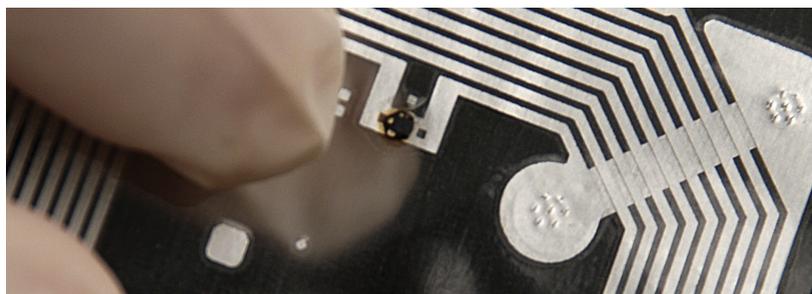
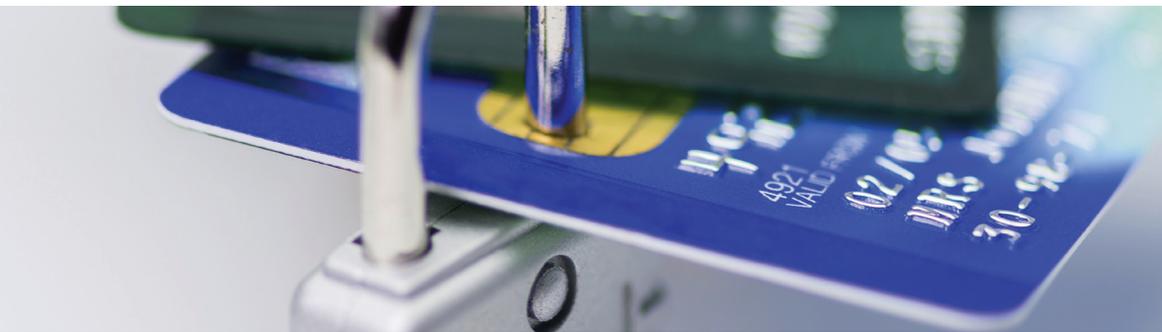


**The Lab
Authority™**

QCard™





CONSULTING



TESTING



CERTIFICATION



EQUIPMENT

WE'RE YOUR THIRD PARTY TEST LAB FOR SMART CARD, MOBILE AND BEYOND.



CONSULTING

Navigating the complicated landscape of EMV, emerging technologies and industry disrupters means you need to have a partner on your side that is on the cutting edge of all that is new and relevant.



TESTING

Q-Card is a globally recognized third party test laboratory providing testing services for a wide range of payment devices including smart cards, wearables, mobile handsets and readers.



CERTIFICATION

Q-Card is an accredited, experienced test laboratory able to perform certification testing for contactless card, mobile and HCE.

- EMVCo
 - VISA
 - American Express
 - ISO / IEC 17025 Certified Testing
-



EQUIPMENT

Use the test equipment the experts use. Our offering of test equipment and test fixtures are used in our own laboratory, so you can be confident that we've designed them for durability, reliability and accuracy.





HELD TO A HIGHER STANDARD

Choosing a qualified lab

Laboratory accreditation provides formal recognition of testing competence as well as a ready means for clients to select a reliable test lab.

With the privacy, security and integrity of billions of smart card and mobile payment transactions at stake in the global economy daily, industry stakeholders rely on Q-Card to ensure payment devices are compliant, secure and reliable. Many labs offer testing, but how do you know the results are correct and accurate? The integrity of our lab and testing results are managed through

use of external international standards and subsequent rigorous accreditations. Laboratory accreditation provides formal recognition of testing competence as well as a ready means for clients to select a reliable test lab.

Q-Card's laboratory holds several accreditations. At the foundation is our ISO 17025 accreditation, which requires testing proficiency, validation of test methods, measurement traceability, calibration and maintenance of test equipment, appropriate sample handling and test environment and technical competence to ensure that test, calibration and measurement data supplied are accurate and reliable.

Q-Card Accreditations

American Express

- Innovative Card Body Contactless Card Level 1
- Mobile/HCE Level 1
- Card Functional - AEIPS & XPAY Level 2
- Contactless Cards (Standard ID1) Level 1
- Physical Card Testing

Visa

- Contactless Card and Non-Card Products Level 1
- Mobile Contactless Level 1
- HCE Level 1
- Physical Card Testing

EMVCo

- Level 1 Contactless, Analog and Digital
- Level 1 Mobile/HCE, Analog and Digital
- Interoperability, Performance and Multiple Execution Environment Testing

Q-Card also tests to EMVCo and payment brand specifications:

- Interoperability
- Performance
- Multiple Execution Environment





**Industry stakeholders
rely on Q-Card to ensure
payment devices are
compliant, secure and
reliable.**



TESTING SERVICES

Q-Card is a globally recognized third party test laboratory providing testing services for a wide range of payment devices including smart cards, wearables, mobile handsets and readers. Our services range from ISO and ANSI durability testing of cards to EMV–certification testing and interoperability testing of mobile handsets for digital wallet applications. We also perform third-party testing for payment brand standards such as American Express, Mastercard and Visa. Our laboratory observes strict confidentiality policies and protocols to ensure secure confidential testing, including secure meeting rooms and safe storage of devices and materials.

Payment Brand Testing

- Visa: EMV Level 1 for Contactless, Mobile and HCE, Analog and Digital
- Mastercard CQM
- American Express EMV Level 1 for Contactless and Card Durability

EMV, NFC and HCE

- EMV Level 1 Certification Testing for Contactless and Mobile, Analog and Digital
- EMV Level 1 Precertification and Debugging Testing for Contactless and Mobile, Analog and Digital

Smart Device Testing

- Interoperability Testing
- Performance Testing
- UV Exposure
- Exposure to Radiation
- Electro Static Discharge (ESD)

Environmental Simulation

- Resistance to Heat
- Resistance to Chemicals
- UV Exposure
- Card Dimensional Stability and Warpage Related to Temperature and Humidity
- Wear Test on Magnetic Stripe
- Card Warpage

Mechanical

- Opacity
- Peel Strength
- Surface Profile of Magstripe
- Dimension of Cards
- Adhesion and Blocking
- Bending Stiffness
- Dynamic Bending Stress
- Dynamic Torsional Stress
- Magnetic Stripe Warpage
- Magnetic Stripe Adhesion
- Surface Roughness of the Magstripe

Consulting

- New Product Design
- Quality Control
- Improved Reliability
- Payment System Analysis and Advice

Physical Card Testing

- 3 Wheel Testing for Chip Cards
- Electro Static Discharge (ESD)
- Impact Resistance
- Abrasion Resistance
- Embossing Retention
- Component and Material Adhesion
- Card Flatness and Profiles
- Card Dimensions
- Card Bend and Torsion
- Corner Impact
- Static Stress
- R and R Gauge

Magnetic Stripe Testing

- 300, 650 Oersted and high-coercivity (hico) stripes
- Signal Amplitude and Jitter
- Tracks 1, 2, 3, 4, (ATB) and Central Track
- Custom Track Location
- Testing per ISO/IEC 7811-2, 7811-6, and 10373
- Hico and Loco
- Magnetic Stripe Adhesion
- Custom Sizes, Materials and Testing
- PTB Reference Testing
- AAMVA Driver License
- Start Sentinel

ISO 17025 Certified Tests

- Environmental Simulation
- Mechanical
- Electrical



Barcode Testing

- ISO 15415, ISO 15416, ISO 15426
- 2D, 3D
- Many Symbolologies and Applications

Terminal and Component Testing

- Reader Reliability
- Magnetic Heads
- Chips and Antennas
- Contactless Testing
- Debugging

Certification Testing

American Express

- Innovative Card Body Contactless Card Level 1
- Mobile/HCE Level 1
- Card Functional - AEIPS & XPAY Level 2
- Contactless Cards (Standard ID1) Level 1
- Physical Card Testing

Visa

- Contactless Card and Non-Card Products Level 1
- Mobile Contactless Level 1
- HCE Level 1
- Physical Card Testing

EMVCo

- Level 1 Contactless, Analog and Digital
- Level 1 Mobile/HCE, Analog and Digital
- Interoperability, Performance and Multiple Execution Environment Testing

Q-Card also tests to EMVCo and payment brand specifications:

- Interoperability
- Performance
- Multiple Execution Environment

Standards

- AAMVA Driver License
- ANSI INCITS 322
- EMVCo
- FIPS 201
- ISO/IEC 10373
- ISO/IEC 14443
- ISO/IEC 24789
- ISO/IEC 5629
- ISO/IEC 7810, 7811, 7813, 7816
- ISO/IEC 8295
- Mastercard CQM and CSI

New Material Verification

- Green and Sustainable Materials
- Metal Cards
- Metallic Inks
- Foils
- Laminates
- ESD
- Antenna Design

Don't see the test you need?

We have hundreds of tests we regularly perform or we can develop a custom test plan tailored specifically to your requirements for cards, tickets and mobile devices.

MARKET EXPERIENCE



Payments

Technology is pushing payments beyond traditional methods. Mobile wallets, wearables, powered cards, and biometrics all offer the benefits of convenience and improved security as well as risk. Implementing these technologies, while protecting consumer data, can be difficult. Q-Card can help develop a plan to test, debug, validate and implement new payment initiatives with confidence.



Mobile

The smartphone has changed the way we work, conduct commerce, socialize and manage our daily lives. It will continue to disrupt entire industries. As the smart device conquers new markets, such as access control, identity, health monitoring and more, you can rely on Q-Card to make sure your devices work when and where they need to by ensuring standards are met for interoperability.



Public Transportation

Convergence is a common term we hear in public transit today. Convergence of payment schemes such as open and closed loop, account-based, cloud-based/mobile ticketing, EMV, NFC, HCE; and convergence of disparate payment systems such as public transit, bike share, parking, tolls and more. Q-Card can help make it all work, whatever the traveler's payment preference may be and whatever the mode of transportation.



Identity

The need for secure credentials is becoming more widespread. Q-Card has played a significant role in testing ID credentials such as drivers licenses, national IDs, government IDs and more. We can help define and evaluate reasonable, secure solutions based on international industry standards and best practices.





Bending Stiffness
Test Fixture



Card Dimension
Gauge



Embossed Character
Gauge



ProxiLAB Quest
Contactless Tester



NomadLAB Portable
Spy & Tester



THE EQUIPMENT THE EXPERTS USE

Test tools for quality labs, production and R&D.

Use the equipment the experts use. Q-Card has been designing, manufacturing and supporting highly accurate test equipment for laboratory, R&D and production environments since 1988. Our offering of test equipment and test fixtures are used in our own laboratory, so you can be confident that we've designed them for durability, reliability and accuracy.

Our complete line of test equipment includes peel testers, bend and torsion, magnetic stripe analyzers, three wheel testers and a variety of ISO, ANSI and Mastercard CQM test fixtures. Q-Card is also an authorized reseller for KEOLABS test tools for EMV and NFC, including contactless spy, PICC and PCD emulation, automation tools and an EMV approved contactless test bench.

Mag3x Magstripe Analyzer



Module Adhesion & Peel Tester



Magstripe Verification Gauge



Card Wrapping Fixture



ProxiSPY Contactless Spy



Climatic Immunity Test Fixture



Smart Card & NFC Testing & Certification

Product	Category	Applications	Standards
 <p>ProxiLAB Quest</p>	Contactless Card and Reader Tester	<ul style="list-style-type: none"> EMVCo Conformance Testing PCD Signal Emulator PICC Signal Emulator 13.56 Mhz Protocol Analyzer 	<ul style="list-style-type: none"> ISO/IEC 14443 NFC FeliCa ISO 15693 EMVCo
 <p>ProxiSPY</p>	Contactless Spy	<ul style="list-style-type: none"> Protocol analysis of communication between contactless cards, readers and mobile handsets 	<ul style="list-style-type: none"> ISO/IEC 14443 NFC FeliCa ISO 15693
 <p>ContactLAB</p>	Contact Spy/Tester	<ul style="list-style-type: none"> Test contact chip cards at electrical, protocol and application level Electrical characterization of the device Reader signal emulator Chip card signal emulator Spy capability 	<ul style="list-style-type: none"> ISO/IEC 7816
 <p>NomadLAB</p>	Portable Contact/Contactless Spy/Emulation	<ul style="list-style-type: none"> Spy and protocol analyzer for easy capture and analysis of communication between contactless cards, readers and mobile phones 	<ul style="list-style-type: none"> ISO/IEC 14443 NFC FeliCa ISO 7816
 <p>SCRIPTIS™</p>	Test Conformance Software	<ul style="list-style-type: none"> Execute tests, view and report results Investigate test results Write or modify test scripts 	<ul style="list-style-type: none"> ISO/IEC 10373-6 ISO 14443 FeliCa NFC
 <p>ROB5X</p>	Laboratory Test Automation	<ul style="list-style-type: none"> Can define multiple trajectories and orientations of the device under test in a way that is both precise and reproducible 5-axis system 	<ul style="list-style-type: none"> Turnkey 5-axis Test Bench Automation System ISO/IEC 10373-6 NFC Forum

Physical Card Testing Products

Product	Category	Applications	Standards
 <p>Module Adhesion, Embossed Character and Peel Tester</p>	Card Body Testing and Chip Testing	<ul style="list-style-type: none"> Peel strength Module adhesion Back of card spot pressure Embossed character retention 	<ul style="list-style-type: none"> ISO/IEC 7810 ISO/IEC 10373-1 ANSI/INCITS MASTERCARD CQM
 <p>Bending Stiffness Fixture</p>	Card Body Testing	<ul style="list-style-type: none"> Evaluates card deformity under load 	<ul style="list-style-type: none"> ISO/IEC 7810 ISO/IEC 10373-1 MASTERCARD CQM
 <p>Card Wrapping Fixture</p>	Chip Testing	<ul style="list-style-type: none"> Performs gluing resistance testing of chip at a 20mm and 25mm radius 	<ul style="list-style-type: none"> MASTERCARD CQM
 <p>Resistance to Heat Test Fixture</p>	Card Body Testing	<ul style="list-style-type: none"> Tests card body stability under heat 	<ul style="list-style-type: none"> ISO/IEC 7810 ISO/IEC 10373-1 MASTERCARD CQM
 <p>Dynamic Bend and Torsion Tester</p>	Card Body Testing	<ul style="list-style-type: none"> Dynamic Bend and Torsion Testing 	<ul style="list-style-type: none"> ISO/IEC 7810 ISO/IEC 10373-1 ANSI/INCITS MASTERCARD CQM
 <p>Card Opacity Tester</p>	Card Body Testing	<ul style="list-style-type: none"> Measures card opacity 	<ul style="list-style-type: none"> ISO/IEC 7810 ISO/IEC 10373-1
 <p>Corner Impact Card Tester</p>	Card Body Testing	<ul style="list-style-type: none"> Tests corner impact and card bending resistance for ISO plastic cards 	<ul style="list-style-type: none"> ANSI/INCITS MASTERCARD CQM

Physical Card Testing Products

Product	Category	Applications	Standards
 <p>3-Wheel Chip Card Tester</p>	Chip Testing	<ul style="list-style-type: none"> Tests mechanical resistance of ID-1 cards 	<ul style="list-style-type: none"> ISO/IEC 7816 ISO/IEC 10373-1 MASTERCARD CQM
 <p>Card Dimension Gauge</p>	Card Body Testing	<ul style="list-style-type: none"> Card dimensioning 	<ul style="list-style-type: none"> ISO/IEC 7816 ISO/IEC 10373-1 MASTERCARD CQM
 <p>Overall Card Warpage Test Fixture</p>	Card Body Testing	<ul style="list-style-type: none"> Card warpage 	<ul style="list-style-type: none"> ISO/IEC 7816 ISO/IEC 10373-1 MASTERCARD CQM
 <p>Resistance to Impact Fixture</p>	Card Body Testing	<ul style="list-style-type: none"> Resistance to impact tests 	<ul style="list-style-type: none"> ANSI INCITS 322 ISO/IEC 7811-1 MASTERCARD CQM
 <p>Relative Height/Surface Profile of Contacts Tester</p>	Card Body Testing	<ul style="list-style-type: none"> Determine difference in thickness between ICC contacts and adjacent surfaces 	<ul style="list-style-type: none"> ISO/IEC 7816-1 ISO/IEC 10373-1 MASTERCARD CQM
 <p>Climatic Immunity Test Fixture</p>	Card Durability	<ul style="list-style-type: none"> Card durability testing 	<ul style="list-style-type: none"> ISO/IEC 7816 ISO/IEC 10373-1 ANSI/INCITS
 <p>Sandpaper and Soft Eraser Rub Durability Fixture</p>	Card Durability	<ul style="list-style-type: none"> Determines resistance of various card printing methods to abrasion caused by rough surfaces 	<ul style="list-style-type: none"> MASTERCARD CQM
 <p>Durability of Surface Printing/Tipping Fixture</p>	Card Durability	<ul style="list-style-type: none"> Designed to be a secure hold down of the card under test 	<ul style="list-style-type: none"> MASTERCARD CQM
 <p>Router Tool for CQM Back of Card Spot Test</p>	Card Durability	<ul style="list-style-type: none"> Designed to prepare a card for the back of card spot pressure test 	<ul style="list-style-type: none"> MASTERCARD CQM

Magnetic Stripe Testing Products

Product	Category	Typical Market	Analysis	Tracks	Media	Standards
 <p>Mag3x Read-Write MagStripe Analyzer</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> ▪ Labs & QA ▪ Card Manufacturers ▪ Personalizers 	Encoded or Pre-encoded Cards, Tickets, Tape, Raw Media	Tracks 1, 2, 3 and Custom Track Locations	ID1, Raw Tape ATB, Bank Books, Tickets	<ul style="list-style-type: none"> ▪ ISO/IEC 7811-2 ▪ ISO/IEC 7811-6 ▪ ISO/IEC 10373 ▪ AAMVADL
 <p>Mag3x Read-Only MagStripe Analyzer</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> ▪ Card Manufacturers ▪ Personalizers 	Encoded Cards, or Encoded Tickets	Tracks 1, 2, 3 and Custom Track Locations	ID1, Raw Tape ATB, Bank Books, Tickets	<ul style="list-style-type: none"> ▪ ISO/IEC 7811-2 ▪ ISO/IEC 7811-6 ▪ ISO/IEC 10373 ▪ AAMVADL
 <p>Mag3xp Read-Only MagStripe Analyzer</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> ▪ Print Manufacturers ▪ Card Manufacturers ▪ Personalizers 	Encoded Cards, or Encoded Tickets	All 3 ISO Tracks	ID1, Raw Tape ATB, Bank Books, Tickets	<ul style="list-style-type: none"> ▪ ISO/IEC 7811-2 ▪ ISO/IEC 7811-6 ▪ ISO/IEC 10373 ▪ AAMVADL
 <p>Mag3x Mini Read-Only MagStripe Analyzer</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> ▪ Card Manufacturers ▪ Personalizers 	Encoded Cards	All 3 ISO Tracks	ID1 Cards & Tickets	<ul style="list-style-type: none"> ▪ ISO/IEC 7811-2 ▪ ISO/IEC 7811-6 ▪ ISO/IEC 10373 ▪ AAMVADL



Card Testing Accessories

Product	Category	Applications	Standards
 <p>Magnetic Stripe Test Cards</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> Jitter Amplitude Density Track Location 	<ul style="list-style-type: none"> ISO/IEC 7811-2 ISO/IEC 7811-6
 <p>Magnetic Calibration Cards</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> Calibrating signal amplitude and the encode current of magnetic stripe test equipment 	<ul style="list-style-type: none"> ISO/IEC 7811-2 ISO/IEC 7811-6
 <p>Magnetic Developers</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> Checking head alignment Checking tracks Revealing damage Performing quality inspections 	<ul style="list-style-type: none"> ISO/IEC 7811-2



Card Feature Verification Gauges

Product	Category	Applications	Standards
 <p>Magnetic Track Location Gauge</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> Visual Inspection of Magnetic Stripe Track Location 	<ul style="list-style-type: none"> ISO/IEC 7811-2/6/7
 <p>Embossed Character Location Gauge</p>	Embossed Testing	<ul style="list-style-type: none"> Visual Inspection of Embossed Characters 	<ul style="list-style-type: none"> ISO/IEC 7811-1 MASTERCARD CQM
 <p>Mastercard Logo Position Gauge</p>	Mastercard Brand Testing	<ul style="list-style-type: none"> Visual Inspection of Mastercard Logo 	<ul style="list-style-type: none"> MASTERCARD BRAND SPECIFICATIONS
 <p>Chip Minimum Contact Area Gauge</p>	Chip Testing	<ul style="list-style-type: none"> Visual Inspection of Chip Contact Area 	<ul style="list-style-type: none"> ISO/IEC 7816-2 MASTERCARD CQM
 <p>2 & 3 Track Magstripe Location Gauge</p>	Magnetic Stripe Testing	<ul style="list-style-type: none"> Visual Inspection of Magnetic Stripe Location 	<ul style="list-style-type: none"> ISO/IEC 7811-6 MASTERCARD CQM

Q-Card can supply custom gauges for many applications.

Call us for a quote on custom gauges at 800-717-8007

QUALITY ASSURANCE STARTS WITH Q-CARD

Q-Card is one of the most trusted names in the card transaction market. Whether you're looking to purchase test equipment for your own facility or want a third-party testing provider you can trust, Q-Card is the authority to rely on.

Our experts are ready to help you solve existing quality issues, improve transaction systems and develop new payment technologies.



www.q-card.com



301 Reagan Street
Sunbury, PA 17801 USA
Phone: 570.286.7447
Fax: 570.286.2649
www.q-card.com

Q-Card is

ISO 9001
Compliant

800-717-8007