

# Estimated project roadmap



Final payment in accordance with the spent man-hours, travel and accommodation expenses

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## Project description

<b>Project name</b>	Automation of electronic components quality inspection
<b>Standards</b>	customer internal documents
<b>List of measured parameters</b>	resistance capacity inductance
<b>Measuring equipments</b>	E4990A Impedance Analyzer
<b>DUT's description</b>	Any type of resistance, capacity, inductance 0806, 1206

## Project architecture and implementation method

Automation and logging software for measuring the parameters of electronic components.

Input quality control in production.

Measures sampling parameters and calculates statistical parameters.

Forms a report and draws a conclusion about the compliance of limits

## Composition of the software suite

TestPatron Automation Studio, 1 license

TestPatron Script for measuring automation and test report creation

TestPatron Driver for Keysight E4990A

## Project RoadMap

The project will be carried out by three employees in two stages under the supervision of the project manager. To develop the documentation, a technical writer is involved.

The 1st and 2nd stage run simultaneously.

1st stage: TestPatron driver development

2nd stage: TestPatron script development

Then the customer will be trained and the project will be submitted for technical support.

### 1st stage: TestPatron driver development for Keysight E4990A

The stage is performed by labview developer

Substage	Duration, man-hours		Remark
	remote	on site	
examination of instrument documentation	4		
development of the command system	2		
driver template development	8		
driver debugging. manual and automatic testing	12		Will be performed remotely
release to production	2		
preparation of documentation	4		

### 2nd stage: TestPatron script development

The stage is performed by script developer

Substage	Duration, man-hours		Remark
	remote	on site	
method of test customer approval	2		
test report template dev. Customer approval	4		
script development	16		
remote debugging	8		Will be performed remotely
customer approval remarks correction	4		TestPatron allows to correct script on the fly
customer training	4		
release to production	4		Prepare an installation disk with all software components
preparation of documentation	8		user manuals for software suite

### Project duration estimation

Total spent man-hours	82	
# of business trips	0	

<b>Expected time of project implementation, weeks</b>	<b>2</b>	since the stages run simultaneously and several employees work
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## Project cost estimation

### Initial data\*

Description	Unit cost	Remark
TestPatron Automation Studio, 1 license, USD	1450	the license is associated with the computer identifier
Script developer hour rate, USD	30	
Labview developer hour rate, USD	50	
Travel expenses, 2 way, 1 person, USD Berlin, Germany	250	
Accommodation expenses, 1 day, USD	150	
TestPatron Automation Studio,	1900	

\* The cost depends on the terms of the contract

Calculation	quantity	Amount, usd
TestPatron License	1	1450
Script developer, man-hours	50	1500
Labview developer, man-hours	32	1600
Travel and accomodation expenses	0	0
Project management and accounting	10%	455
1 year technical support	10%	500,5
<b>Estimated project cost*</b>		<b>5505,5</b>

\*Possible error in time and cost estimation less than 30% ( confidence levels is 90% )