

SmartCard Technologies

As a leading and independent full service provider for SmartCard, RFID and NFC related solutions, CTC advanced's worldwide operating SmartCard Technologies Competence Center offers a wide range of services to implement the type approval process for mobile payment applications, ICC cards, wearables and terminals.

TEST SCHEMES & ACCREDITATIONS

ePAYMENT

Banking, Mobile Payment & mPOS Solutions

- EMVCo
- American Express
- Discover
- Mastercard
- Visa
- DK-Die Deutsche Kreditwirtschaft

eHEALTH

Electronic Health Cards

- gematik
- SESAM-Vitale

eIDENTIFICATION

ePassport, nPA

- BSI
- ICAO

eTICKETING

- VDV-KA
- CEN/TS

BIOMETRICS

COMPLIANCE TESTING FOR CONTACTLESS TECHNOLOGIES

- ISO/IEC 14443
- ISO/IEC 15693

STANDARDISATION ACTIVITIES

- Member of ETSI
- Member of NFC Forum
- Member of GlobalPlatform
- Member of NEXO
- Member of EMVGTA (Technical Associates)
- Member of GCF
- Member of GSMA

TESTING SERVICES

- Type Approval Testing
- Pretest / Debug Testing
- Consultancy

RFID

Whether RFID technology is used for ePassport, Contactless or NFC applications, CTC advanced supports customers in setting and evolving the performance, ensuring that products meet the expectations for regulatory, quality, health, environmental and safety standards for almost any market around the world.

NFC

Near Field Communication (NFC) is an extension of the existing SmartCard standards (contactless/RFID) that combines the interface of a smartcard and a reader into a single device. CTC advanced is a NFC Forum Test Lab and active member in several NFC Forum working groups (Compliance Program WG, Test Mode Taskforce, Testing WG, RF Testing Taskforce). Our Lab offers different test services for NFC devices:

- NFC Forum Accredited Test Lab
- Qualification tests of NFC devices based on ISO/IEC 14443 and ISO/IEC 10373

SUPPLEMENTARY TESTING SERVICES

CTC advanced offers complementary testing and certification services for your terminal and its interfaces:

- EMC, Electrical Safety, Health
- Environmental Impact Assessment
- DECT, LTE/UMTS/GSM, Bluetooth®, Wi-Fi®
- Network Access
- International Type Approval



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As a holder of various accreditations for both contact and contactless applications CTC advanced offers consulting, testing and certification services for Banking Applications, Mobile Payment and mPOS solutions including analog test bench, protocol and application testing.

EMVCO

CTC advanced is accredited by EMVCo to perform Type Approval Testing on:

Terminals

- EMVCo Contact Terminal Level 1 and 2
- EMVCo Contactless Terminal Level 1
- EMVCo Contactless Product Terminal (Level 2)
- EMVCo Terminal ESD Evaluation

Cards / Wearables

- EMVCo Contact Card Level 1
- EMVCo Contactless Card Level 1
- EMVCo CCD & CPA Card

Mobile

- EMVCo Mobile Phase II
- PPSE/AAUI

AMERICAN EXPRESS (AMEX)

CTC advanced is accredited by AMEX to perform Type Approval Testing on:

Terminals

- Expresspay Terminal Level 2 contactless

Mobile

- Expresspay Mobile Level 1 (incl. HCE Level 1)

DISCOVER

CTC advanced is accredited by Discover to perform Type Approval Testing on:

Terminals

- Contactless Terminal Level 2 D-PAS Reader Application (SE)

Cards / Wearables

- Contact D-PAS Card Application

Mobile

- Mobile D-PAS Card Application (SE)

MASTERCARD

CTC advanced is accredited by MasterCard to perform Type Approval Testing on:

Terminals

- Acceptance Devices (Contactless Terminal Level 2)

Cards/Wearables

- M/Chip Card
- Contact, contactless and dual interface testing

Mobile

- M/Chip Mobile
- MasterCard Cloud Based Payments (MCBP)
- MasterCard Mobile Payment (incl. HCE / SE)
- MasterCard Mobile Payment Application (MPA)

CTC advanced is accredited by MasterCard to act as a Formal Service Provider for:

- M-TIP / GICC-TIP
- CPV

VISA

CTC advanced is accredited by Visa to perform Type Approval Testing on:

Terminals

- Visa contactless device and reader (MSC, qVSDC, VOQOS and CrossTesting)
- Fleet
- Biometrics Terminal Specification

Cards / Wearables

- VSDC functional testing (incl. Level 1)
 - Contactless testing (VCPS)
 - Contact testing (VIS)
 - dual interface testing

Mobile

- Visa Mobile Payment (incl. HCE)
- Visa Mobile Payment Application (VMPA incl. UICC/SE)

DK – DIE DEUTSCHE KREDITWIRTSCHAFT

CTC advanced's test services according to the DK approval procedure include:

- Electronic Cash Terminals and Network Components
- GeldKarte
- Secoder
- Payment Network Host Systems
- German ATM System (GA 2015)
- DC-POS 3.0 / TA 7.2

GLOBALPLATFORM

GlobalPlatform defines and develops specifications to facilitate the secure deployment and management of multiple applications on secure chip technology.

GlobalPlatform offers a standardized infrastructure and APIs for the management of applications on secure chip technology, which are compatible with all connected devices. CTC advanced is GlobalPlatform Qualified Lab with focus on the card side. Available test suites:

- UICC Configuration
- UICC Contactless Extension
- Basic Financial Configuration
- ID Configuration
- Mapping Guidelines
- UICC SCP81 Extension
- SWP and HCI (v1 and v2)
- Secure Element
- Secure Element Access Control (Card Compliance)
- Common Implementation Configuration
- eUICC Compliance Test Suite