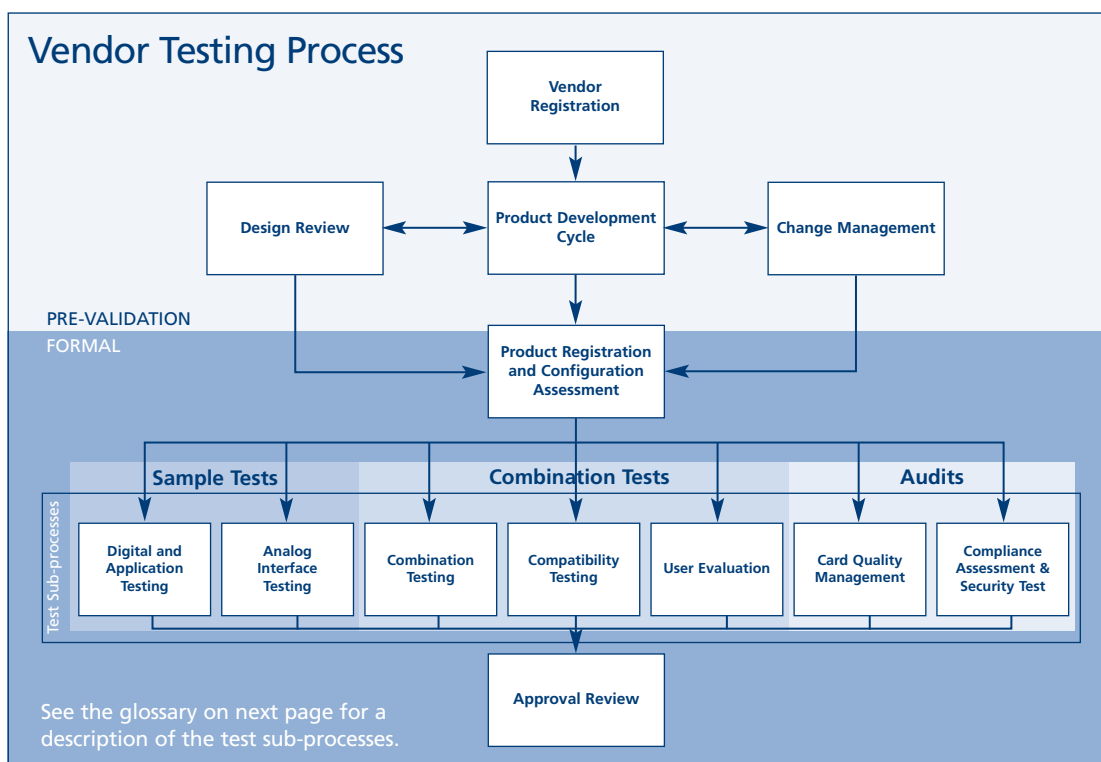


# MasterCard® *PayPass*™ Card Vendor Testing Process

The process of obtaining *PayPass* approval



A thorough test and approval process has been developed for *PayPass* products to promote worldwide interoperability at an acceptable time and cost to all parties.

The aim of the testing process is to increase confidence that each *PayPass* cardholder product should:

- **Work** smoothly
- **Everywhere** it is accepted
- **Every time** it is used

After completing this process, card vendors can obtain the **MasterCard *PayPass* Vendor Product-Letter of Approval**. The card can

then be presented as a reliable off-the-shelf cardholder product for issuers to deploy.

## Process overview

Vendors first need to register by signing a *PayPass* Specifications License Agreement to obtain relevant specifications and support.

During product development, vendors work with a choice of accredited test laboratories that provide expertise on testing tools and processes. In this way products are pre-validated before formal testing is started, saving the vendor cost and time.

At the earliest possible stage, the vendor must conduct a design review. This ensures that the proposed product meets MasterCard requirements for cardholder product implementations.

The formal testing begins with registration of the product. MasterCard performs an assessment and informs the vendor of which tests need to be performed.

There are formal tests for each area where cardholder product requirements are defined by MasterCard: analog and digital interfaces, application interface, quality management, and security. These tests are performed by accredited test laboratories.

Successful completion of these tests results in formal statements of conformity from MasterCard.

Additional tests may be requested by MasterCard to determine compatibility and usability of the cardholder product. MasterCard produces test reports based on these test results.

Formal statements of conformity can also be obtained separately for cardholder product components. These components can then be assembled with other tested components to form a complete cardholder product.

When all required testing is completed, the vendor submits the results for MasterCard approval.

Once the complete cardholder product is approved, the vendor receives a MasterCard *PayPass* Vendor Product–Letter of Approval and an entry on the *PayPass*-approved products Web site.

## Testing program

The *PayPass* Card Vendor Testing process relates directly to MasterCard testing goals:

- **Sample Tests:** Tests of the product characteristics (Does it work?)
- **Combination Tests:** Tests of the product interaction with other devices (Will it work everywhere?)
- **Audits:** Ensures the sample of the product tested is representative, repeatable, and reliable, and continues to be so (Will it work every time?)

## Contact information

For further information, please contact:

Testing and support services e-mail:

[testing@paypass.com](mailto:testing@paypass.com)

*PayPass* Web site: [www.paypass.com](http://www.paypass.com)

## Card Vendor Test Sub-processes Glossary

Test Sub-process	Test Area	R	Description
Analog Interface Testing	Analog behavior	M	Formal testing of the electromagnetic characteristics of the cardholder product against <i>PayPass</i> ISO/IEC 14443 requirements.
Digital and Application Testing	Digital behavior	M	Formal testing of the software communications protocol of the cardholder product against <i>PayPass</i> ISO/IEC 14443 requirements.
	Application behavior	M	Formally testing the characteristics of the application against <i>PayPass</i> requirements.
Combination Testing	Behavior with merchant devices	O	Formal testing that a transaction is correctly performed within specified transaction times using a number of <i>PayPass</i> terminal devices presenting the cardholder product under test into the terminal landing zone from different angles with different speeds.
Compatibility Testing	Implementation and usage	O	Testing that a range of <i>PayPass</i> -M/Chip and <i>PayPass</i> -Mag Stripe terminals can be used with the cardholder product in a consistent and effective manner.
User Evaluations	Usability	O	Testing the user reaction to the cardholder product and recording their perception.
Card Quality Management	Product production and change management	M	Formal audit of vendor processes to ensure that samples received by the testing laboratory are representative of the final production cardholder product.
Compliance Assessment & Security Testing	Security of silicon and application design	M	Formal assessment of the security of the chip hardware design and the operating software design.

R=Requirement level: M=Mandatory, O=Optional (if requested by MasterCard)