



a Clear2Pay company

INQ® End-to-End Level 1 Platform

EMV Level 1 Card Test Suite

Description

In order to simplify implementations and to enhance global interoperability of Integrated Circuit Card (ICC) implementations, EMVCo defined a new test specification for EMV cards. This standard specifies a minimum common set of card implementation options, card application behaviours and data element definitions sufficient to accomplish an EMV transaction.

The EMV Level 1 Card test suite is available as an off-the-shelf product that runs on the INQ Level 1 Platform, Integri's core platform for all solutions in Low-Level Protocol Testing.

The testing of the following features is automated and detailed (by using trace viewer, navigator and log files).

- Answer to reset
- Character transmission
- T=0 protocol requirements
- T=1 protocol requirements

Prior to the test execution, the user starts to configure the so-called ICS file, i.e. the 'Implementation Conformance Statement'. In this file, the different options, as defined in the EMV specifications, are configured.

Using this file, a reference EMV transaction is automatically executed and the commands are prepared at protocol level.

Any error reported by the tests is associated with a time stamp that can be found in the TimeStamp column in the viewer, making it easy to locate the reported problem.

Cursors can be used to measure delays at various locations.

Perturbations can be performed easily within scripts with a direct access to the Micropross MP300TC2 sequencer:

- Forced parity errors in emission and reception
- Glitch generation on Vcc and Clock
- Modification of timings (TA, TB, TC...)
- ETU width adjustable
- Protocol level perturbations

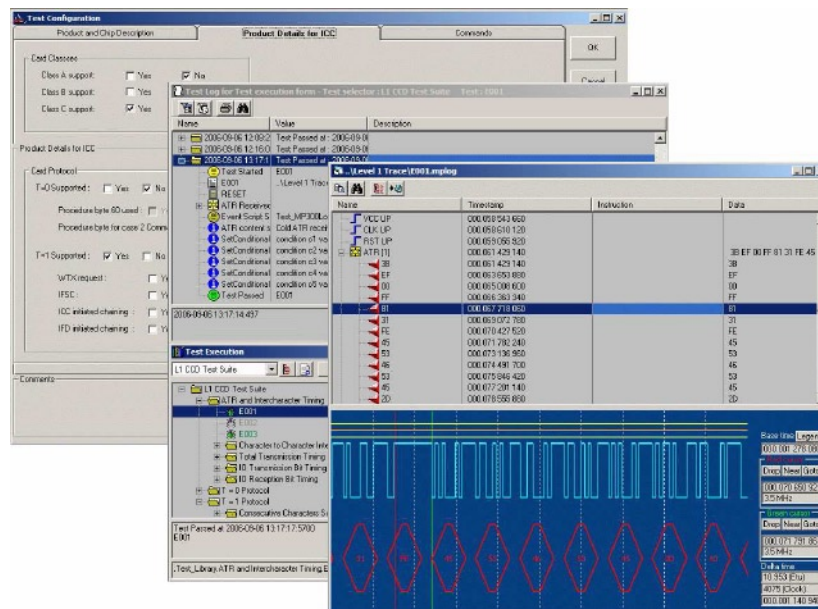


Highlights

- Fully automated – no user action required
- Complete set of functional tests for Card level 1 approval
- Enables fully detailed tracking of completed transactions from bit to packet level
- Card Debugging during implementation
- High level reporting functionality foreseen
- Simulation of various conformant and non-conformant behaviors at connection level

Out of the box testing





Technical Specifications

The implementation of the EMV L1 Card Test Suite is based on the following specifications:

- Specification Update Bulletin No. 25, Common Core definitions, Second Edition April 2004
- Specification Update Bulletin No. 41, Corrections to Common Core Definitions, First Edition June 2005
- Specification Update Bulletin No. 46, Replacement of EMV Session Key Derivation Method, First Edition October 2005
- Specification Update Bulletin No. 47, Support for Proprietary Authentication Data in CCD, First Edition April 2006
- EMVCo COMMON CORE DEFINITIONS IMPLEMENTATION CONFORMANCE STATEMENT LEVEL 1 & 2 - FOR EMV SPECIFICATIONS v4.1, December 2005, Draft V1.0
- EMVCo COMMON CORE DEFINITIONS IMPLEMENTATION CONFORMANCE STATEMENT LEVEL 1 & 2 - FOR EMV SPECIFICATIONS v4.1, June 2006, Draft v2.5
- EMVCo Card Type Approval CCD Level 1 and Level 2 Card Images Requirements, Version 4.1.a, July 2006
- EMVCo Card Type Approval Level 1 Electrical and Protocol Test Cases Version 4.1b, February 2006

Product Family

Runs on the INQ Level 1 Platform - Contact Card Testing Configuration

Requires MP300TC2 Card Reader



Integri

a Clear2Pay company

Integri is a wholly owned, autonomous business unit of Clear2Pay, an international financial technology company focused on delivering globally applicable solutions for secure, timely electronic payments. Clear2Pay operates from 13 international offices and currently employs over 400 staff.

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