **all needed hardware and software elements**, that enable you to perform all normative analog and digital tests, without having to seek for additional signal generators, or measurement devices. They are all included inside the box..

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|--|---|--|
| <b>1 Windows 10 PC</b><br>Dual core 8GB RAM<br>750 GB Hard Drive<br>8 USB sockets                      | <b>2 14 bits 130 MS/s DAQ Board</b>                           | <b>3 Oscilloscope</b><br>350 MHz - 2.5GS/s - 4 channels  |
| <b>4 50W power amplifier</b><br>Optimised for 13.56MHz software<br>controlled 100% automatic operating | <b>5 Extension Bay</b><br>2x12V supplies CRM supply & control | <b>6 MP500 TCL3</b><br>13.56MHz signal generator<br>Terminal simulator<br>Contactless SC simulator<br>Waveshape customisable |
| <b>7 Automated test libraries</b>  | <b>8 Powerful integrated test platform</b>                    |  |



# The Ideal Tool

## Supported Protocols

- ISO/IEC 14443 (proximity)
- Supported data rates :
  - 106, 212, 424, 848 kbps
  - VHBR optionnal. Support up to 6.8Mbps
  - Asymmetrical baudrates supported
- B' (Innovatron)
- ISO/IEC 15693 (Vicinity cards)
- Supported data rates :
  - Low & high data rate (1 out of 4, 1 out of 256)
- Tag behaviour :
  - 1 and 2 sub carriers
- ISO 18000-3 Mode 1
- Mifare™
- Supported versions (Classic, Light, Ultra Light, Ultra Light C, Desfire)
- FeliCa™

- - Supported data rates (212, 424 kbps)
- NFC Forum modes
  - Peer 2 Peer, Listening, Polling
- NFC Forum tags
  - Tag type 1 (Innovision Topaz)
  - Tag type 2 (Mifare Ultra Light)
  - Tag type 3 (FeliCa)
  - Tag type 4 (ISO 14443 A/B)
- ISO 18092 (NFC-IP1)
- Supported communication mechanisms (Active/passive mode, initiator/target)
- Raw mode
- Possibility to implement custom protocols

## Programmable parameters

- Physical parameters (all types)
  - Field strength
  - Rise/fall time of the modulation
  - Modulation index
  - Pause time (ISO 14443 A & ISO 15693)
  - Duration of each bit + EOF + SOF (ISO 14443 A)
  - Arbitrary waveshape generator
- Logical parameters
  - Type A pause
  - FWT, TR0, TR1, TR2
  - Communication speed
  - Response time (contactless smartcard simulation)

## Mechanical Dimensions

- 230mmx431mmx466mm
- Weight : 19 kg
- Cooling system : Integrated, no need for external cooling

## Available option

- Compatible with the Denso Robot for a full automated test experience



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"Dekra's commitment with our customers is to offer always the best One Stop Service. For this Dekra has trusted NI' Contactless Test Station with integrated robot to successfully deploy our accredited laboratory for EMVCo contactless Cards and Mobile devices"

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Noemi Pérez, Wireless Laboratory Manager - DEKRA

## BUSINESS AREAS



Telecom



Banking



E-health



M2M



NFC enabled



WPC



E-passport



E-ID (driver licences  
ID cards, and more)

## Spy feature

Signals displayed	<ul style="list-style-type: none"><li>- Field presence</li><li>- Modulation</li><li>- Sequences</li><li>- Bytes</li><li>- I/O direction</li><li>- Baudrate change</li><li>- Trigger state</li></ul>
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## Power amplifier Part

Power output	50W
Input impedance :	50 Ohm
Class A	
Baudrate coverage	From 106kbps to 6,8Mbps for optimum behaviour
RF bandwidth	6-20MHz

## Oscilloscope part

Bandwidth	350MHz
Number of channels :	4
Sampling rate	5GS.s
Resolution	8 bits

## A/D converter block

Model recommended for EMVCo analog testing	
Resolution	14 bits
Sampling rate	130 MS.s
Number of channels	2




## PC block

Operating system	Windows 10 Pro SP1
RAM	8 GB
Hard Drive	750 GB
	8 USB 2.0
Extension ports	Ethernet connection
	VGA screen

## 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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