

TEST TOOLS & MACHINES

MECHANICAL & FUNCTIONAL SOFTWARE INCLUDED

MULANN is fully devoted providing tools and services for cards and tickets testing. Testing is a crucial operation in manufacturing and personalization for maintaining a very high level of quality. MULANN designs, manufactures, and assembles complete mechanic and electronic systems. It allows to offer mechanical testers, functional testers and professional services as maintenance, expertise and training. Our range fully supports smart card manufacturers, cards personalizers, qualification laboratories and public transport operators.

NTMAG, ALL-IN-ONE FUNCTIONAL TEST MAGNETIC CHIP ANTENNA

The NTMAGII C is dedicated to personalization centers. It allows to check LoCo and HiCo encoded cards. As options, contact and contactless readers can be added inside the tester. Thanks to this option, the analyzer named NTMAGII CP-CL becomes the unique tester worldwide allowing the user to check quickly a complete smartcard in only one insertion leading to a saving of time and money.

The NTMAGIII version is fully automatic and can quality batches of up 500 cards. Thanks to this option, we have customers that use this machine for the quality control of display cards (Dynamic CCV and Power Card).

ASSOCIATED PRODUCTS / MAGNETICS

We also provide high quality magnetic consumables for smart card manufacturers:
TAPES & SLURRIES



Aware of the costs that represent the testing tools compared to production, each MULANN product has been designed to address one of the following types of customer's need.

Access: Tools compliant with standards at the best price tradeoff.

Evolution: Versatile tools for testing beyond the norms and enable deeper analysis.

Productivity: Tools ensure efficient tests on large volume, optimize operation time and capture results.

T3R, DYNAMIC MECHANICAL TESTING CAPABILITY

The T3R-E version is able to test any ID-1 cards including contactless cards and offers as an option a unique feature for querying the transponder of the card under test at each cycle, helping the analysis of test failures. Easy-to-use equipment with a 3,53 touch-screen pad. History log can be saved onto the SD Card into an Excel compatible reading format (csv).

PST, USER FRIENDLY INTERFACE WITH COMPREHENSIVE TEMPLATES

The PST-E Peel strength tester is designed to test the resistance of the added protective overlay on any ID-1 smart cards. This is an easy-to-use equipment with preparation tool to cut printed card into equal sections, including a comprehensive screen results with templates.

PRODUCT PANEL – TEST TOOLS & MACHINES

Product	Description	Range			Supports	Features	Norms									
		ACCESS	EVOLUTION	PRODUCTIVITY			Dimension	Embossing	Test Methods	Contactless - Proximity	Contactless - Vicinity	Durability	CQM Master Card	USA Norms		
							ISO 7810	ISO 7811-1	ISO 10373-1	ISO 10373-2	ISO 14443-1	ISO 15693-1	ISO 24789-2	CQM V2.15	ANSI-INICITS 322	
MECHANICAL TESTS																
DIMENSIONAL TOOLS																
CDT	Card dimension return card or unused card	●	●		Plastic card and paper	Size	●		●						●	
CST	Corner stencil	●			Plastic card and paper	Positioning									●	
CTT	Card thickness	●	●		Plastic card and paper	Thickness	●		●						●	
CWT	Overall card warpage	●	●		Plastic card and paper	Warpage	●	●								
PROCESS / DURABILITY TOOLS																
ABT	Adhesion and blocking fixture	●			Plastic card	Stack Control	●		●						●	
BST	Bending stiffness	●			Plastic card	Bending	●		●						●	
BWT	Bending stiffness & wrapping	●			Plastic card	Combo Wrapping and Bending	●		●				●	●		
CFT	Cantilever fixture	●			Plastic card	Bending with temperature	●		●				●	●		
CIT	Corner impact	●			Plastic card	Resistance									●	
DFT	Clamping fixture for durability	●			Plastic card	Durability	●								●	
ECT	Embossed characters	●			Plastic card	Resistance	●	●							●	
IBS	ICC backside spot pressure	●	●		Plastic card	Glue test									●	
IMT	Impact	●			Plastic card	Resistance on personalization		●							●	
PST	Peel strength		●		Plastic card	Digital gauge, wear and fraud			●				●	●	●	
TET	Tensile	●			Plastic card	Roller process resistance									●	
TPT	Tape pull	●			Plastic card	Printing Test, CQM Mastercard									●	
WTT	Wrapping	●			Plastic card	Three radius wrapping test	●							●	●	
PROCESS DURABILITY MACHINES																
FTD	Dynamic bending & torsion	●			Plastic card	6 cards, Full bending & torsion test	●				●		●	●	●	
TFD	Dynamic bending			●	Plastic card	30 cards, Full bending test	●		●		●		●	●	●	
ATT	Card abrasion	●			Plastic card	Linear Abrasion- Surface Resistance	●	●							●	
TUS	Magnetic stripe Wear	●			Plastic card	Magnetic stripe wear test	●			●					●	
T3R	3-Wheel Tester	●	●	●	Plastic card	Mechanical & Functionnal test (RFID)	●		●		●	●	●	●	●	
FUNCTIONAL TESTS																
ANALYZER / TESTER																
IST	Inlay Sheet tester			●	Different inlay formats	Producer - Go-NoGo Antenna Test					●	●				
PVT	EMV, Magnetic, Contact and Contactless	●			LoCo & HiCo EMV cards	Personalizer	●				●	●				
NTMAG II	Magnetic Analyzer + Contact/Contactless		●		LoCo & HiCo EMV cards	Personalizer, Producer, 1 card	●	●		●	●	●	●	●	●	
NTMAG III	Automate Magnetic Analyzer			●	LoCo & HiCo EMV cards	Producer, 200 cards	●	●		●	●	●	●	●	●	
SOFTWARE																
μCARD Software	NTMAG Control & Scripting Software		●		EMV cards	Personalizer	These utilities features a suite of EMV software test tool with intuitive user interface									
EMV Software	NTMAG Card Profile Creation Software		●		EMV cards	Personalizer										
PVT Software Suite	PVT Control & Scripting Software		●		EMV cards	Personalizer										
PVT API	API for System integration in VB	●			EMV cards	Personalizer										