

# Net **X**pert XG

Next Generation Ethernet Speed Certifier

FW 2.1x

Menu structure and user guide



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# NetXpert XG – Next Generation Qualifier

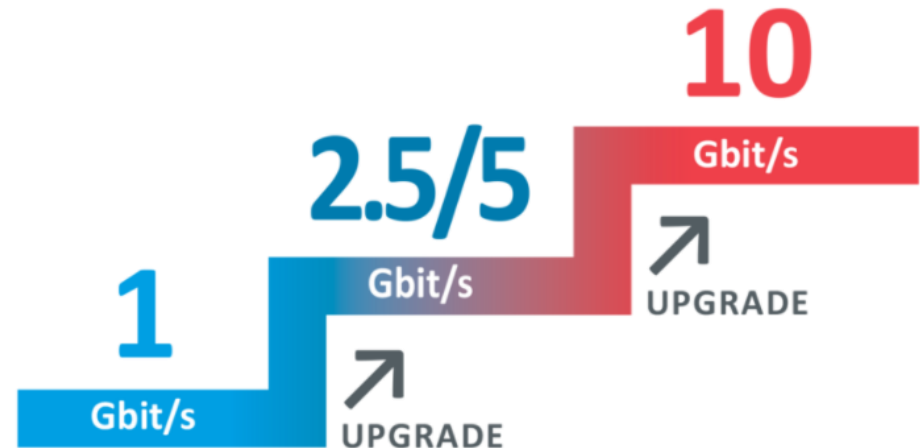
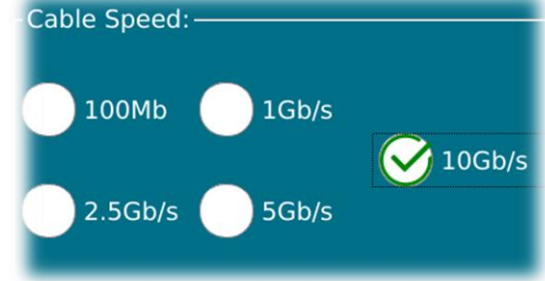
## Main operating modes

- Qualifying passive communication lines
  - Main unit communicates with wiremap, mapper or active remotes at the far end of the line...
    - To implement a wiremap test and troubleshoot the cable
    - To locate the connected ports
    - To identify the Ethernet performance of a transmission path (up to 10 Gbit/s)
- Ethernet commissioning and troubleshooting
  - Main unit is connected directly to an active Switch-Port to...
    - identify Ethernet connection speed and PoE capabilities
    - identify existing network structure
    - test PoE/PoE+/PoE++ availability (idle and loaded)
    - test DHCP
    - implement ping and traceroute tests
    - find related switch ports
    - decode CDP und LLDP protocols
    - identify VLANs



# Three Speed Levels

- NetXpert XG – Next Generation „Ethernet Speed Certifier“
  - Three scalable models
    - 100 Megabit and 1 Gigabit Ethernet
    - 100 Megabit and 1/2,5/5 Gigabit Ethernet
    - 100 Megabit and 1/2,5/5/10 Gigabit Ethernet
  - Passive copper cable qualification
    - Wiremap
    - Signal to noise ratio (SNR)
    - Bit Error Rate Testing (BERT)
    - Delay Skew
  - Passive qualification of fiber cables (in progress)
  - Tools for setup and troubleshooting in active networks
    - Copper
    - Fiber optic (1G/10G)
    - WLAN (2,4 GHz Band)



# Hardware

- Main unit
  - Housing is impact-resistant plastic with edge protector elastic bands
  - Foldable kickstand for convenient operation
  - Ergonomic landscape format to maximize readability
  - Hand straps for carrying comfort
  - Rubber material to cover all the ports
  - User accessible battery
  - On/off button
    - Power unit on and off
    - Integrated LED indicates the status of the power supply
    - Green= Battery charge >20%
    - Green flashing = Unit is charging (both fans are running)
    - Red= Battery charge <20%
    - Red flashing= Unit is not charging because of excessive internal heating (Do not unplug the charger! Both fans are running and charging will start automatically, when temperature returns to normal)



# Ports

## Micro-USB port (in conjunction with an adapter)

- For importing...
  - Logos for reporting
  - List Based Testing (LBT) test lists from eXport-Software
  - Firmware-Updates
  - License key
- For exporting...
  - Test-projects in various formats to share or external processing

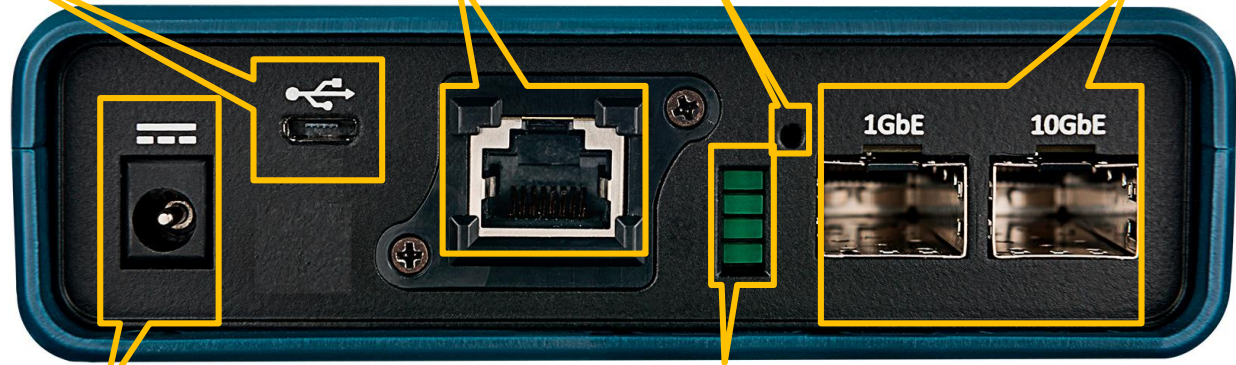
## RJ45 measuring port

- Replaceable parts with 10 Gigabit Performance
- Part number XY

## Restart button

## SFP slots

- 1 Gigabit Ethernet LWL SFP
- 10 Gigabit Ethernet



## Power supply connection (12 Vdc)

- Operations of the device and charging the batteries (Li-Ion)

## LED port indicators (top to bottom)

- Optical Link and Activity, 10G
- Optical Link and Activity, 1G
- Copper Link, any speed
- Copper Activity, any speed

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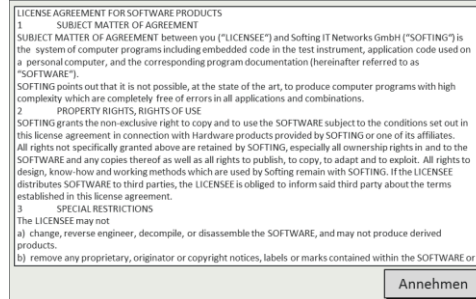
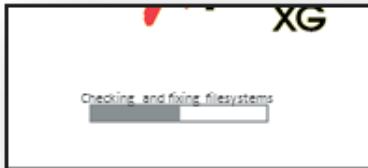
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# Setting up the device

- Switch-on
  - Boot-Screen appears with a progress bar
  - During initial operation, EULA (End User License Agreement) must be confirmed
    - Hardware belongs to the user
    - Operating software is licensed to the user
- Switch-off
  - Long press on on/off button
    - Prevents accidentally turning off the unit
    - Confirmation screen requires entry
  - Shut down screen appears with a progress bar
    - File structure is evaluated and if necessary repaired



# Start screen

The screenshot shows the start screen of the NetXpert XG application. At the top, there is a status bar with a Wi-Fi icon, the time 14:10:34, and a battery icon showing 94% charge. The main area features a large digital clock displaying '14:10:34' and the date 'March 15, 2019'. Below the clock are several icons: 'Cable Test' (with a checkmark), 'Network Tests' (with a network diagram), 'File Manager' (with a folder icon), 'Tools' (with a wrench icon), and 'Settings' (with a gear icon). The 'NetXpert XG' logo is prominently displayed in the center. Yellow callout boxes with arrows point to these elements, providing detailed information about each.

Battery charge level /charging indicator

Date and time

- Make sure that values are correct! It will be used in test reports.

Device settings (section 7)

- Device settings
- Test parameter specifications

Tools (section 6)

- Troubleshooting and quick testing

File Manager (section 5)  
Data management and reports

Cable test (section 3)

- Test setup
- Passive cable qualification

Network tests (section 4)

- Test setup on different media

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# Cable Test Function

## Determining transmission capabilities of passive cabling

- Supported media
  - Copper (connected to active remote)
  - Fiber optic
    - In progress
    - Second main unit is required
- Test parameters
  - Wiremap
  - Signal to noise ratio (SNR)
  - Signal propagation delay (Delay Skew)
  - Bit Error Rate Test (BERT)
- Available Ethernet speeds
  - 100 Megabit/1 Gigabit Ethernet
    - All models
  - 100 Megabit and 1/2,5/5 Gigabit Ethernet
    - Model „NX\_XG\_10G / 226552“ and „NX\_XG\_25\_5G / 226553“
  - 100 Megabit and 1/2,5/5/10 Gigabit Ethernet
    - Model „NX\_XG\_10G / 226552“
  - Upgrading all the models up to 10 Gigabit Ethernet is possible via license key

The screenshot shows the 'Cable Test' application interface. At the top, it displays 'Cable Test' and the time '14:34:56' with an 87% battery icon. The main content is divided into a table of cables and a detailed view for 'Cable001'.

Name	Length	Result
Cable001	28.5	10Gb
Cable002	12.0	Fail
Cable003	0.7	ID 19
Cable004	---	----
Cable005	---	----
Cable006	---	----

**Cable001**  
28.5 m

Wiremap	Length	Status	Skew	SNR Margin
1-1	30.6 m	Ok	2.5 ns	4.4 dB
2-2				
3-3	33.7 m	Ok	0.0 ns	2.8 dB
6-6				
4-4	28.5 m	Ok	3.5 ns	2.9 dB
5-5				
7-7	32.8 m	Ok	1.5 ns	3.4 dB
8-8				
S-S				

CAT7A STP- LBT\_Test 42.7pF/m  
BERT:0 errors  
AR ID: 1

Retest Test

**10Gb**

# Testing passive copper cabling

## Remotes and cable tracking

- Available remotes
  - Test parameters are determined by the type of remote used
  - Ethernet Speed Certification Active Remote
    - Starting a test is possible on the remote unit (test and link indicator)
    - Status indicator for battery charge and last test result (pass/fail)
  - Wiremap test and port identification via optional wiremap remote units (#1 to 8)
  - Port identifying via optional mapper remote units (#1 to 24)
- Cable tracking/ acoustic port allocation
  - Intern tone generator
  - Optional analog cable tracker/port locator (e.g. Softing CP15, shown here)



Wiremap Remotes (226528)



Mapper Remotes (226581)



Cable tracker/port locator (226007)



# Testing passive copper cabling

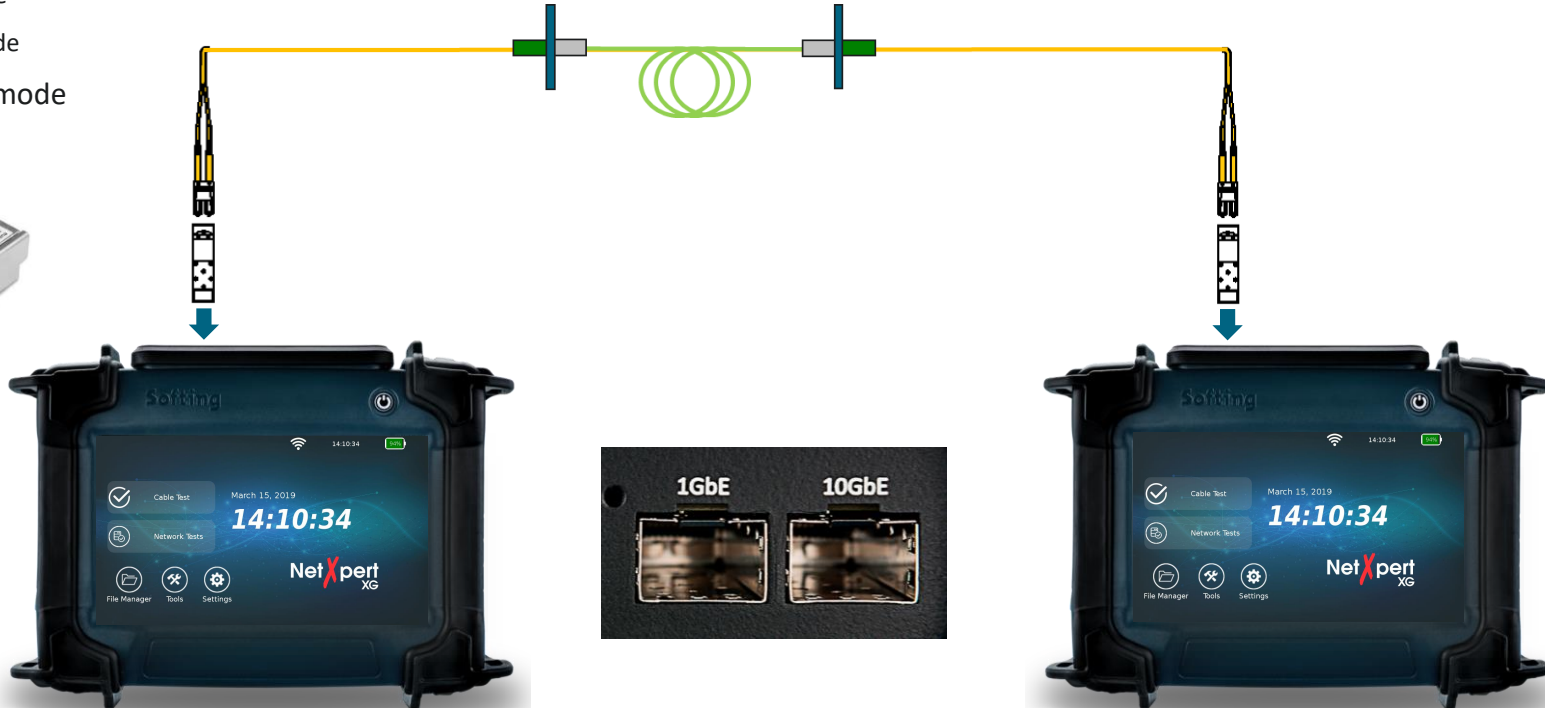
## Test setup for qualification

- Main unit and active remote required
- „Set reference“ of both test cables of the main unit and remote unit before starting a test



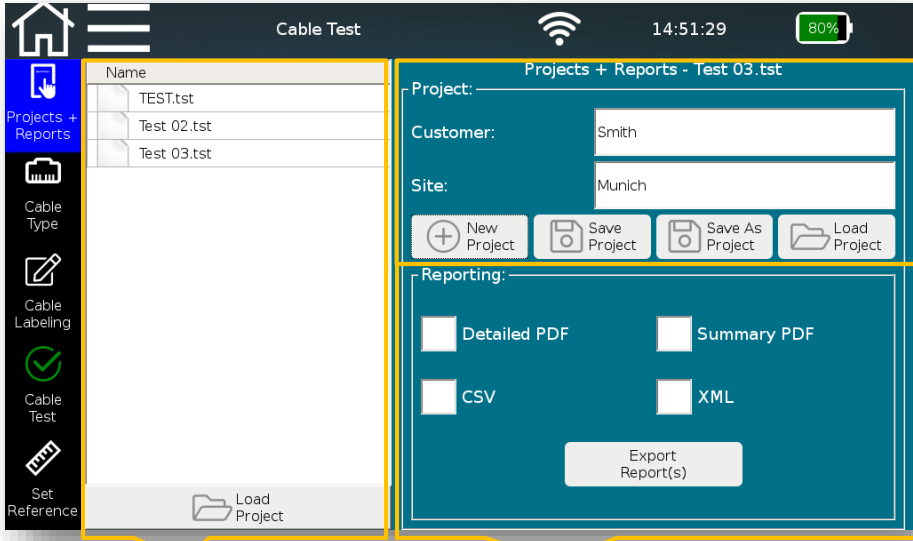
# Testing passive fiber cabling (in progress)

- Two main units are required
  - With corresponding SFP 1G or 10G modules
    - Multimode
    - Single mode
  - Master/Slave mode



# Process of a cable testing project

## Create a project- Initial screen



- Open project chosen from the list at the left side
- Details are shown for the chosen project
  - Customer data
  - Site data
- Project management
  - Creating new projects
  - Saving changes
  - Loading projects via File Manager menu

- Load existing projects in the device

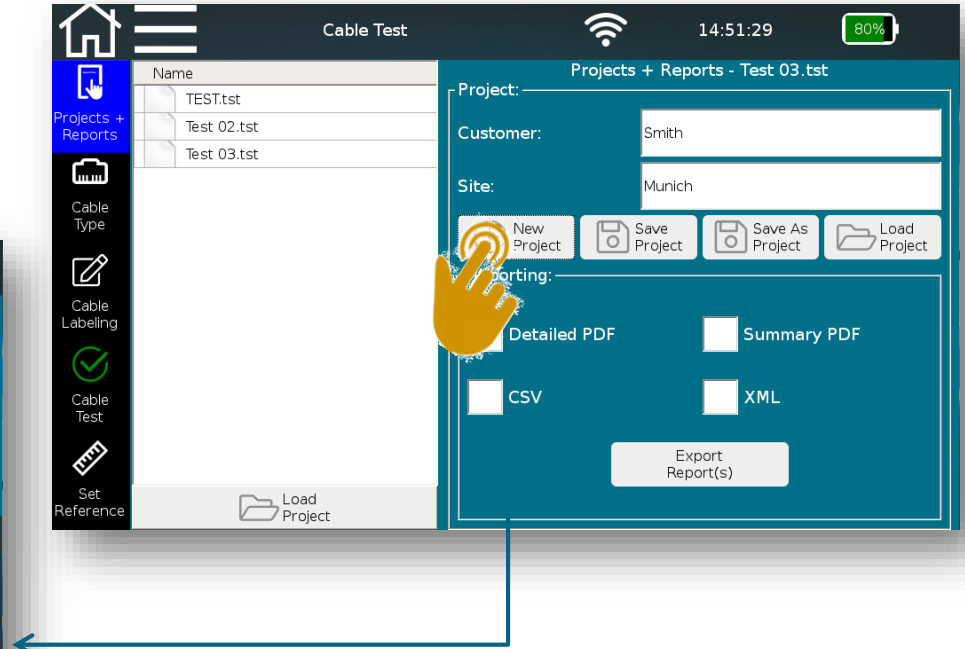
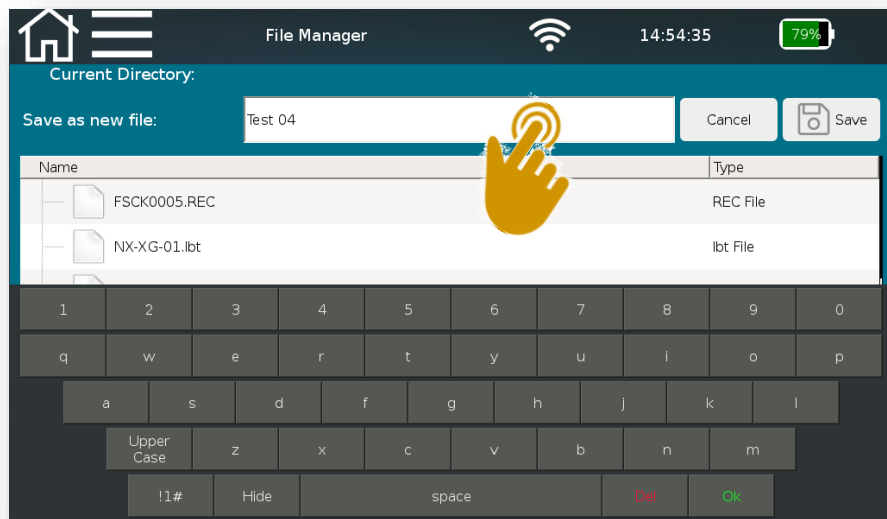
- Internal documentation generation
  - Detailed PDF (summary and details)
  - Summary PDF
  - CSV – open format, e.g. preparation on Excel
  - XML – exchange format with eXport



# Process of a cable testing project

## Create a project

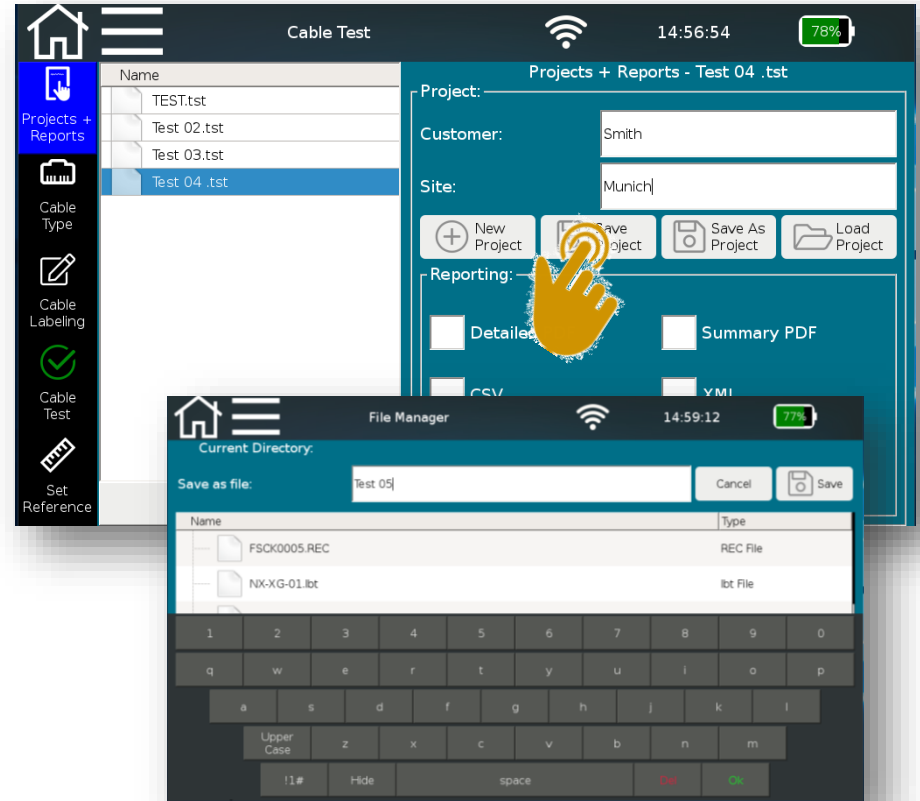
- Creating a „new project“
  - Opens „File Manager “ menu
  - Enter project name



# Process of a cable testing project

## Create a project

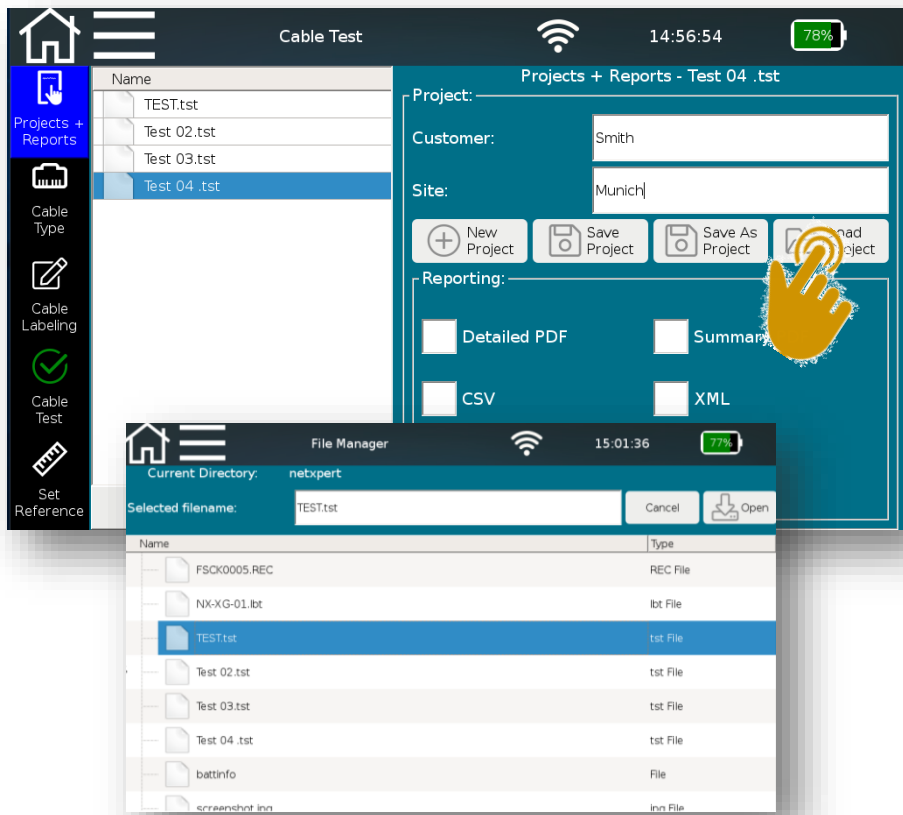
- „Creating a „new project““
  - Opens „File Manager “ menu
  - Enter project name
- „Save Project“ saves changed information to the open project
  - Customer
  - Site
- „Save As Project“ creates a new project based on changed information



# Process of a cable testing project

## Create a project

- „Creating a „new project““
  - Opens „File Manager “ menu
  - Enter project name
- „Save Project“ saves changed information to the open project
  - Customer
  - Site
- „Save As Project“ creates a new project based on changed information
- „Load Project“ via File Manager menu



# Process of a cable testing project

## Defining test standards- Initial screen

The screenshot shows the 'Cable Test' application interface. On the left is a navigation menu with icons for 'Projects + Reports', 'Cable Type', 'Cable Labeling', 'Cable Test', and 'Set Reference'. The main area is divided into a table of test standards and a configuration panel for the selected 'CAT5 UTP' standard.

Name	Shield	Speed
CAT5 UTP	None	1 Gb
CAT5 STP	Yes	1 Gb
CAT5E UTP	None	1 Gb
CAT5E STP	Yes	1 Gb
CAT6 UTP	None	1 Gb
CAT6 STP	Yes	1 Gb
CAT6A UTP	None	1 Gb
CAT7 STP	Yes	1 Gb
CAT7A STP	Yes	1 Gb

The configuration panel for 'Cable Type - SOFTING EQUIVALANT.tst' includes the following fields:

- Name: CAT5 UTP
- pF/m: 49.2
- NVP: 68 (with a 'Learn Length Constants' button)
- Speed: Radio buttons for 10Gb, 5Gb, 2.5Gb, 1Gb (selected), and 100Mb.
- Cable Shield: Radio buttons for No Shield (selected), Shielded, and Ignore Shield.
- Cable Wiring: Radio buttons for Two-Pair, Straight, X-over, and Ignore X-over (selected).

At the bottom of the configuration panel are buttons for 'Apply Type Changes' and 'Set Current Type'. Below the table are buttons for '+', '-', 'Add Defaults', and 'Import Types'.

### Templates of test standards

- Basis for own test standards
- List is expendable
- Pattern or external template can be imported

### Defining test standards via „Cable Type“ which is assigned to the currently open project

- Name of the test standard
- Constants for length determination
  - pf/m – cable capacity
  - NVP value – Nominal Velocity of Propagation
  - Values can be found on data sheets of the cables or determined simply by “Learn Length Constants” (Reference length>30m)

### Details on test standards

- „Speed“ – maximum Ethernet speed to be tested
- Cable structure
  - „Cable Shield“ – Consideration of the shielding of the installed cable
  - „Cable Wiring“ – Number of wire pairs and orientation

# Process of a cable testing project

## Defining test standards

- Selecting a template
  - Select a template similar to your application
  - Using the available templates helps to avoid mistakes
    - Write and deletion protection, if test results available (if some tests are already done)

The screenshot displays the 'Cable Test' application interface. On the left, a sidebar contains navigation icons for 'Projects + Reports', 'Cable Type', 'Cable Labeling', 'Cable Test', and 'Set Reference'. The main area is divided into three sections:

- Table:** A table with columns 'Name', 'Shield', and 'Speed'. The first row, 'CAT5 UTP', is highlighted in blue and has a hand icon pointing to it. Other rows include 'CAT5 STP', 'CAT5E UTP', 'CAT5E STP', 'CAT6 UTP', 'CAT6 STP', 'CAT6A UTP', 'CAT7 STP', and 'CAT7A STP'.
- Configuration Panel:** Titled 'Cable Type - SOFTING EQUIVALANT.tst', it contains fields for 'Name' (CAT5 UTP), 'pF/m' (49.2), and 'NVP' (68). Below these are three sections: 'Speed' (radio buttons for 10Gb, 5Gb, 2.5Gb, 1Gb, 100Mb), 'Cable Shield' (radio buttons for No Shield, Shielded, Ignore Shield), and 'Cable Wiring' (radio buttons for Two-Pair, Straight, X-over, Ignore X-over). 'Apply Type Changes' and 'Set Current Type' buttons are at the bottom.
- Bottom Bar:** Contains icons for 'Add Defaults' and 'Import Types'.

# Process of a cable testing project

## Defining test standards

- Selecting a template
  - Select a template similar to your application
  - Using the available templates helps to avoid mistakes
    - Write and deletion protection, if test results available (if some tests are already done)
    - If a cable test type (template) is being used in a label definition or in a cable test, the cable test type parameters on the right will be grayed out and are not editable. This will keep you from accidentally changing a cable parameter for cable templates in use.
    - If you delete the cable labels and cable tests, the template will become editable once again.

The screenshot shows the 'Cable Test' application interface. At the top, it displays 'Cable Test' and the time '13:24:31' with a 44% battery level. The main content is divided into a table of templates and a configuration panel on the right.

Name	Shield	Speed
CAT5 UTP	None	1 Gb
CAT5 STP	Yes	1 Gb
CAT5E UTP	None	1 Gb
CAT5E STP	Yes	1 Gb
CAT6 UTP	None	1 Gb
CAT6 STP	Yes	1 Gb
CAT6A UTP	None	1 Gb
CAT7 STP	Yes	1 Gb
CAT7A STP	Yes	1 Gb

The configuration panel on the right is titled 'Cable Type - SOFTING EQUIVALANT.tst'. It includes fields for 'Name' (CAT5 UTP), 'pF/m' (49.2), and 'NVP' (68). Below these are three sections: 'Speed' with radio buttons for 10Gb, 5Gb, 2.5Gb, 1Gb (selected), and 100Mb; 'Cable Shield' with radio buttons for No Shield (selected), Shielded, and Ignore Shield; and 'Cable Wiring' with radio buttons for Two-Pair, Straight, X-over, and Ignore X-over (selected). At the bottom of the configuration panel are buttons for 'Apply Type Changes' and 'Set Current Type'. The left sidebar contains navigation icons for 'Projects + Reports', 'Cable Type', 'Cable Labeling', 'Cable Test', and 'Set Reference'.

# Process of a cable testing project

## Defining test standards

- Selecting a template
  - Select a template similar to your application
  - Using the available templates helps to avoid mistakes
    - Write and deletion protection, if test results available (if some tests are already done)
    - If a cable test type (template) is being used in a label definition or in a cable test, the cable test type parameters on the right will be grayed out and are not editable. This will keep you from accidentally changing a cable parameter for cable templates in use.
    - If you delete the cable labels and cable tests, the template will become editable once again.
    - The current cable test (Set Current Type) will be highlighted in Green.

The screenshot shows the 'Cable Test' application interface. On the left is a navigation menu with icons for Home, Reports, Cable Type, Cable Labeling, Cable Test, and Set Reference. The main area displays a table of cable test templates:

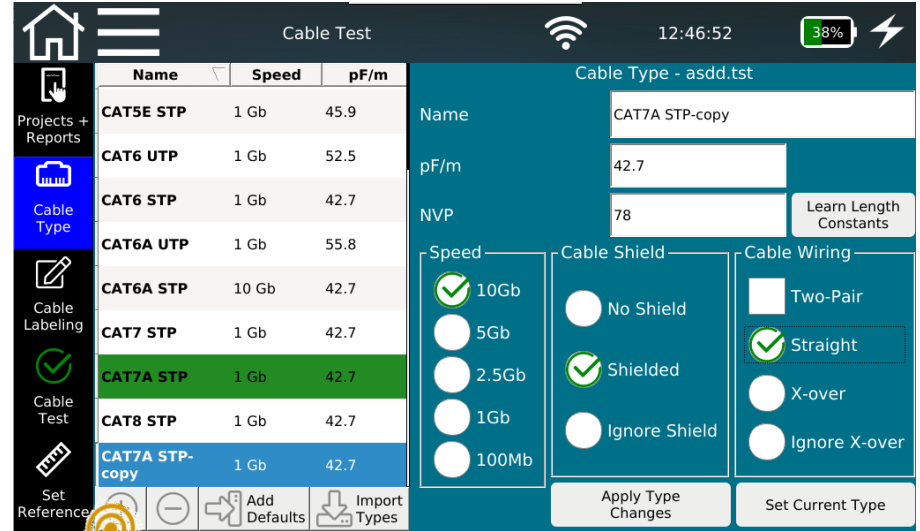
Name	Shield	Speed
CAT5 UTP	None	1 Gb
CAT5 STP	Yes	1 Gb
CAT5E UTP	None	1 Gb
CAT5E STP	Yes	1 Gb
CAT6 UTP	None	1 Gb
CAT6 STP	Yes	1 Gb
<b>CAT6A UTP</b>	None	1 Gb
CAT7 STP	Yes	1 Gb
CAT7A STP	Yes	1 Gb

The 'CAT6A UTP' template is selected and highlighted in green. To the right, the configuration panel for 'Cable Type - SOFTING EQUIVALANT.tst' is shown. It includes fields for Name (CAT6A UTP), pF/m (55.8), and NVP (66). Below these are three sections: 'Speed' with radio buttons for 10Gb, 5Gb, 2.5Gb, 1Gb (selected), and 100Mb; 'Cable Shield' with radio buttons for No Shield (selected), Shielded, and Ignore Shield; and 'Cable Wiring' with radio buttons for Two-Pair, Straight, X-over, and Ignore X-over (selected). At the bottom of the configuration panel are buttons for 'Apply Type Changes' and 'Set Current Type'. The top of the screen shows a status bar with a home icon, a hamburger menu, the title 'Cable Test', a Wi-Fi icon, the time '13:27:13', a battery level of '45%', and a power icon.

# Process of a cable testing project

## Defining test standards

- Copy template
  - Copy will be added to the end of the list



The screenshot shows the 'Cable Test' application interface. On the left, a sidebar menu includes 'Projects + Reports', 'Cable Type', 'Cable Labeling', 'Cable Test', and 'Set Reference'. The main area displays a table of cable types with columns for Name, Speed, and pF/m. The 'CAT7A STP-copy' entry is selected and highlighted in blue. Below the table, there are buttons for 'Add Defaults' and 'Import Types'. On the right, a configuration panel for 'Cable Type - asdd.tst' shows fields for Name (CAT7A STP-copy), pF/m (42.7), and NVP (78). It also features three sections: 'Speed' with radio buttons for 10Gb (checked), 5Gb, 2.5Gb, 1Gb, and 100Mb; 'Cable Shield' with radio buttons for No Shield, Shielded (checked), and Ignore Shield; and 'Cable Wiring' with radio buttons for Two-Pair, Straight (checked), X-over, and Ignore X-over. At the bottom right, there are buttons for 'Apply Type Changes' and 'Set Current Type'. A yellow hand icon is pointing at the 'Set Reference' button in the sidebar.

Name	Speed	pF/m
CAT5E STP	1 Gb	45.9
CAT6 UTP	1 Gb	52.5
CAT6 STP	1 Gb	42.7
CAT6A UTP	1 Gb	55.8
CAT6A STP	10 Gb	42.7
CAT7 STP	1 Gb	42.7
CAT7A STP	1 Gb	42.7
CAT8 STP	1 Gb	42.7
CAT7A STP-copy	1 Gb	42.7



# Process of a cable testing project

## Defining test standards

- Copy template
  - Copy will be added to the end of the list
- Select copy
  - Customize name
  - Edit parameters
    - Cable constants
    - Ethernet speed
    - Shielding features
    - Cable Wiring

Name	Speed	pF/m
CAT5E STP	1 Gb	45.9
CAT6 UTP	1 Gb	52.5
CAT6 STP	1 Gb	42.7
CAT6A UTP	1 Gb	55.8
CAT6A STP	10 Gb	42.7
CAT7 STP	1 Gb	42.7
CAT7A STP	1 Gb	42.7
CAT8 STP	1 Gb	42.7
CAT7A STP-copy	1 Gb	42.7

**Cable Type - asdd.tst**

Name: CAT7A STP-copy

pF/m: 42.7

NVP: 78 [Learn Length Constants](#)

Speed:  10Gb,  5Gb,  2.5Gb,  1Gb,  100Mb

Cable Shield:  No Shield,  Shielded,  Ignore Shield

Cable Wiring:  Two-Pair,  Straight,  X-over,  Ignore X-over

[Apply Type Changes](#) [Set Current Type](#)

**Cable Type - Test 04.tst**

Name: CAT7A UTP-copy

pF/m: 55.8

NVP: 78 [Learn Length Constants](#)

Speed: 55.8

Cable Shield:  No Shield,  Shielded,  Ignore Shield

Cable Wiring:  Two-Pair,  Straight,  X-over,  Ignore X-over

# Process of a cable testing project

## Defining test standards

- Copy template
  - Copy will be added to the end of the list
- Select copy
  - Customize name
  - Edit parameters
    - Cable constants
    - Ethernet speed
    - Shielding features
    - Cable Wiring
  - Confirm with "Apply Type Changes" and select "Set Current Type" for this project
  - Stored test standards or results can no longer be edited

The screenshot shows the 'Cable Test' application interface. On the left is a navigation menu with icons for Home, Projects + Reports, Cable Type, Cable Labeling, Cable Test, and Set Reference. The main area is divided into a table of cable types and a configuration panel for the selected 'CAT7A STP-copy' type.

Name	Speed	pF/m
CAT5E STP	1 Gb	45.9
CAT6 UTP	1 Gb	52.5
CAT6 STP	1 Gb	42.7
CAT6A UTP	1 Gb	55.8
CAT6A STP	10 Gb	42.7
CAT7 STP	1 Gb	42.7
CAT7A STP	1 Gb	42.7
CAT8 STP	1 Gb	42.7
CAT7A STP-copy	1 Gb	42.7

The configuration panel for 'Cable Type - asdd.tst' includes the following fields and options:

- Name: CAT7A STP-copy
- pF/m: 42.7
- NVP: 78 (with a 'Learn Length Constants' button)
- Speed: Radio buttons for 10Gb (checked), 5Gb, 2.5Gb, 1Gb, and 100Mb.
- Cable Shield: Radio buttons for No Shield, Shielded (checked), and Ignore Shield.
- Cable Wiring: Radio buttons for Two-Pair, Straight (checked), X-over, and Ignore X-over.
- Buttons: 'Apply Type Changes' and 'Set Current Type' (highlighted with a yellow box and a hand icon).

# Process of a cable testing project

## Setting up a test list- Create names for cabling

Cable Test

13:53:44 45%

Cable Labeling - Test.tst

Template:

Next Label:

Current Type: CAT6A UTP Change Cable Type Clear Label

Name		Rack	
Building		Panel	
Floor		Speed	10 Gb
Room		ID	1
Seperator -		Number of Cables to Add:	1

Cable count: 0 of 1000 Add Cables

- Based on "Current Type" selected previously from the Cable Type menu

# Process of a cable testing project

## Setting up a test list- Create names for cabling

The screenshot shows the 'Cable Test' application interface. The top bar displays 'Cable Test', signal strength, time (13:51:28), and battery level (46%). The main area is titled 'Cable Labeling - Test.tst' and contains a 'Template:' section with 'Next Label:' and 'Current Type: CAT6A UTP'. There are buttons for 'Change Cable Type' and 'Clear Label'. Below this is a table with the following data:

Name	Cable	Rack	1
Building	1	Panel	A
Floor	GF	Speed	10 Gb
Room	VT01	ID	1
Seperator	-	Number of Cables to Add:	1

At the bottom, there is a 'Cable count: 0 of 1000' and an 'Add Cables' button. The left sidebar contains navigation icons for 'Projects + Reports', 'Cable Type', 'Cable Labeling' (highlighted in blue), 'Cable Test', and 'Set Reference'.

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field

# Process of a cable testing project

## Setting up a test list- Create names for cabling

Cable Test

13:50:12 47%

Cable Labeling - Test.tst

Template: <Name>  
Next Label: Cable

Current Type: CAT6A UTP

Name	Cable	Rack	1
Building	1	Panel	A
Floor	GF	Speed	10 Gb
Room	VT01	ID	1
Seperator	-	Number of Cables to Add:	1

Cable count: 0 of 1000

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name

# Process of a cable testing project

## Setting up a test list- Create names for cablings

The screenshot shows the 'Cable Labeling - Test.tst' screen in the Cable Test application. The interface includes a sidebar with navigation options: Projects + Reports, Cable Type, Cable Labeling (selected), Cable Test, and Set Reference. The main area displays a table for defining cable parameters. The 'Seperator' field is highlighted with a yellow box and a hand icon.

Name	Length	Result
Cable Labeling - Test.tst		
Template: <Name>-<Building>-<Floor>-<ID>		
Next Label: Cable-1-GF-001		
Current Type: CAT6A UTP	Change Cable Type	Clear Label
Name: Cable	Rack: 1	
Building: 1	Panel: A	
Floor: GF	Speed: 10 Gb	
Room: VT01	ID: 1	
Seperator: -	Number of Cables to Add: 1	

able count: 0 of 1000

Add Cables

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name
- Separator can be used multiple times by tapping on it each time after selecting one parameter. "Template" and "Next Label" will be updated accordingly.

# Process of a cable testing project

## Setting up a test list- Create names for cablings

Cable Test

14:06:45 40%

Cable Labeling - Test.tst

Template: <Name>-<Building>-<Floor>-<ID>

Next Label: Cable-1-GF-001

Current Type: CAT6A UTP

Change Cable Type Clear Label

Name	Cable	Rack	1
Building	1	Panel	A
Floor	GF	Speed	10 Gb
Room	VT01	ID	1
Seperator	-	Number of Cables to Add:	1

Cable count: 0 of 1000 Add Cables

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name
- Separator can be used multiple times by tapping on it each time after selecting one parameter and "Next Label" will be updated accordingly.
- "ID" field (counter) can be positioned anywhere within the template

# Process of a cable testing project

## Setting up a test list- Create names for cabling

The screenshot shows the 'Cable Labeling - Test.tst' screen in the Cable Test application. The interface includes a sidebar with navigation options: Projects + Reports, Cable Type, Cable Labeling (highlighted), Cable Test, and Set Reference. The main area features a table for entering cable parameters and a 'Clear Label' button.

Name	Length	Result	
Cable Labeling - Test.tst			
Template:			
Next Label:			
Current Type: CAT6A UTP		Change Cable Type	
		Clear Label	
Name	Cable	Rack	1
Building	1	Panel	A
Floor	GF	Speed	10 Gb
Room	VT01	ID	1
Seperator	-	Number of Cables to Add:	1

Cable count: 0 of 1000 Add Cables

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name  
Separator can be used multiple times by tapping on it each time after selecting one parameter and "Next Label" will be updated accordingly.
- "ID" field (counter) can be positioned anywhere within the template
- "Clear Label" will clear the label template, but already entered names and values will not be affected.



# Process of a cable testing project

## Setting up a test list- Create names for cabling

The screenshot shows the 'Cable Test' application interface. On the left is a navigation menu with icons for 'Projects + Reports', 'Cable Type', 'Cable Labeling' (highlighted in blue), 'Cable Test', and 'Set Reference'. The main screen is titled 'Cable Test' and shows a table of cables with columns for 'Name', 'Length', and 'Result'. Below the table is a configuration screen for 'Cable Labeling - Test.tst'. The configuration includes a template, current type (CAT6A UTP), and buttons for 'Change Cable Type' and 'Clear Label'. A table of parameters is shown with green highlights on 'Cable', 'Building', and 'Floor'. The 'Number of Cables to Add' field is highlighted with a yellow box and has a hand icon pointing to it. The bottom of the screen shows 'Cable count: 10 of 1000' and an 'Add Cables' button.

Name	Length	Result
Cable-1-GF-002	---	----
Cable-1-GF-003	---	----
Cable-1-GF-004	---	----
Cable-1-GF-005	---	----
Cable-1-GF-006	---	----
Cable-1-GF-007	---	----
Cable-1-GF-008	---	----
Cable-1-GF-009	---	----
Cable-1-GF-010	---	----

**Cable Labeling - Test.tst**

Template: <Name>-<Building>-<Floor>-<ID>  
Next Label: Cable-1-GF-011

Current Type: CAT6A UTP    Change Cable Type    Clear Label

Name	Cable	Rack	1
Building	1	Panel	A
Floor	GF	Speed	10 Gb
Room	VT01	ID	11
Seperator	-	Number of Cables to Add:	10

Cable count: 10 of 1000    Add Cables

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name
- Separator can be used multiple times by tapping on it each time after selecting one parameter and "Next Label" will be updated accordingly.
- "ID" field (counter) can be positioned anywhere within the template
- "Clear Label" will clear the label template, but the names and values will not be cleared.
- Add cables by entering number of cables to be tested in the input field

# Process of a cable testing project

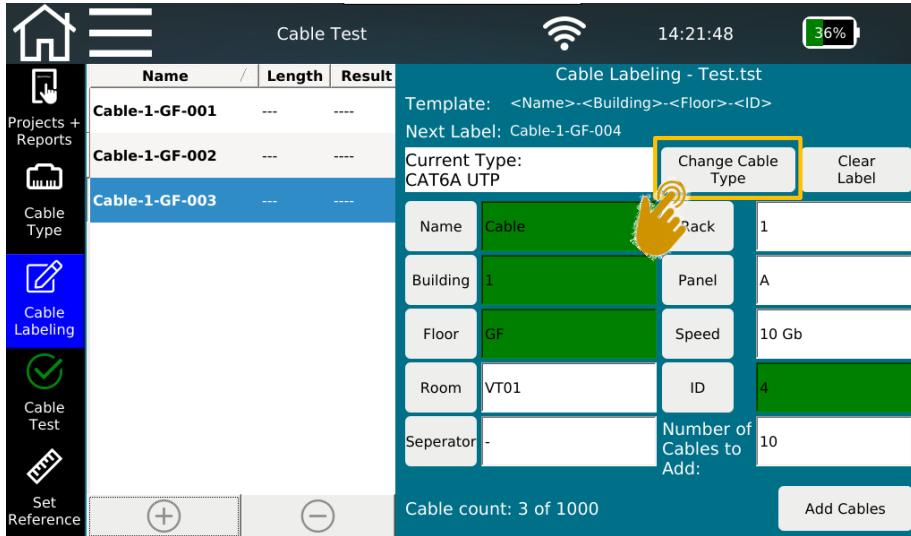
## Setting up a test list- Create names for cablings

The screenshot shows the 'Cable Test' application interface. On the left is a navigation menu with icons for 'Projects + Reports', 'Cable Type', 'Cable Labeling' (highlighted in blue), 'Cable Test', and 'Set Reference'. The main area is divided into two sections. The top section is a table with columns 'Name', 'Length', and 'Result'. It lists three cables: 'Cable-1-GF-001', 'Cable-1-GF-002', and 'Cable-1-GF-003'. The bottom section is titled 'Cable Labeling - Test.tst' and contains a template: '<Name>-<Building>-<Floor>-<ID>'. Below the template, it shows 'Next Label: Cable-1-GF-004' and 'Current Type: CAT6A UTP'. There are buttons for 'Change Cable Type' and 'Clear Label'. A grid of input fields is shown with labels: Name (Cable), Rack (1), Building (1), Panel (A), Floor (GF), Speed (10 Gb), Room (VT01), ID (4), and Separator (-). A 'Number of Cables to Add' field is set to 10. At the bottom, there is a 'Cable count: 3 of 1000' and an 'Add Cables' button. A yellow box highlights the '+' button in the bottom left corner, with a hand icon pointing to it.

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name
- Separator can be used multiple times by tapping on it each time after selecting one parameter and "Next Label" will be updated accordingly.
- "ID" field (counter) can be positioned anywhere within the template
- "Clear Label" will clear the label template, but the names and values will not be cleared.
- Add cables by entering number of cables to be tested in the input field
- Or simply tap on the "+" button to add cables one by one

# Process of a cable testing project

## Setting up a test list- Create names for cabling



- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name
- Separator can be used multiple times by tapping on it each time after selecting one parameter and "Next Label" will be updated accordingly.
- "ID" field (counter) can be positioned anywhere within the template
- "Clear Label" will clear the label template, but the names and values will not be cleared.
- Add cables by entering number of cables to be tested in the input field
- Or simply tap on the "+" button to add cables one by one
- Having any number of cable types is possible when creating new test lines
  - „Change cable type "jumps back to the previous menu and allows selection of another test standard
  - Cable type can no longer be changed for already created or measured test lines

# Process of a cable testing project

## Setting up a test list- Create names for cabling

Name	Length	Result
Cable-1-GF-001	---	----
Cable-1-GF-002	---	----
Cable-1-GF-003	---	----

Cable Labeling - Test.tst

Template: <Name>-<Building>-<Floor>-<ID>

Next Label: Cable-1-GF-004

Current Type: CAT6A UTP

Change Cable Type

Clear Label

Name	Cable	Rack	1
Building	1	Panel	A
Floor	GF	Speed	10 Gb
Room	VT01	ID	4
Separator	-	Number of Cables to Add:	10

Cable count: 3 of 1000

Add Cables

■ There will be an error message, if...

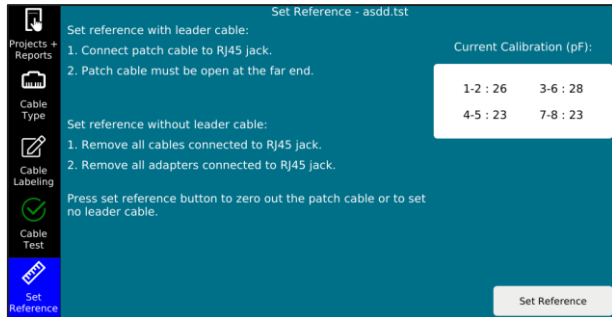
- „ID“ field is not included in the name
- No name field is selected and the template is empty

- Based on "Current Type" selected previously from the Cable Type menu
- Enter the names and values by pressing on the respective input field
- By tapping on the corresponding label button, the label parameter will turn green, which means the parameter will be used in the label name
- Separator can be used multiple times by tapping on it each time after selecting one parameter and "Next Label" will be updated accordingly.
- "ID" field (counter) can be positioned anywhere within the template
- "Clear Label" will clear the label template, but the names and values will not be cleared.
- Add cables by entering number of cables to be tested in the input field
- Or simply tap on the "+" button to add cables one by one
- Having any number of cable types is possible when creating new test lines
  - „Change cable type "jumps back to the previous menu and allows selection of another test standard
  - Cable type can no longer be changed for already created or measured test lines

# Process of a cable testing project



## Set reference

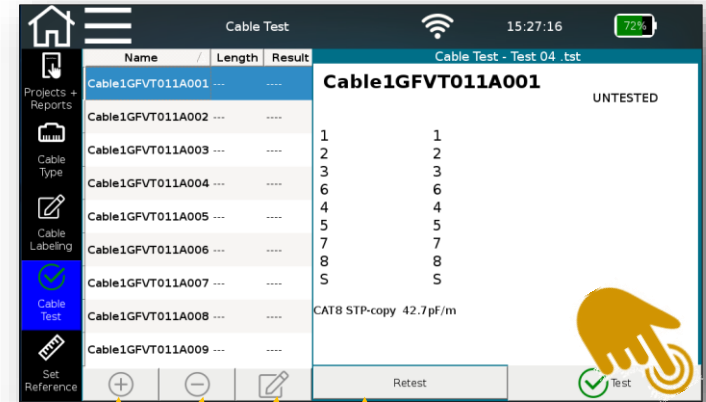
- Increase the accuracy of the length determination
- Set reference without using patch cables
  - Remove all cables and adapters and tap on Set Reference
- Set reference without using patch cables
  - Connect reference cables only to the main unit
    - Connect both test cords by a coupler
    - Connect one end to the local tester and leave the other end open
    - Determination of capacity determines cable capacitance
    - Cable capacitance will be subtracted from the overall result later
    - Repeat the process, if you change the test cord



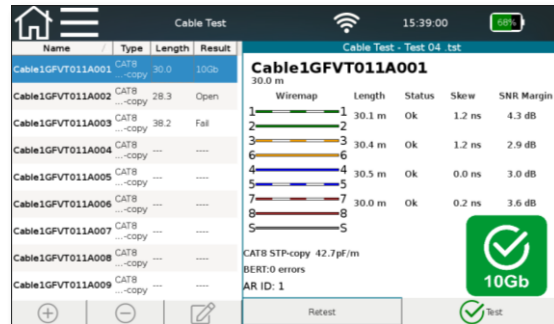
# Process of a cable testing project

## Performing a test

- Test any listed cable in a random order
- Initiate a test by pressing the  Test button
- Cancel a test run by pressing the  Test Stoppen button
- By pressing the test button, the next entry on the list will be tested
  - If the end of the list is reached, a new entry will be created automatically
- When a new test list is created, it is permanently connected with test standards
  - If the test standard is wrong...
    - Delete incorrect list entries
    - Correct the test standard in the previous menu
    - Recreate the test list



Repeat the test by pressing "retest"

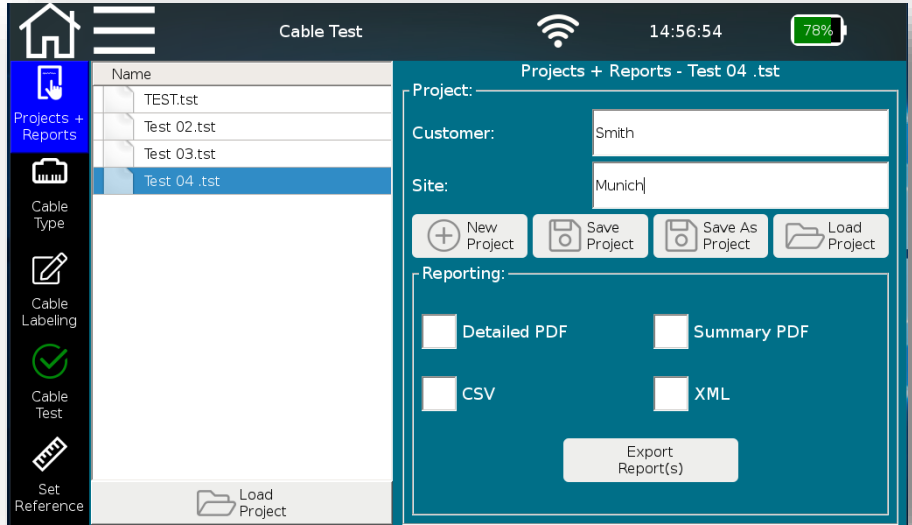
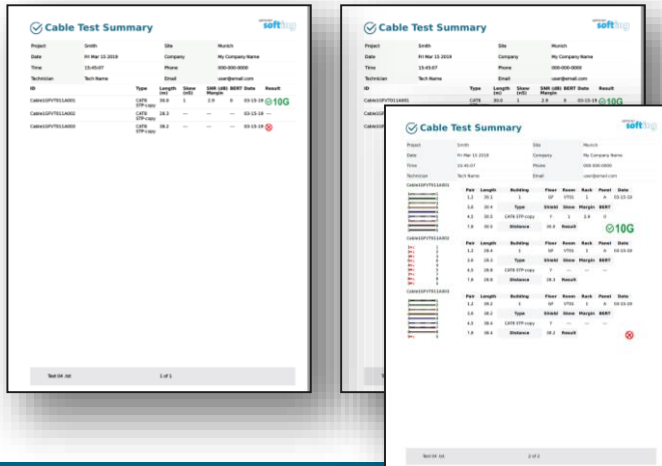


Editing the cable name later is possible

Adding and deleting cable names is also possible here

# Process of a cable testing project Reporting

- Internal documentation
  - PDF summary
  - PDF details – summary and details
  - CSV – open format, e.g. editing on Excel
  - XML – exchange format with eXport
- Reports can be generated after completion or during project processing



- Creation of documentation in the device automatically
  - Selection of one or more output formats
  - "Export Report (s)" to initiate internal report generation

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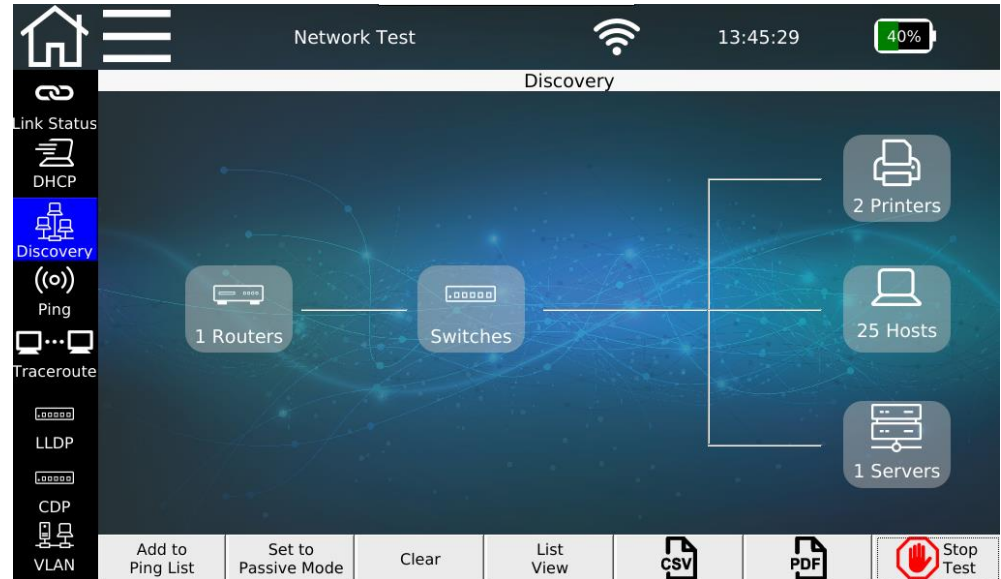
8



# „Network Tests“ function

## Simple diagnosis of an active network

- General
  - Supported media
    - Copper, fiber optic and Wi-Fi
  - IPv4/IPv6 support
- Available Ethernet speed
  - 100 Mb / 1 Gb Ethernet
    - All models
  - 100Mb and 1/2,5/5 Gb Ethernet
    - Model „NX\_XG\_10G / 226552“ and „NX\_XG\_25\_5G / 226553“
  - 100Mb and 1/2,5/5/10 Gb Ethernet
    - Model „NX\_XG\_10G / 226552“
- Upgrade of all models up to 10 Gb Ethernet is possible with license key



# „Network Tests“ function

## Test setup

- Via RJ45 copper connection
- Via SFP module on fiber optic
  - 1 Gbit/s
  - 10 Gbit/s
- Via Wi-Fi
  - Internal antenna
  - 2,4 GHz Band



# „Network Tests“ function

## Test parameters

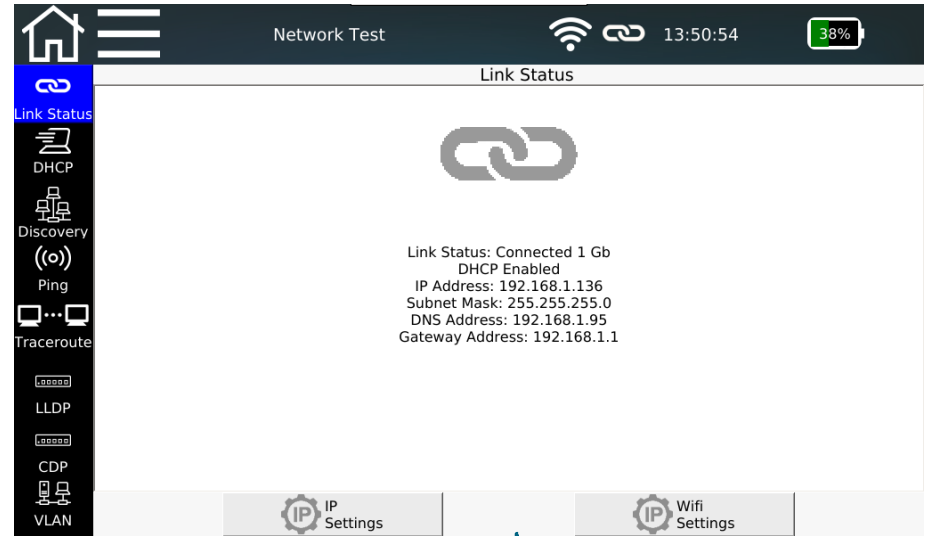


- Link-Status
  - Establishing connection with Switch via DHCP or fixed addressing
- DHCP-Test
  - Establishing a connection via dynamic addressing with output of the connection data
- Discovery
  - Search for stations in the network and categorization by device class
- Pinging specific addresses and address lists
  - Manual entry or transferring the address from network discovery function
  - Internal addresses or external URLs
- Traceroute
  - Step by step target tracking
- CDP und LLDP protocol detection
  - Exchange of connection information
- VLAN detection
  - Tagging after IEEE 802.1q

# „Network Tests“ function

## Test parameters

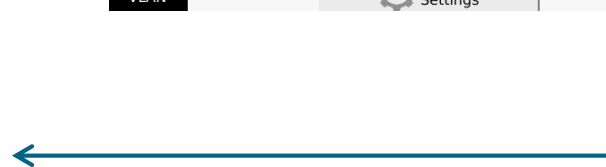
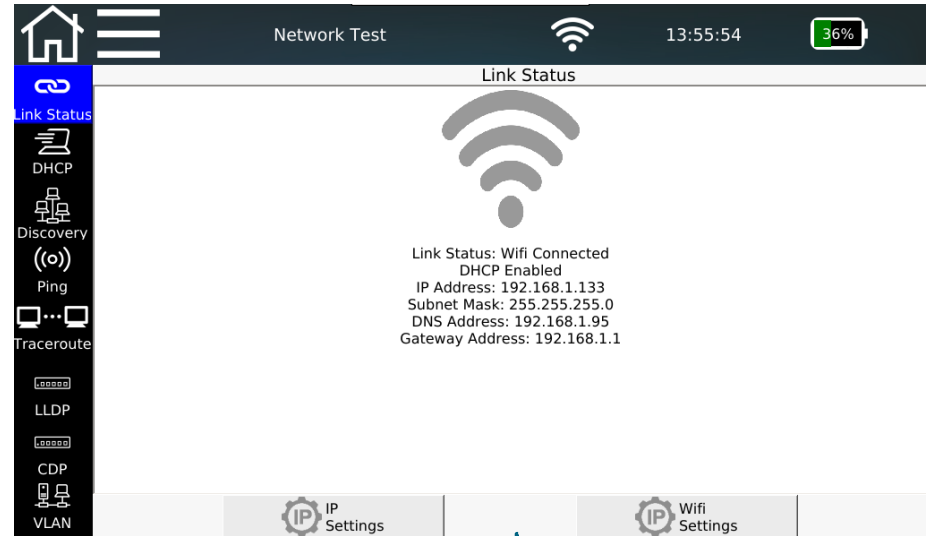
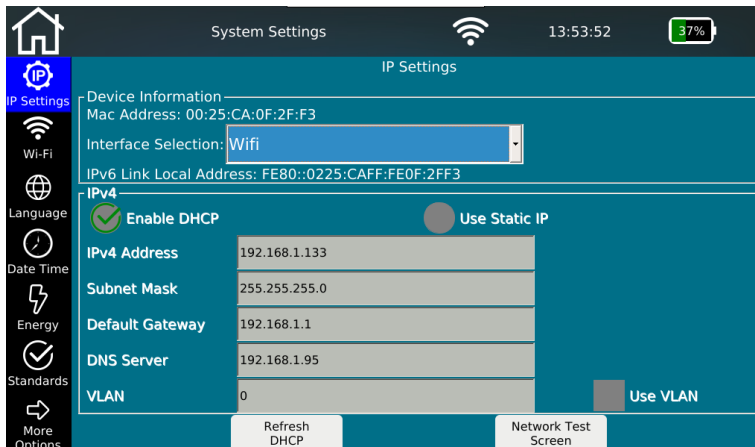
- Link Status
  - Establishing connection with Switch via DHCP or fixed addressing
  - Output of connection details



# „Network Tests“ function

## Test parameters

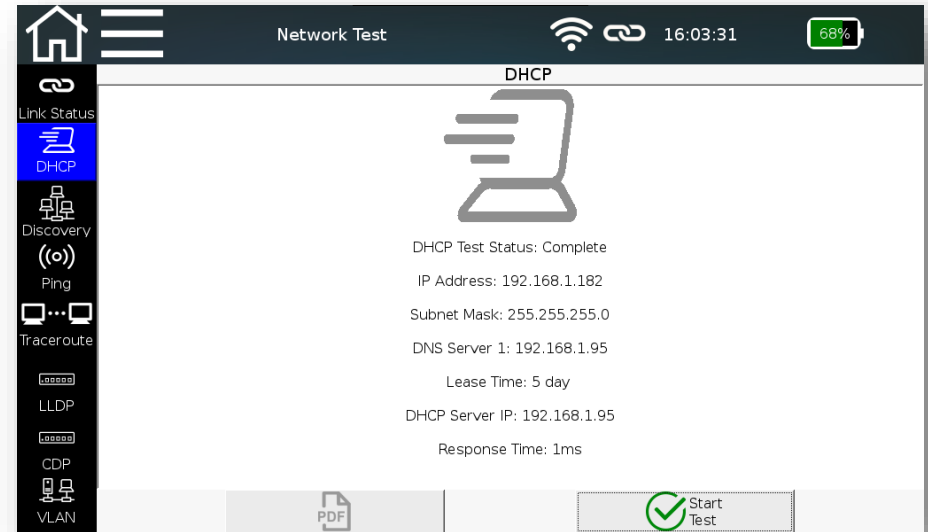
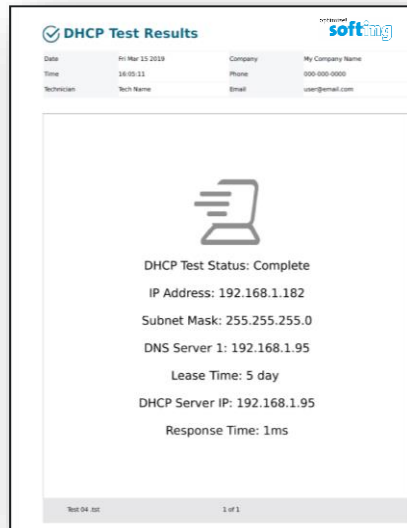
- Link Status (Wi-Fi Connection)
  - Establishing connection with Switch via DHCP or fixed addressing
  - Output of connection details



# „Network Tests“ function

## Test parameters

- DHCP-Test
  - Establishing a connection via dynamic addressing with output of the connection data
  - It can be documented as PDF report



# „Network Tests“ function

## Test parameters

- Network discovery
  - Search for stations in the network and categorization by device class (active or passive mode)
  - Graphical or tabular layout
  - DNS resolution
  - Selectable addresses for ping list
  - Duplicate IP addresses will be marked in red
  - Documentable as PDF report or CSV export

Mac Address	IPv4 Address	IPv6 Address	DNS Name	Netbios Name	Device Type
00:12:3B:44:C3:2A	192.168.1.107				Host
78:1B:34:00:00:00	192.168.1.108				Host
00:0C:29:00:00:00	192.168.1.109				Host
00:0F:00:75:02:A3	192.168.1.111		cam-3224-0a.pstiber.local		Host
00:09:0F:09:00:12	192.168.1.11		No Such Name		Router
70:72:CF:87:78:08	192.168.1.10		No Such Name		Host
00:1A:58:05:8B:26	192.168.1.145		No Such Name		Host
18:60:24:9C:83:21	192.168.1.160		wfca.dhcp.softing.com	WFCA	Host
84:39:8E:66:34:55	192.168.1.93		No Such Name	EXPORT-CLOUD-DE	Host
00:ED:4C:08:57:30	192.168.1.174		pc-fneuhoff.dhcp.softing.com	PC-FNEUHOFF	Host
8C:3B:AD:80:83:96	192.168.1.178		No Such Name		Host
C4:24:58:89:46:90	192.168.1.155		psiber001.pstiber.local	PSIBER001	Server
00:15:99:A4:C5:C8	192.168.1.157		No Such Name	SAMSUNG-ITN-PM	Host
00:06:71:41:00:25	192.168.1.141		No Such Name		Host
D4:8E:09:C6:8A:05	192.168.1.151		lager-pc.pstiber.local	LAGER-PC	Host
00:1E:4F:28:89:1A	192.168.1.192		No Such Name		Host
00:0F:0C:13:16:17	192.168.1.150		No Such Name		Host
80:48:7A:BB:8D:50	192.168.1.252		No Such Name		Host
54:9F:35:23:97:9C	192.168.1.99		srvact.pstiber.local	SRVACT	Host
04:8E:09:0C:89:09	192.168.1.156		gerhardh.pc.dhcp.softing.com	GERHARDT-PC	Host
00:26:73:58:A4:F2	192.168.1.82		rico2500.pstiber.local	RNP0026758A4F2	Host
30:10:64:0C:62:1A	192.168.1.125		No Such Name		Host
20:10:ED:0C:12:A8	192.168.0.1		No Such Name		Switch
A0:63:91:8B:33:94					24

Mac Address	IPv4 Address	IPv6 Address	DNS Name	Netbios Name	Device Type
1	F0:1F:AF:3A:7F:5A	192.168.1.167	huber-pc.dhcp.softing.com	HUBER-PC	Host
3	F8:00:00:75:02:A3	192.168.1.111	cam-3224-0a.pstiber.local		Host
4	00:09:0F:09:00:12	192.168.1.11	No Such Name		Router
5	70:72:CF:87:78:08	192.168.1.10	No Such Name		Host
6	00:1A:58:05:8B:26	192.168.1.145	No Such Name		Host
7	18:60:24:9C:83:21	192.168.1.160	wfca.dhcp.softing.com	WFCA	Host
8	84:39:8E:66:34:55	192.168.1.93	No Such Name	EXPORT-CLOUD-DE	Host
9	00:ED:4C:08:57:30	192.168.1.174	pc-fneuhoff.dhcp.softing.com	PC-FNEUHOFF	Host
10	8C:3B:AD:80:83:96	192.168.1.178	No Such Name		Host
11	C4:24:58:89:46:90	192.168.1.155	psiber001.pstiber.local	PSIBER001	Server
12	00:15:99:A4:C5:C8	192.168.1.157	No Such Name	SAMSUNG-ITN-PM	Host
13	00:06:71:41:00:25	192.168.1.141	No Such Name		Host
14	D4:8E:09:C6:8A:05	192.168.1.151	lager-pc.pstiber.local	LAGER-PC	Host
15	00:1E:4F:28:89:1A	192.168.1.192	No Such Name		Host
16	00:0F:0C:13:16:17	192.168.1.150	No Such Name		Host
17	80:48:7A:BB:8D:50	192.168.1.252	No Such Name		Host
18	54:9F:35:23:97:9C	192.168.1.99	srvact.pstiber.local	SRVACT	Host
19	04:8E:09:0C:89:09	192.168.1.156	gerhardh.pc.dhcp.softing.com	GERHARDT-PC	Host
20	00:26:73:58:A4:F2	192.168.1.82	rico2500.pstiber.local	RNP0026758A4F2	Host
21	30:10:64:0C:62:1A	192.168.1.125	No Such Name		Host
22	20:10:ED:0C:12:A8	192.168.0.1	No Such Name		Switch
23	A0:63:91:8B:33:94				24

Network Test Discovery

1 Routers, 1 Switches, 504 Hosts, 34 Servers

Buttons: Add to Ping List, Set to Passive Mode, Clear, List View, CSV, PDF, Stop Test

Mac Address	IPv4 Address	IPv6 Address	DNS Name	Netbios Name	Device Type
00:13:FA:04:18:84					Host
00:10:6C:00:29:...	172.17.0.19				Host
00:15:5D:00:34:...	172.17.0.203				Host
00:09:0F:F1:4C:1A	172.17.0.14				Host
00:0D:23:0F:B0:C8	172.17.0.70				Host
00:15:5D:00:4D:...	172.17.0.242				Host
9C:3D:CF:F2:1D:...	172.17.43.142				Host
00:15:5D:00:34:09	172.17.0.12				Host
60:12:8B:D4:C:...	172.17.0.124				Host
00:09:0F:E1:86:02	172.17.0.4				Host
00:1F:33:FB:2C:07	172.17.0.186				Host
00:22:64:CC:15:FB	172.17.0.21				Host
CC:40:D0:56:37:...	172.17.43.211				Host
00:15:5D:00:3C:...	172.17.4.90				Host

Buttons: Add to Ping List, Set to Passive Mode, Clear, Map View, CSV, PDF, Stop Test

# „Network Tests“ function

## Test parameters

- Pinging specific addresses and address lists
  - Manual entry or transferring the address from network discovery function
  - Internal addresses or external URLs
  - Documentable as PDF report or CSV export

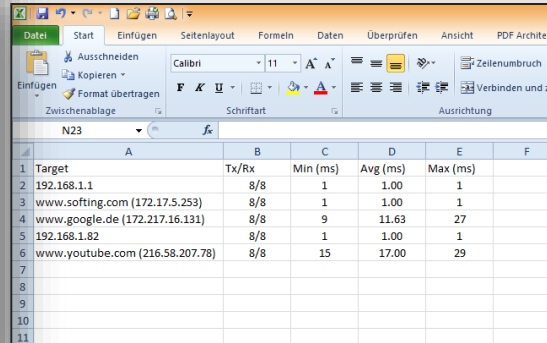


**Ping Test Summary**

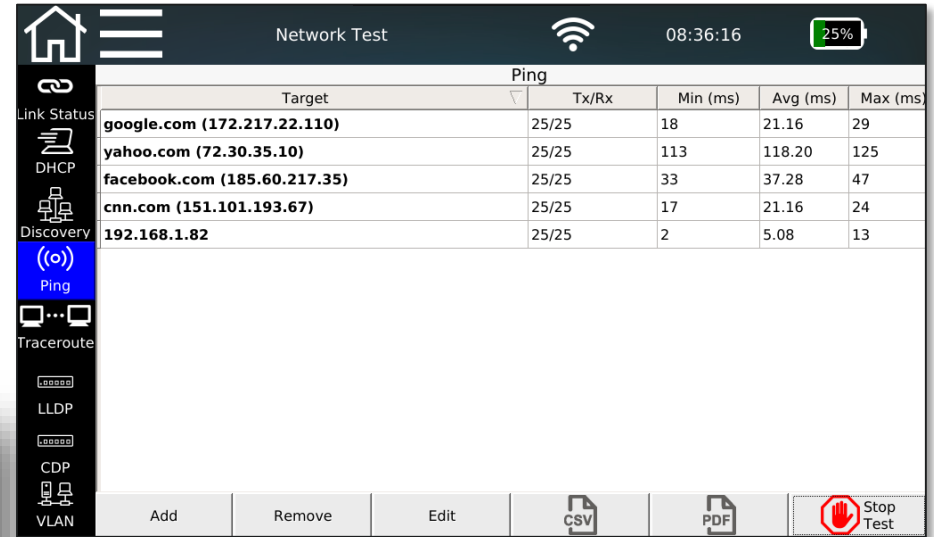
Date: Fri Mar 13 2015  
Time: 08:38:12  
Technician: Tech-Name

Company: My Company Name  
Phone: 000-000-0000  
Email: user@company.com

Target	Tx/Rx	Min (ms)	Max (ms)	Avg (ms)
www.softing.com (172.17.5.253)	8/8	1	2	1.33
www.yahoo.com (97.248.98.7)	8/8	36	54	39.30
192.168.1.1	8/8	1	1	1.00
192.168.1.157	8/8	1	2	1.25



Target	Tx/Rx	Min (ms)	Avg (ms)	Max (ms)
192.168.1.1	8/8	1	1.00	1
www.softing.com (172.17.5.253)	8/8	1	1.00	1
www.google.de (172.217.16.131)	8/8	9	11.63	27
192.168.1.82	8/8	1	1.00	1
www.youtube.com (216.58.207.78)	8/8	15	17.00	29



Network Test

08:36:16 25%

Target	Tx/Rx	Min (ms)	Avg (ms)	Max (ms)
google.com (172.217.22.110)	25/25	18	21.16	29
yahoo.com (72.30.35.10)	25/25	113	118.20	125
facebook.com (185.60.217.35)	25/25	33	37.28	47
cnn.com (151.101.193.67)	25/25	17	21.16	24
192.168.1.82	25/25	2	5.08	13

Link Status  
DHCP  
Discovery  
Ping  
Traceroute  
LLDP  
CDP  
VLAN

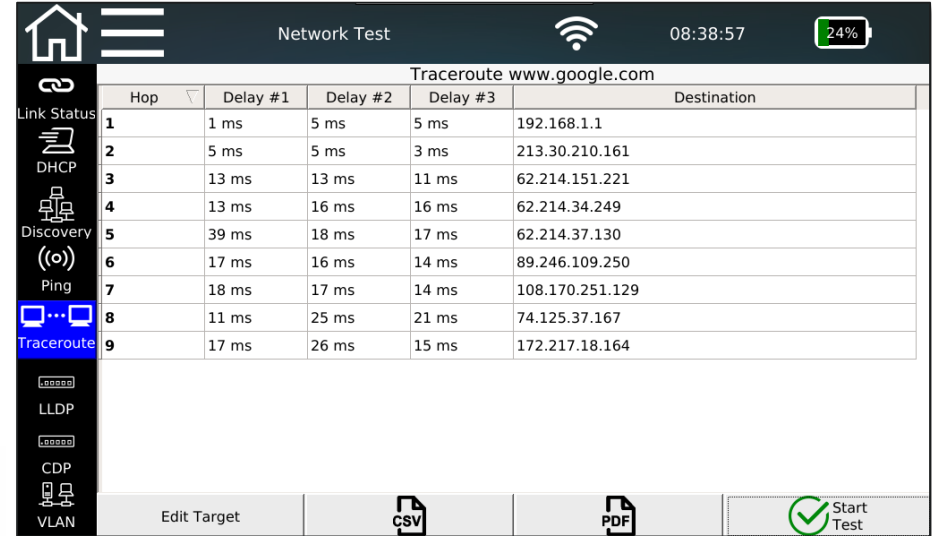
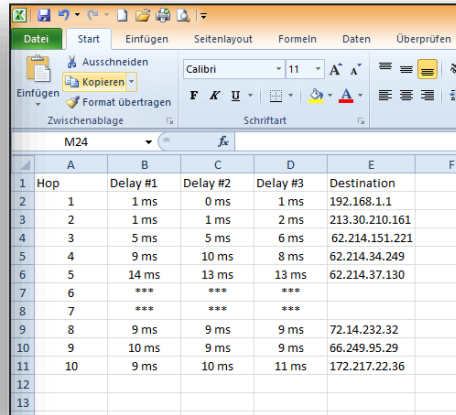
Add Remove Edit CSV PDF Stop Test



# „Network Tests“ function

## Test parameters

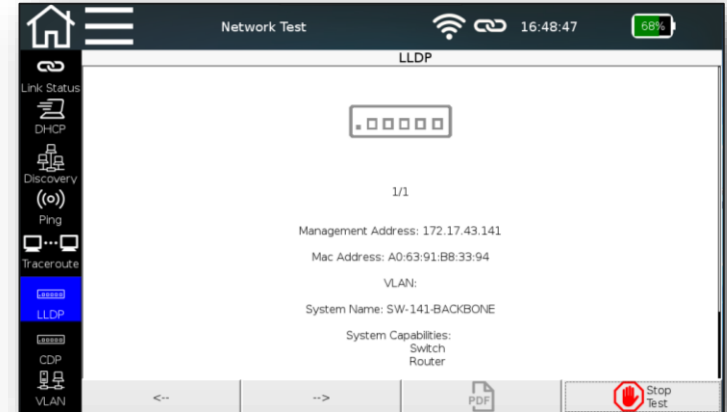
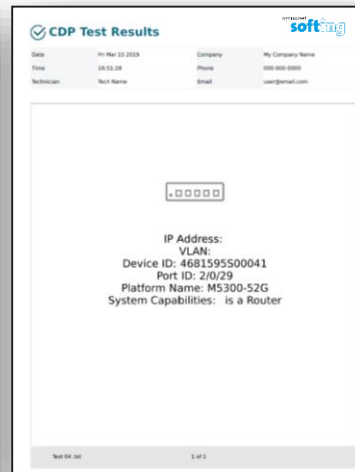
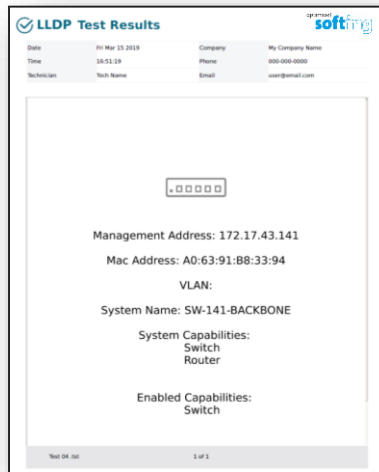
- Traceroute
  - Step by step target tracking
  - Localization of interruptions in the path
    - Internal problem
    - Provider problem
  - Documentable as PDF report or CSV export



# „Network Tests“ function

## Test parameters

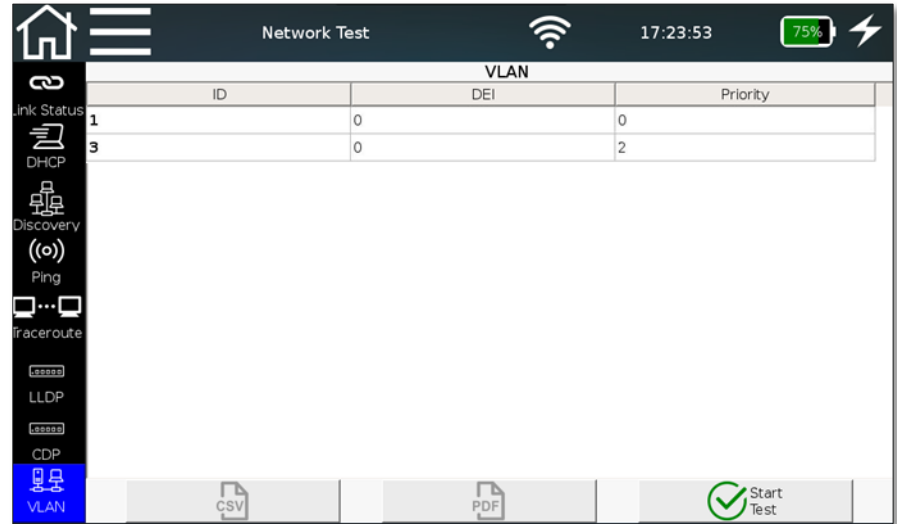
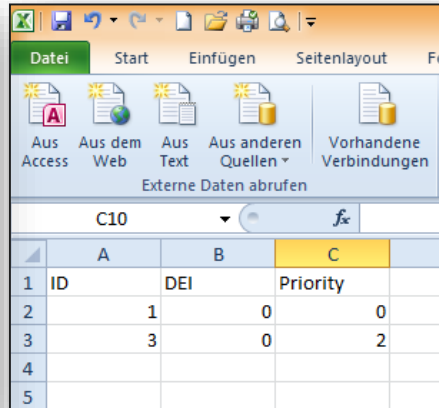
- Protocol detection
  - LLDP – Link Layer Discovery Protocol
  - CDP – Cisco Discovery Protocol
  - Exchange of connection information
  - In some applications important for mapping
  - Documentable as PDF



# „Network Tests“ function

## Test parameters

- VLAN detection
  - Tagging after IEEE 802.1q
  - Output of
    - ID – Number of the VLAN
    - DEI – Drop Eligible Indicator: Can be used to indicate that frames can be dropped in the presence of network congestions (formerly CFI).
    - Priority – User priority information
  - Documentable as PDF report or CSV export



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- Basic settings
  - Device settings
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- Licensing and updates
  - Speed upgrades
  - Firmware updates

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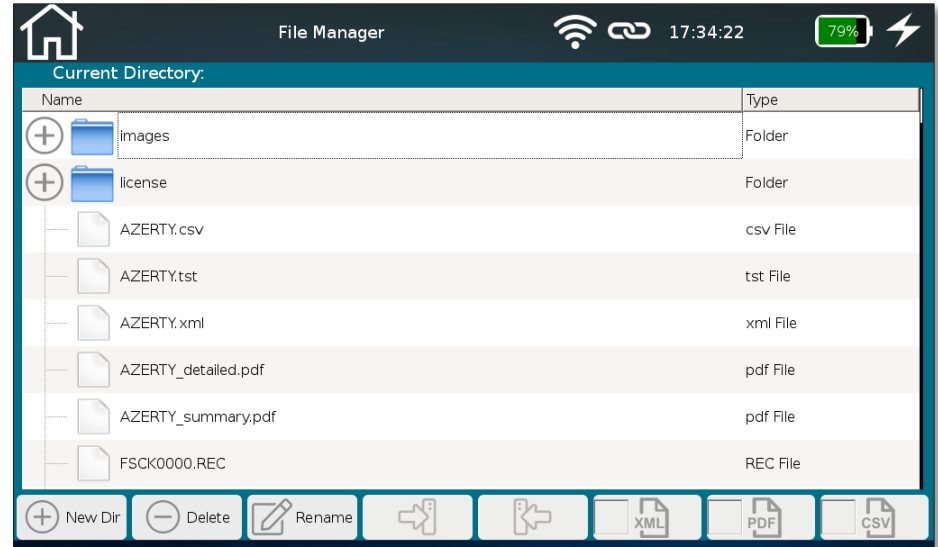
6

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8

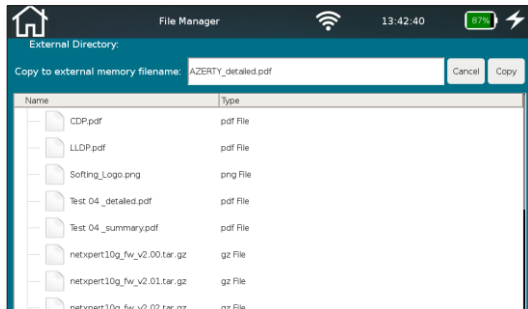
# „File Manager“ menu

- Management of different file types
  - Original test data ending with ".tst"
  - Test protocols for direct transfer via PDF format
    - Summary
    - Detailed
  - Test data as open „CSV“ format
    - Further processing e.g. on MS-Excel
    - Integration in network administration programs
  - Data exchange with eXport data management software via XML format (in progress)
  - Delete and rename existing files
- Switchable format filters make it easier to see an overview



# „File Manager“ menu

- Create your own project structures
- Import/download...
  - external test data from eXport data management software
  - Firmware updates
  - Logos to use on reports
- Data exchange between internal memory and external medium via USB stick (micro-USB adapter is included)
  - Possibility to change the file name when copying
  - Please connect the USB flash drive with the adapter cable before inserting it to the main unit!



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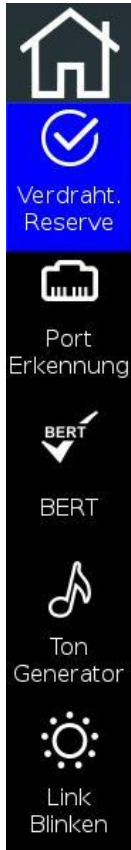
6

7

8

# „Tools“ menu

## General



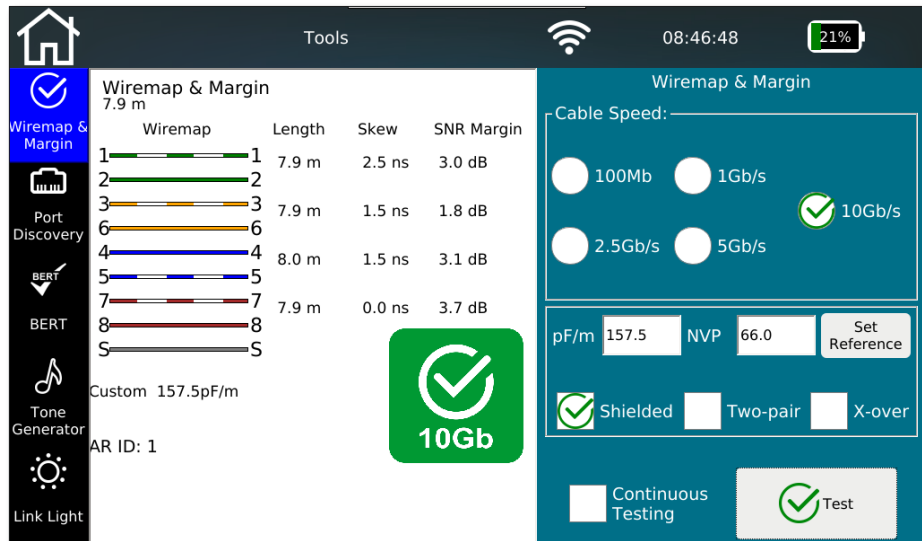
- Additional functions
  - Wiremap and margin
  - Port discovery
  - BERT
  - Tone Generator
  - Link Light



# „Tools“ menu

## Wiremap and margin

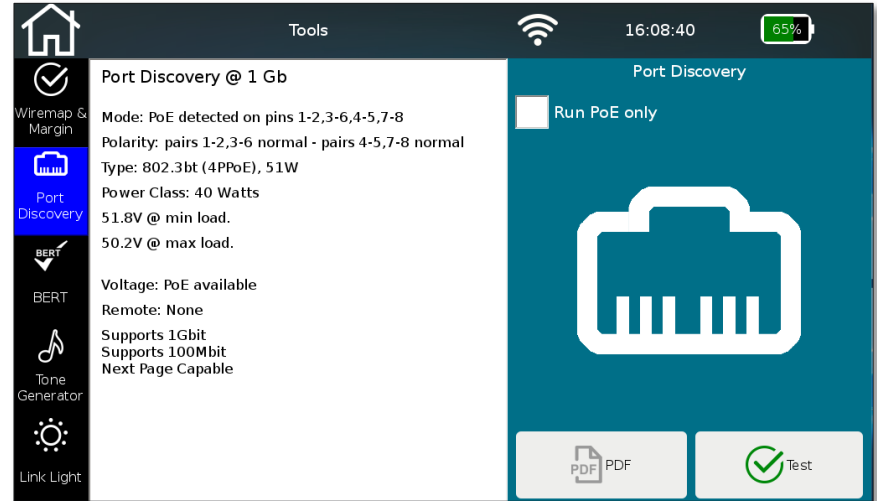
- Passive single test
  - Wiremap test
    - Length determination
    - Error output
  - Performance test
    - Selectable Ethernet speed
- Cable wiring and shield freely selectable
  - Shielded / No shield
  - Straight / X-Over
  - Four pair / two pair
  - In case of a wrong selection, and error message will be displayed
- Continuous test
  - Locate loose contacts
  - Interruptions due to temporary events



# „Tools“ menu

## Port discovery

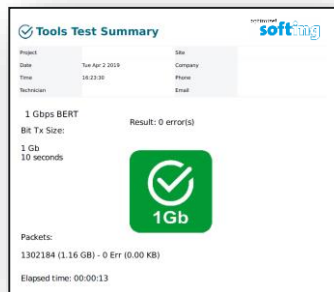
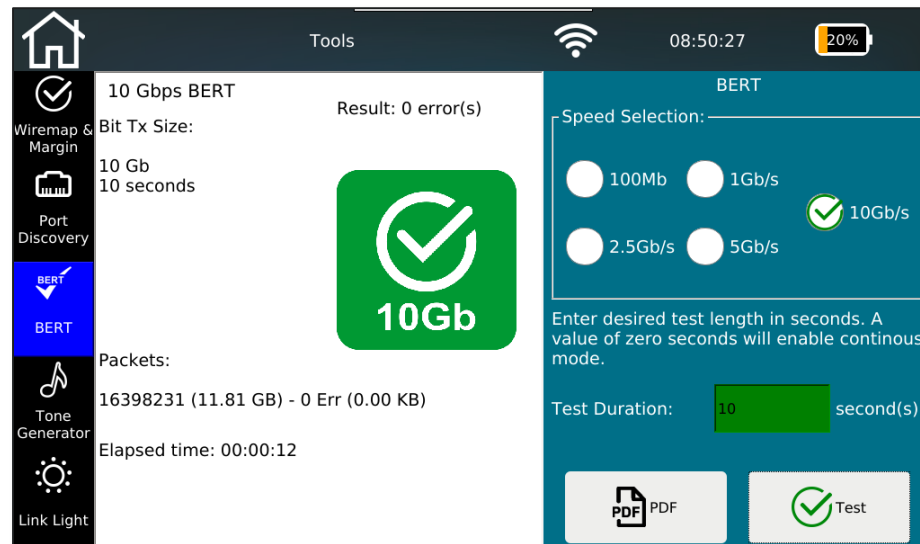
- Provides detailed information about the switch port
  - Ethernet speed of the current connection
  - Possible speeds of the port
- PoE evaluation (also as a single function)
  - Operating mode
  - Polarity
  - Type / power class
    - PoE / PoE+ / PoE ++
  - Voltage drop with or without load
  - Documentable as PDF



# „Tools“ menu

## Separate Bit Error Rate Test (BERT)

- Preset test times depending on selected Ethernet speed
  - Test times are based on statistical security (see table below, 63%)
  - Values can also be adjusted between 0 (continuous test) to 300 seconds
  - Evaluation via sent and received packets
  - Documentable as PDF

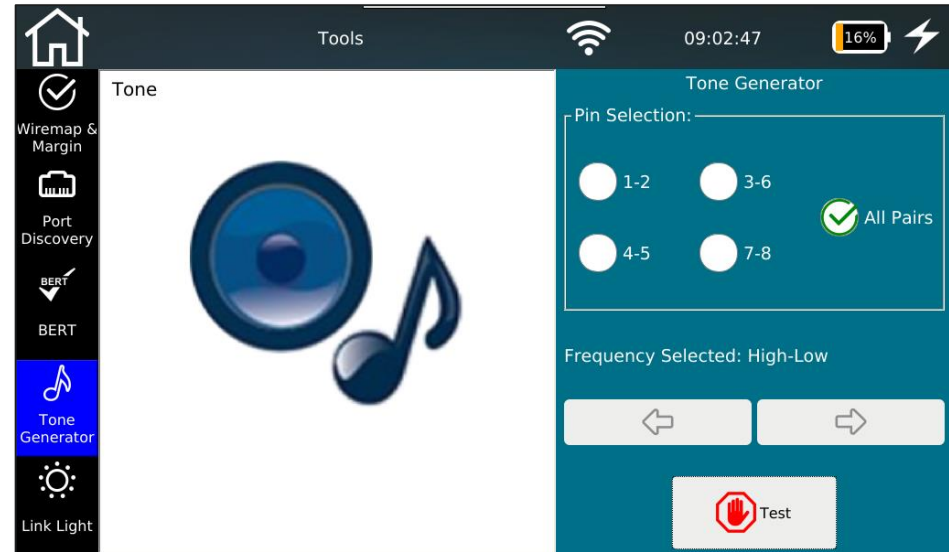


Transmission format	Standards reference	Required Bit Error Rate in standards reference	Test time for 10% confidence level	Test time for 63% confidence level	Test time for 95% confidence level
1G	IEEE Std 802.3ab	$10^{-10}$	1 second	10 seconds	30 seconds
2.5G	IEEE Std 802.3bz	$10^{-12}$	42 seconds	6 minutes 38 seconds	19 minutes 58 seconds
5G	IEEE Std 802.3bz	$10^{-12}$	21 seconds	3 minutes 19 seconds	9 minutes 59 seconds
10G	IEEE Std 802.3an	$10^{-12}$	11 seconds	1 minute 39 seconds	5 minutes 0 seconds

# „Tools“ menu

## Ton generator

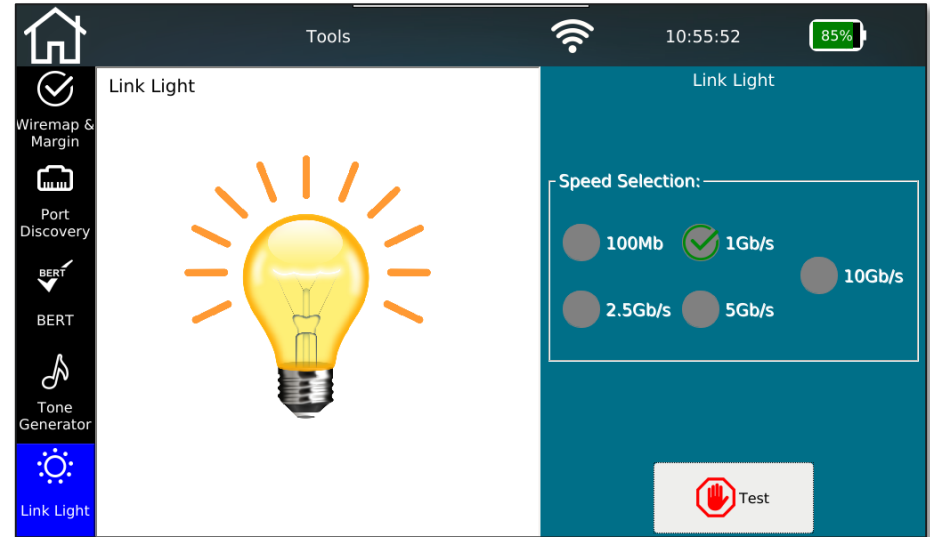
- Acoustic signaling
  - Signal pairs freely selectable
- Acceptance via any analog inductive receiver



# „Tools“ menu

## Link light

- Optical port detection on the switch
  - Localization of the connected switch port
  - Slow flashing link LED (0.5Hz)



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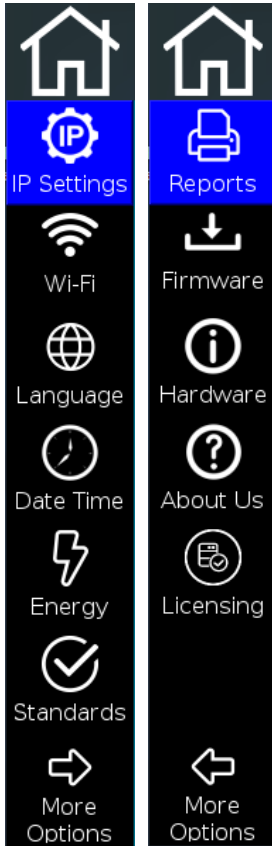
6

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# „Settings“ menu

## General

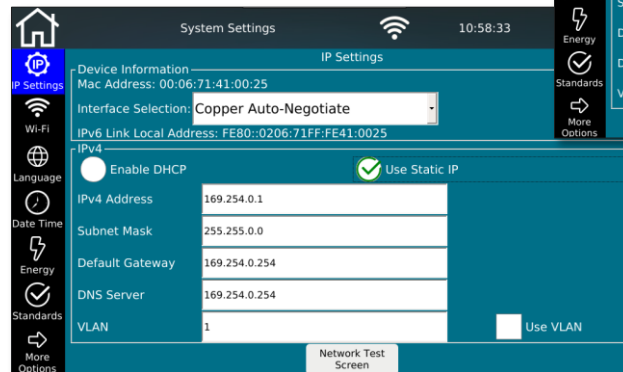
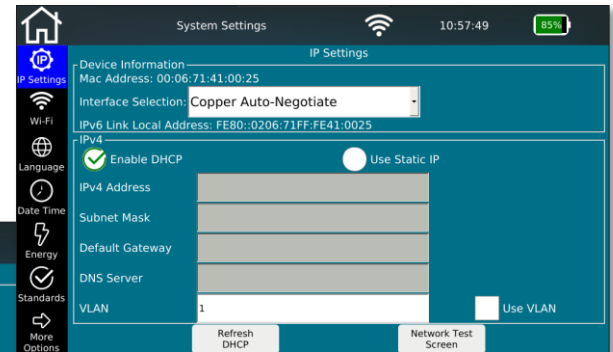
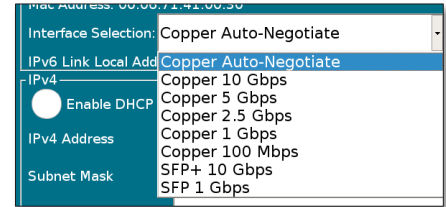


- Specify IP Details
- Wi-Fi scan and connection
- System settings
  - Language settings
  - Date/time
  - Energy saving options
  - Units (ft/m) and wiring standard (T568A/T568B) settings
- Header information and logo selection for report generation
- Info screens on
  - Installed firmware
  - Integrated hardware
  - Manufacturer contact details
  - Active licenses and upgrade options

# „Settings“ menu

## Specify IP Details

- Selecting interface for active tests
  - RJ45-Port for copper
    - Auto negotiation or fixed speed
  - „1GbE“ cage for fiber optic testing at 1 Gigabit Ethernet via optional SFP module
  - „10GbE“- cage for fiber optic testing at 1 Gigabit Ethernet via optional SFP+ module
    - After this selection, the device boots into a special mode
  - Wi-Fi
    - Wi-Fi connection with DHCP address assignment
    - Wi-Fi is enabled, only if the unit is connected to a network
- Additional device information for integration into an active network
  - MAC address
  - IPv6 Link local address
- IPv4 address assignment
  - Via DHCP or
  - Manual input
  - Optional activation of VLAN function

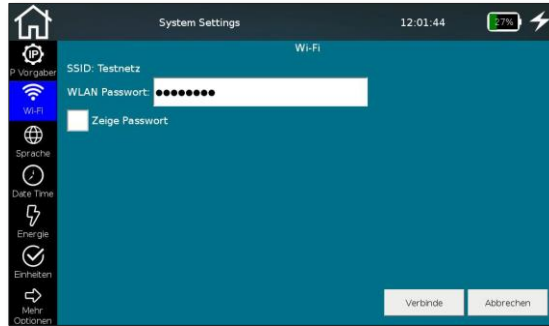
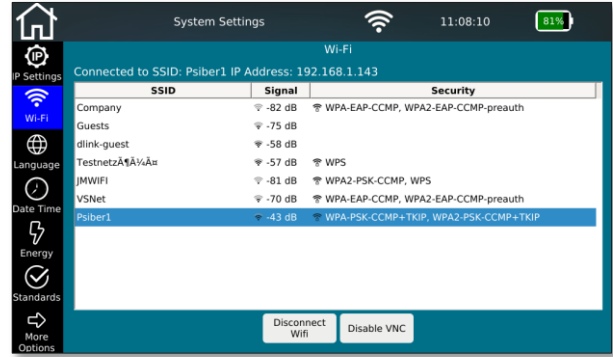




# „Settings“ menu

## Wi-Fi scan and connection

- By selecting the menu item, a network scan in the 2.4 GHz band starts automatically
- Display of founded SSIDs
  - Display the name
  - Signal strength
  - Encryption methods
- Selection of the WLAN network to establish the connection
  - Password entry (if necessary)
- After the connection is established, all active network tests are available
  - “WiFi” must be selected from the drop-down list as interface in the IP Settings menu
- Available VNC functions
  - Remote control of the device functions
  - Presentation mode

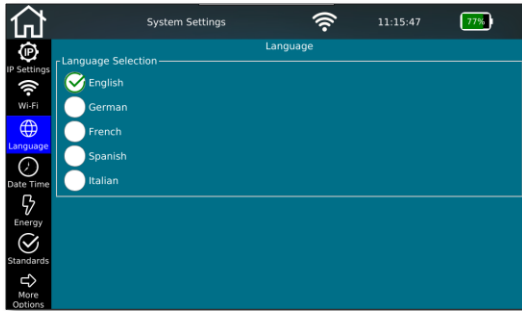


# „Settings“ menu

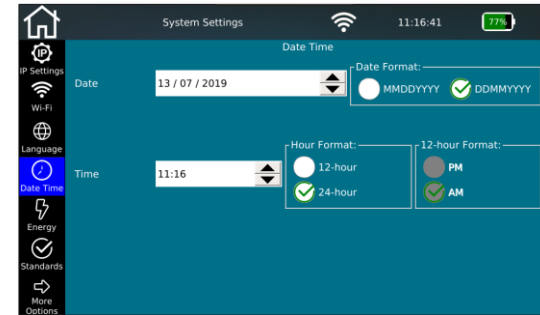
## System settings

- Device specific system settings

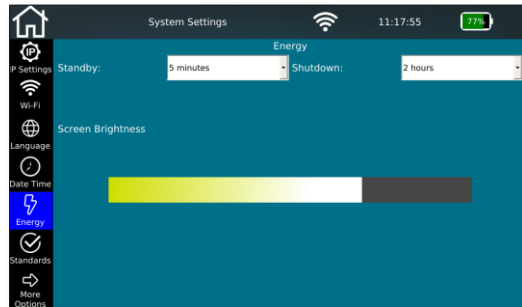
- Language settings



- Date/Time



- Energy saving options



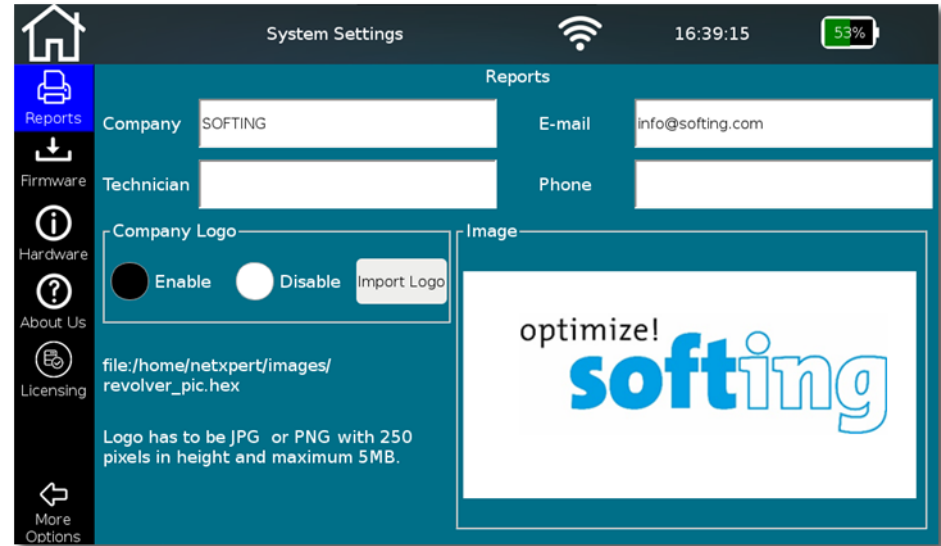
- Units (ft/m) /wiring standards



# „Settings“ menu

## Header information and logo selection for report generation

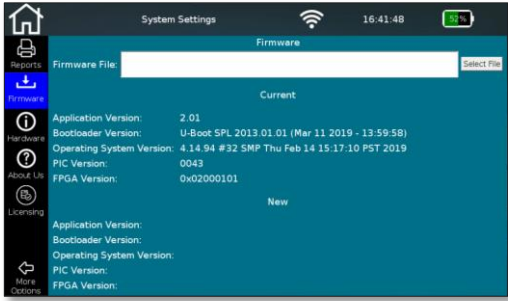
- Information that can be permanently displayed as header information on the test reports
  - Company that is conducting the test
  - Technician who is conducting the test
  - Contact details of the company
    - E-mail address
    - Telephone number
- Logo of the company that is conducting the test
  - Enable and disable the logo display on the test reports
  - Import from external sources via USB stick
    - Note allowed file formats
    - Note size limitation



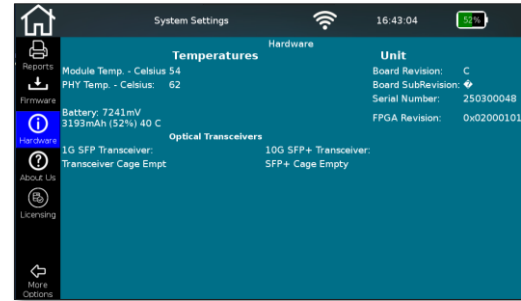
# „Settings“ menu

## Info screens

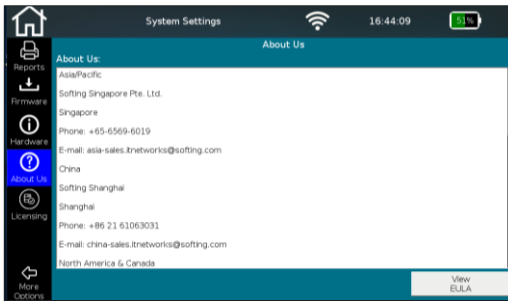
- Info screens on
  - Installed firmware



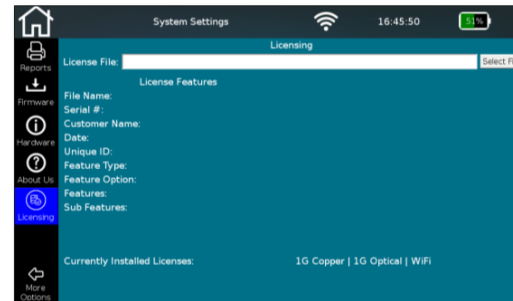
- Integrated hardware



- Manufacturer contact details



- Active licenses and upgrade options



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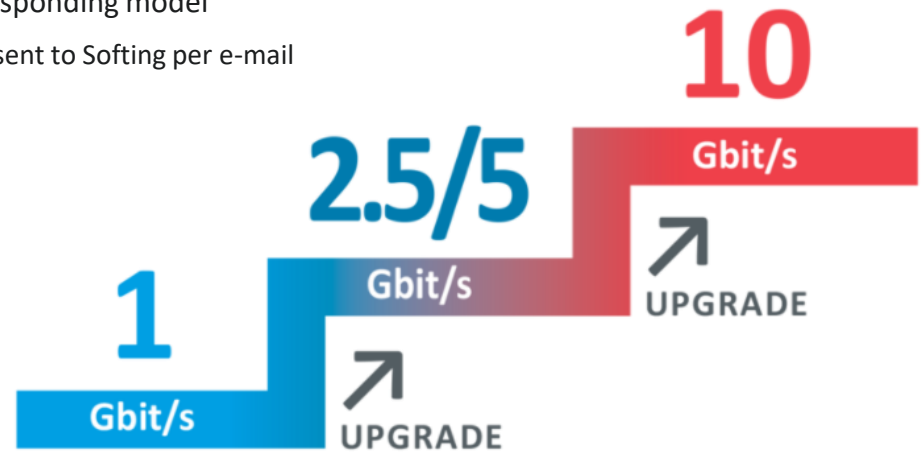
7

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# Licensing system

## General

- „Step-up“ license
  - Upgrades the test speed one level at a time
  - Installation via USB-Stick after purchase
- „Functional“ license
  - Free or paid feature enhancements
- Hardware has a license preinstalled up to 1 Gbit/s
- Higher models need additionally 1 or 2 license vouchers for corresponding model
  - The serial number of the product and the voucher code must be sent to Softing per e-mail
- License key is binary file for specific serial numbers
  - It can only be used on one device



# Licensing system

## Installing a license

- Two ways to upgrade a license
  - Buy a NetXpert XG in 2.5 / 5G or 10G version
    - Product is always delivered with a 1G license installed
    - One or two license vouchers are delivered in a separate box
    - Email the voucher codes and the serial number of the main unit to [upgrade.itnetworks@softing.com](mailto:upgrade.itnetworks@softing.com) (Serial number can be found on system settings → hardware or at the back side of the main unit)
    - Softing replies with a file (binary license file) to be installed on the main unit via USB-Stick
  - Buy a voucher at a later date
    - Classic order transaction via dealer with the serial number of the main unit
    - Download the attached file from the e-mail (binary license file) to USB stick and import to main unit
- Each installed license will be displayed at the bottom of the screen



# Firmware updates

- Regular firmware updates
  - Bug fixing
  - Basic (free of charge) performance enhancements
  - Informing the end customers directly
  - Available via Softing webpage at no charge
  - Regular update cycle
  - Installing via USB stick
  - „Over the air“ (planned)





# For further inquiries and support:

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