

WEBPAGE, VNC AND FTP FOR ROHDE & SCHWARZ DC POWER SUPPLIES AND R&S®LCX LCR METERS

Ethernet based remote services for Rohde & Schwarz DC power supplies and R&S®LCX LCR meters



Your task

Local access and in-person operation of instruments can be challenging in production setups, remote test rooms or other environments. Remote access to a graphical user interface (GUI) is far better in these scenarios.

Rohde & Schwarz solution

Rohde & Schwarz DC power supplies and R&S®LCX LCR meters can use Ethernet based services, an instrument webpage, a Virtual Network Computing (VNC) remote control and file transfer protocol (FTP) to link the instrument and a remote computer. VNC is a platform-independent Ethernet remote control that can be accessed from a PC. FTP is a protocol for transferring files between computers on a network and works with any operating system.

Features available with remote services

The Ethernet based remote services available for Rohde & Schwarz DC power supplies and R&S®LCX LCR meters have several important features. The following includes an overview of the configuration process, SCPI device control page capabilities, a description of the VNC device control page, the location of product documentation and file transfer capabilities.

Configuration overview

An Ethernet connection is needed between the instrument and computer to remotely access an instrument GUI.

As soon as the instrument IP address is entered in a web browser, the webpage opens and has a SCPI device control page, a VNC device control page as well as access to network settings, change password fields and a field to search for product documentation. Parameters in the user interface can be edited and sent to the instrument.

Example of the user interface

The screenshot shows a web browser interface for a Rohde & Schwarz instrument. The page title is "Instrument Home". On the left, there is a navigation menu with the following items: "Instrument Home", "SCPI Device Control", "VNC Device Control", "Network Settings", "Change Password", and "Documentation". The main content area displays the following information:

| | | | |
|-------------------|------------------|-----------------------|------------------------------------|
| Manufacturer: | Rohde&Schwarz | Ethernet Port: | RS LCR Meter LCX200-XXXXXX |
| Device Type: | LCX200 | Description: | RS-LCX200-XXXXXX-Local |
| Serial Number: | XXXXXX | Host name: | XXXXXX-XXXXXX-Local |
| Firmware Version: | 02.003 008FB48A1 | MAC-Address: | XX-XX-XX-XX-XX-XX |
| | | IP Address: | 192.168.1.100 |
| | | VISA Resource String: | TCPIP::192.168.1.100::5025::SOCKET |
| | | TCPIP: | 192.168.1.100::5025::INSTR |
| | | Current Time: | 2022-03-25 14:47:56 |
| | | Time Source: | Operating system |

At the bottom right, there is a "Device Identification" section with radio buttons for "On" and "Off". The footer of the page reads "©2019 ROHDE&SCHWARZ. All rights reserved."

Application Card | Version 01.00

ROHDE & SCHWARZ

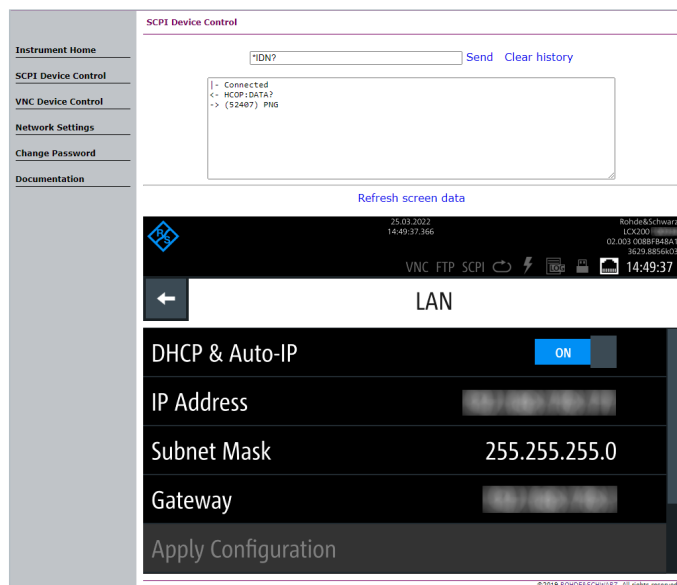
Make ideas real



SCPI device control page

The SCPI control page has a text box where SCPI commands can be entered for the instrument. The commands and query responses are listed in the history box below. Clicking refresh screen data queries a hardcopy of the current instrument GUI.

SCPI device control page



VNC device control

A valid VNC port on the instrument must be set up for VNC device control. After the VNC is disabled, port numbers can be changed. The VNC user interface shows the complete front panel of the instrument. You can use the mouse to operate the GUI as you would the touchscreen. Front panel keys can also be pressed with a mouse click.

Product documentation

A documentation section is available in the user interface. The webpage contains a web version of the getting started manual and a link to the product webpage.

File transfer

A valid port, username and password must be set to remotely transfer a file via FTP. You can use special apps such as Filezilla to access the FTP server on the instrument. Windows file explorer can also be used to access the server by adding a network location that provides permanent access to the FTP server, as long as the IPv4 address and login credentials are not changed.

The instrument file system appears with the specified name in the Windows file explorer navigation field.

Summary

In-person operation can be challenging in many situations and it can be better to access a GUI remotely. Rohde&Schwarz DC power supplies and R&S®LCR LCX meters can be operated remotely using Ethernet based services to access the GUI, SCPI command controls, file transfer and electronic documentation.

See also

- <https://www.rohde-schwarz.com/powersupplies>
- <https://www.rohde-schwarz.com/product/lcx>
- <https://www.rohde-schwarz.com/appnote/1GP135>

| Designation | Type | Order No. |
|--|------------|--------------|
| Single-channel power supply | R&S®NGL201 | 3639.3763.02 |
| Two-channel power supply | R&S®NGL202 | 3639.3763.03 |
| Single-channel power supply | R&S®NGM201 | 3638.4472.02 |
| Two-channel power supply | R&S®NGM202 | 3638.4472.03 |
| Two-quadrant source measure unit | R&S®NGU201 | 3639.3763.02 |
| Four-quadrant source measure unit | R&S®NGU401 | 3639.3763.03 |
| Two-channel power supply, 400 W, 32 V/20 A | R&S®NGP802 | 5601.4007.05 |
| Four-channel power supply, 800 W, 32 V/20 A | R&S®NGP804 | 5601.4007.02 |
| Four-channel power supply, 800 W, 2 × 32 V/20 A, 2 × 64 V/10 A | R&S®NGP814 | 5601.4007.04 |
| Two-channel power supply, 400 W, 64 V/10 A | R&S®NGP822 | 5601.4007.06 |
| Four-channel power supply, 800 W, 64 V/10 A | R&S®NGP824 | 5601.4007.03 |
| LCR meter, 300 kHz | R&S®LCX100 | 3629.8856.02 |
| LCR meter, 500 kHz | R&S®LCX200 | 3629.8856.03 |

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