Collis M/Chip Advance Test Suite

The Collis M/Chip Advance Test Suite significantly increases your chances of functional approval with just 1 iteration.

With our extensive experience with M/Chip testing you can benefit from our best practices!

M/Chip Advance

MasterCard has developed new card payment application specifications which extend the current M/Chip 4 capabilities.

These new specifications are called M/Chip Advance. M/Chip Advance is not a replacement of M/Chip, it is a set of new specifications.

This new advance in payment functionality by MasterCard facilitates the deployment of contactless applications and integrates information needed for business applications such as transit and loyalty.

For a card to benefit from M/Chip Advance payment application, card vendors must conform to the M/Chip Advance specifications, and get an approval by MasterCard.

Functional Approval

We have developed the Collis M/Chip Advance Test Suite. This Test Suite tests your card according to MasterCard M/Chip Advance specifications.

MasterCard documents are non-public and only made available to authorized test labs. Test cases has been derived which cover all major MasterCard requirements based on extensive experience in M/Chip testing.

We are accredited by MasterCard to provide chip related consultancy and training. This accreditation confirms our knowledge and expertise.

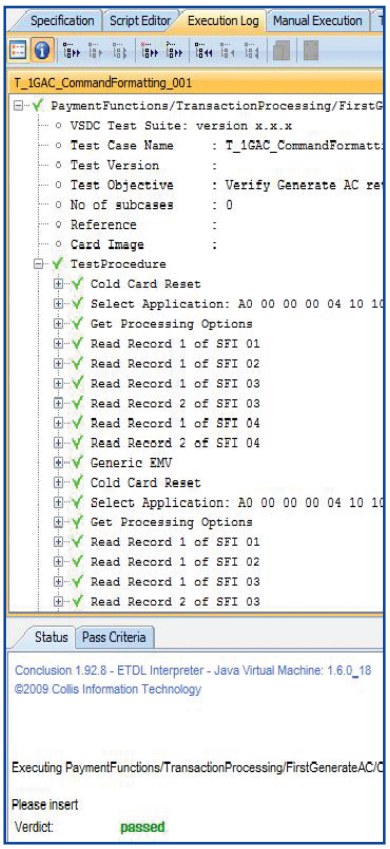
The Collis M/Chip Advance Test Suite is an essential need for every card vendor and card application developer. The Test Suite is designed for preparation for functional approval of your payment application. Contact us today to speed-up your M/Chip Advance functional approval!

Collis M/Chip Advance Test Suite - Key Benefits

- Collis test suites help to speed up your development and reduce time-to-market
- Extensive M/Chip testing experience
- Qualified test tool vendor for issuers and acquirers
- Accredited by MasterCard to deliver chip related consultancy, training, and Formal Approval Services for TIP and M/TIP

Functional Approval Made Easy

Feature and Benefits



Execution Log window

As with all Collis Test Tools, the Collis M/Chip Advance Test Suite is developed with **Automated Testing** in mind. It is **easy-to-use** and **flexible**. Key features of the test suite include:

- **User Friendly**

  Only those test cases applicable to the user implementation are executed. For example, if the user implementation does not support Stand-alone Data Storage, these tests are reported as 'Not applicable'.

- **Easy Access**

  Configurable parameters such as keys and PINs are organized in a logical way for easy access.

- **Intelligent Pre-Condition Processing**

  A common feature of other test suites is the requirement for tests to be executed in a particular order. Pre-condition processing ensures that the card is in the correct state to execute the test case and minimizes the number of tests which fail due to simple card configuration errors.

- **In-Depth Reporting**

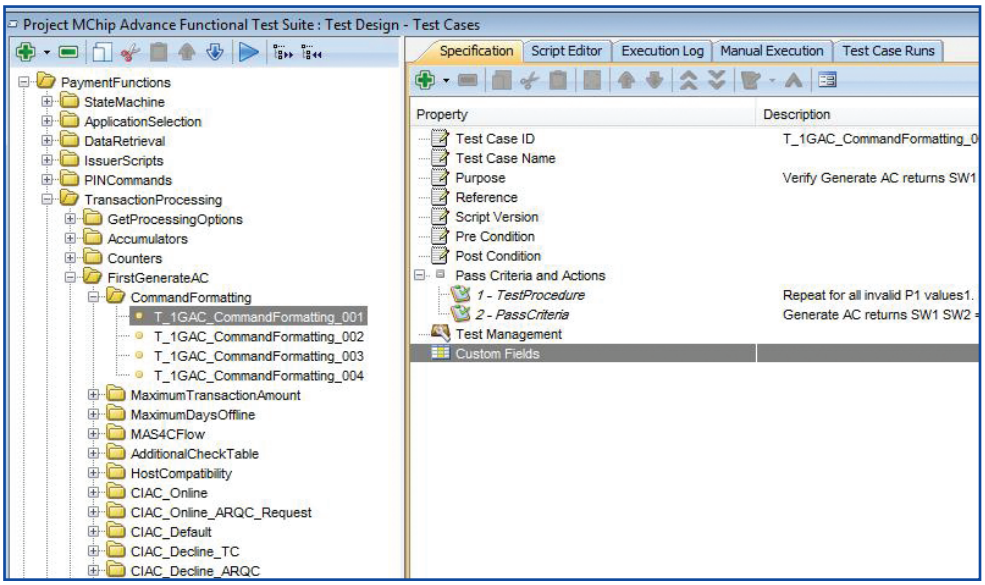
  The Collis M/Chip Advance Test Suite is built on the Collis Test Manager Platform which features automatic generation of test reports. These can be configured with the level of detail required for the target audience i.e. summary information for management or detailed for developers and testers.

- **Minimal Card Image Requirements**

  Unlike other functional approval test suites, the number of different card images required is kept to the barest minimum.

- **Quick & Easy Test Batch Creation**

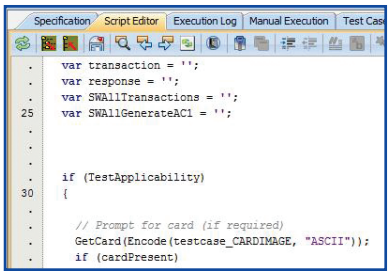
  Using the Scenario facility of the Collis Test Manager, test batches can be created quickly and easily. If you need to create a small test run based on a particular area of functionality of a complete regression test, Scenarios enable the test batch to be created with minimal effort.



Collis M/Chip Advance Test Suite - Test Specifications tab of the test menu

Extensive Test Coverage

Ability to test on payment transaction



Script Editor window

Test Coverage

The Collis M/Chip Advance Test Suite contains over 1400 test cases covering both positive and negative tests. The Test Suite is divided into the following test groups:

Payment Functions

- **State Machine**

  The M/Chip Advance State Machine defines when and in what order commands can be accepted by the application. Correct implementation of the State Machine is an important part of the security of the Application. The Test Suite ensures the application has correctly and fully implemented the State Machine.

- **Application Selection**

  The EMV protocol allows for various methods of selecting a payment application: PSE/PPSE or using an AID list. Test cases ensure that the M/Chip Advance application can be correctly selected by any method used.

- **Data Retrieval**

  M/Chip Advance has introduced a large number of new data elements which can be retrieved using GET DATA and added new filters for retrieving SFI records. Test cases in this group ensure that data is retrieved correctly and any restrictions are correctly applied.

- **Issuer Scripts**

  The new ISSUER UPDATES command provides an easier method of updating Accumulator and Counter values and limits. Test cases exercise the ISSUER UPDATES command together with APPLICATION BLOCK, APPLICATION UNBLOCK, PUT DATA, PIN CHANGE/UNBLOCK and UPDATE RECORD.

- **PIN Functions**

  Test cases in this group exercise the GET CHALLENGE, VERIFY and PIN CHANGE/UNBLOCK commands as well as the new OFFLINE CHANGE PIN command. The test cases ensure the application has correctly implemented these commands and so protect the card holders PIN.

- **Transaction Processing**

  The Generate AC command is the heart of the M/Chip Application and commands the largest majority of test cases. Within this test group functionality such as Card Risk Management, Host Compatibility, Transaction Logging, Transaction Recovery and Accumulator and Counters are exercised as well as the basic operation of the First and Second Generate AC commands.

Data Storage Functions

- **Integrated Data Storage**

  With Integrated Data Storage retrieval and update of storage locations is integrated into the EMV transaction flow. Tests in this group ensure the application can access and update the data and that the security has been correctly implemented.

- **Stand-alone Data Storage**

  Update and retrieval of data with this functionality is outside of the normal EMV transaction flow. Tests exercise the GET DATA, PUT DATA and PUT DATA (CLA='80') commands when used to access or update the Standalone Data Storage locations.

Contact Us

Product Range

- **Collis M/Chip Advance Test Suite**
  Ref Code: C-MChipAdv-P1

  The test suite is suitable for preparation for functional approval with over 1400 test cases, which significantly increases your chance of approval with fewer iterations.

Additional Products

- **Collis Test Manager**
  Ref Code: CTM-P1
- **Collis M/Chip & *PayPass* Test Suite**
  Ref Code: C-MChipPP-P1
- **Collis VSDC Test Suite**
  Ref Code: C-VSDC-P1
- **Collis VCPS (qVSDC) Test Suite**
  Ref Code: C-VCPS-P1
- **Collis CPA/CCD L2 Compliance Test Suite**
  Ref Code: C-CPACCDL2-P1

Services and Training

- **Implementation Support**
  Ref Code: MChipAdv-S1
- **M/Chip Advance Training**
  Ref Code: MChipAdv-T1

Contact

The Collis and Aspects portfolio of test tools are developed by UL Transaction Security.

For sales enquiries, please contact us at info@ul-ts.com, visit www.ul-ts.com, or contact a UL Licensed Reseller.

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