5 Remote Control Basics

This chapter provides basic information on operating an instrument via remote control.

5.1 Remote Control Interfaces and Protocols

The instrument supports different interfaces for remote control. The following table gives an overview.

Table 5-1: Remote control interfaces and protocols

Interface	Protocols, VISA*) address string	Remarks

Local Area Network (LAN)	Protocols:
	• HiSLIP High-Speed LAN Instrument Protocol (IVI-6.1)
	VISA*) address string:
	`TCPIP::host address::hislip0[::INSTR]`
	• VXI-11
	VISA*) address string:
	`TCPIP::host address[::LAN device name][::INSTR]`
	• socket communication (Raw Ethernet, simple telnet)
	VISA*) address string:
	`TCPIP::host address[::LAN device name]::<port>::SOCKET`
		A LAN connector is located on the front or rear panel of the instrument, or both.
		The interface is based on TCP/IP and supports various protocols.
		For a description of the protocols refer to:
		• Chapter 5.1.3.1, "HiSLIP protocol", on page 244
		• Chapter 5.1.3.2, "VXI-11 protocol", on page 244
		• Chapter 5.1.3.3, "Socket communication", on page 244

Serial Interface	VISA*) address string: `ASRL[0-9][::INSTR]`	For a description of the interface, refer to Chapter 5.1.5, "Serial Interface", on page 246.
GPIB (IEC/IEEE Bus Interface)	VISA*) address string: `GPIB::primary address[::INSTR]` (no secondary address)	Optional GPIB bus interfaces according to standard IEC 625.1/IEEE 488.1 are located on the rear panel of the instrument. For a description of the interface, refer to Chapter 5.1.6, "GPIB Interface (IEC/IEEE Bus Interface)", on page 246. **Note:** Within this interface description, the term GPIB is used as a synonym for the IEC/IEEE bus interface.
*) VISA is a standardized software interface library providing input and output functions to communicate with instruments. A VISA installation on the controller is a prerequisite for remote control over LAN (when using VXI-11 or HiSLIP protocol), USB and serial interface. For remote control via socket communication VISA installation is optional. For more information, see Chapter 5.1.1, "VISA Libraries", on page 241.		

Rohde & Schwarz provides the standardized I/O software library R&S VISA for communication via TCP/IP (LAN: HiSlip, VXI-11 and raw socket) or USB (USBTMC) interfaces.

R&S VISA is available for download at the Rohde & Schwarz website http://www.rohde-schwarz.com/rsvisa.

How to configure the remote control interfaces, see Chapter 5.2, "Starting a Remote Control Session", on page 249.