SW Module Test Plan

Customer

Project

**Revision History**

| **Version** | **Date** | **Change Description / Reason** | **Author** |
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# Objective of this Test Plan

This Test Plan applies to the <project name> project and is mandatory for all phases of the project. For personal responsibilities see <Master Test Plan ID (from ConfigMan)>.

The objective of this test level is to demonstrate that the software modules fulfil the Software Module Design

Specification and do not contain undesired functionality.

If no Master Test Plan exists for the project, then state the ID of the Project Manual, as in that case the appropriate information is to be given there and is the Project Manager's responsibility.

## Definitions, glossary, abbreviations

If applicable own project-specific abbreviations and definitions.

# Introduction

This section briefly describes the test assignment from stakeholder point of view.



## Scope of Test Level

Summarize the test assignment with the focus on the stakeholder expectation concerning this test level. This includes aspects like specific / important features, development and thereby test focus for releases deliverables. This section may be a reference to a portion of the Master Test Plan, may be an addition, or reflect changes to the Master Test Plan.

If there are additional project-specific characteristics for this test level, then they have to be described here too. All characteristics are relevant that require special attention in this test level and in particular influence the standard process.

## Documents, defining the framework conditions

Stakeholder expectations for this test level relevant on test planning, specification and execution.

The following documents define the framework conditions for this Test Plan:

* <Master test Plan ID revision >
* Milestone plans
* Release objectives
* …

# Test objects



## Description of the test objects

Tests are defined for the following test objects:

This section briefly describes the objects to be tested.

* Test object
* <Test object>
* <...>

The following objects are not subject of this Test Plan and therefore no test objects:

In this section, the objects are to be briefly described for which no tests are planned. If all objects are included, then document this with n/a.

## Documents, defining the test basis

The following documents are needed to create the test cases for this test level in this project:

* Engineering level specific specification <Revision>
* Engineering level specific architecture <Revision>
* Other documentation

Other documentation might be error reports, lessons-learned documents or similar from earlier projects.

The following documents are required for test execution in addition to the released Test Specification of this test level (e.g. test tool manuals etc.):

* <Document name with revision>

## Features to be tested

All features that are tested need to be described and grouped to tests.



### <TestnameID001>

List the features that are tested in this test.

* <Feature w>
* <Feature x>
* <Feature y>
* <…>

### <TestnameID002>

List the features that are tested in this test.

* <Feature w>
* <…>
* <Feature z>

### <TestnameID003>

List the features that are tested in this test.

* <…>

## Features not to be tested

All features should be described that are not tested. Reasons must be given why these features are not tested (e.g. technical reasons, lack of resources etc.).

* <…>

# Test Strategy



## Test Strategy in the development process

The definition of the objectives of the Test Strategy of this test level in the development process shall be detailed here, e.g. by taking over of a standard approach for this test level from Confluence.

In the following the project specific test strategy has to be defined. If a master test strategy has been developed for this project in the Master Test Plan, this strategy will be a refinement for this test level.

<…>

## Risk assessment for each system part

The results from the risk classification of the system parts are shown in:

* <Risk Assessment of system shares, ID revision >

A summary of the risk assessments can be pointed out here.

## Breadth and depth of testing and priorities

The definition of the breadth and depth of testing shall be detailed here, e.g. by taking over of a standard approach for this test level from Confluence.

An explicit definition, alternative to a reference or a refinement can be given here like:

<…>

The priority of the test execution results from the risk class. Shares of the risk class “high” are considered first in the test execution. The necessary breadth and depth of testing must be documented for each risk class "high", "medium" and "low".

## Test automation

This chapter briefly describes the strategy and planned degree of test automation.

## Re- and regression test strategy

The definition of the re- and regression test strategy shall be detailed here, e.g. by taking over of a standard approach for this test level from Confluence.

An explicit definition, alternative to a reference or a refinement can be given here:

<…>

## Pass / fail and test exit criteria

The criteria defined in the Master Test Plan should be detailed in this section.

The definition of the pass / fail criteria shall be detailed here, e.g. by taking over of a standard approach for this test level from Confluence.

An explicit definition, alternative to a reference or a refinement can be given here:

<…>

The definition of the test exit criteria shall be detailed here, e.g. by taking over of a standard approach for this test level from Confluence.

An explicit definition, alternative to a reference or a refinement can be given here:

<…>

## Interruption criteria and resumption requirements

In the project often a continuous test execution is interrupted by serious faults. This can result in test abortion, suspension with resumption of the test or by a change of the test object “on the fly”. The definition of the any kind of interruption criteria and resumption requirements shall be detailed here, e.g. by taking over of a standard approach for this test level from Confluence.

An explicit definition, alternative to a reference or a refinement can be given here:

<…>

# Test organization



## Test activities, expenditures, and schedule

### Test activities and expenditures

Here, the expenditure estimate from the Master Test Plan needs to be detailed and documented. The documentation must be sufficiently detailed to enable other persons who are not members of the project team to understand it.

Draw up the effort estimation here, or provide a link to the calculation sheet.

Working step Expenditure

<

Test case determination x PT

Test execution y PT

...>

### Test schedule

It is necessary to schedule the test activities for this Test Level from the Master Test Plan. Accordingly, the schedule needs to be updated. The test activities should if possible always relate to dates of software development activities. In this way it can be prevented that the test team causes delays of the development process. Make the schedule as granular as possible. The MS Project tool should be used to support the test planning.

< Draw up the schedule here or indicate the version of the MS Project plan. (Inserting a link is not recommended because if changes are made to the MS Project plan, then the Master Test Plan needs to be checked and maybe updated.) >

## Traceability

The definition of the traceability of the Master Test Plan can be detailed here, e.g. by taking over of standard approach from Confluence. Since the approaches depend on the interrelated documents (requirements vs. test specification) the applicable approaches have to be selected accordingly.

An explicit definition, alternative or additional to a reference as well as a refinement can be given here:

<…>

## How to proceed test specific tasks

This section describes / references all “How Tos” which should be applied to specific activities within the test process and which are binding for the test team for this test level.

## Test work products

Additionally to the test deliverables, defined in the Master Test Plan the following work products are created in this test level and documents the test activities:

* Log-files
* …

### Test design / case specification / procedure specification

This section describes / references all “How Tos” which are spcific for this test level and should be applied to design the test, to determine the test case and procedure specifications.

### Test report / logs

This section describes / references all “How Tos” which are spcific for this test level and should be applied to create the test report. Further more details concerning test level specific test log and trace files should be defined here.

# Test environment / infrastructure

The necessary and the desired characteristics for the test environment and infrastructure have to be defined here.

If a suitable test environment / infrastructure is not available at present, these demands are the starting point for the development or purchasing of a suitable environment / infrastructure.

If existing test environment or infrastructure fulfils the demands the selected environment / infrastructure shall be listed here (instead of a listing of the demands.)



## Hardware tools

It needs to be specified here which devices are required for the tests, e.g. emulator, pattern generator, etc. and what amount of hardware tools is required (if applicable: by when)?

A diagram may be presented which shows how the devices are to be connected. If the hardware platform is necessary for the test, then make a reference here to the required hardware version.

The following hardware is required to carry out the tests:

* <Target>
* <Emulator>
* <Additional cards (CAN, LIN...>
* <Climatic chambers>
* <Other hardware (measuring equipment ...)>
* <Test vehicles>

## Software tools

Which and what amount of software tools are required (if applicable: by when)?

The following project-specific software is required to carry out the tests:

* <LabVIEW, version>
* <NI TestStand>
* <Remaining bus simulation>
* <Other software (HMM, …)>

## Further test tools

Determined demands for additional special tools. If none are needed, then please enter n/a here.

<…>

## Further test infrastructure

Determined demands for new test infrastructure or for modifications on an existing test infrastructure. If none are needed, then please enter n/a here.

<…>