# 2300-533-R System Verification Software (SVS)

# MS2026B and MS2028B VNA Master™ MS2026C, MS2027C, MS2028C, MS2036C, MS2037C, MS2038C VNA Master™ SC7858 Verification Kit, N Connectors SC7859 Verification Kit, K Connectors

This quick start guide provides a brief overview of the installation and use of the 2300-533-R System Verification Software and the SC7858 and SC7859 Verification Kits with these handheld VNA Masters.



# **1-1 Verification Kit Components**

The supplied Verification Kit components are listed to the right in Figure 1-1.



Figure 1-1. SC7858 and SC7859 Verification Kit Components

### **1-2 Required Equipment**

The required equipment varies depending on the Verification Kit and VNA Master that are being tested

Required Equipment	SC7858 N Verification Kit	SC7859 K Verification Kit
VNA Master	MS2026B, MS2028B, MS2026C, MS2027C, MS2028C, MS2036C, MS2037C, MS2038C	With Option 11: MS2028B, MS2028C, and MS2038C
PC Controller Minimum Requirements	Microsoft Windows XP, 1 GB RAM, CD Drive, at least 20 MB of free hard disk space, USB 2.0 Type A port or Ethernet port	Microsoft Windows XP, 1 GB RAM, CD Drive, at least 20 MB of free hard disk space, USB 2.0 Type A port or Ethernet port
Software Driver	National Instruments VISA Runtime version 3.6 or later <sup>a</sup>	National Instruments VISA Runtime version 3.6 or later <sup>a</sup>
Instrument USB Driver	Anritsu USB Driver	Anritsu USB Driver
Interface Cable	If using USB, then use Anritsu 3-2000-1498 USB A-mini cable.	If using USB, then use Anritsu 3-2000-1498 USB A-mini cable.
	If using Ethernet, then use Anritsu 3-806-152 Crossover Patch Cable (direct connection) or 2000-1371-R Ethernet Cable (via network hub/switch).	If using Ethernet, then use Anritsu 3-806-152 Crossover Patch Cable (direct connection) or 2000-1371-R Ethernet Cable (via network hub/switch).
M-F Through Cable	Anritsu 3670NN50-2	Anritsu 3670K50-2
M-M Adapter	NA	Anritsu 33KK50B
Male Calibration Tee	Anritsu OSLN50	Anritsu OSLK50
Female Calibration Tee	Anritsu OSLNF50	Anritsu OSLKF50

 Table 1-1.
 Required Equipment

a.National Instruments VISA Runtime license is available from National Instruments as a stand-alone software package or as part of National Instruments GPIB adapter Hardware package. Please contact National Instruments for details.

## **1-3 PC Controller Ethernet Cable Connection to VNA Master**

The basic connections between a PC and the VNA Master using Ethernet interface are shown in Figure 1-2.



1	VNA Master MS202xB
2	PC Controller
3	Ethernet Cable
4	Verification Kit USB Memory Device with characterization data

Figure 1-2. Basic Connections Between PC and VNA Master Using Ethernet Interface

### 1-4 PC Controller USB Cable Connection to VNA Master

The basic connections between a PC and the VNA Master using USB interface are shown in Figure 1-3.



1	VNA Master MS202xB
2	PC Controller
3	USB A-mini Cable
4	Verification Kit USB Memory Device with characterization data

Figure 1-3. Basic Connections Between PC and VNA Master Using USB Interface

## **1-5** Installing the System Verification Software Application

- 1. Put the System Verification Software Application CD into the CD Drive on the PC Controller.
- 2. The CD AutoRun function should display the Startup screen.
- **3.** If the installation does not start automatically, then navigate to the CD directory and double-click the file named VNAMasterVerificationSetup.exe.
- 4. Follow the dialog box instructions to complete the software installation.



Figure 1-4. System Verification Software Application CD Startup Screen

### **1-6** User Interface Operation

Double-click the VNA Verification Software desktop icon to launch the System Verification Software Application. Preliminary screens gather information about the VNA Master and the Calibration and Verification components. When done gathering information, the Verification Program Main Screen appears. Not all areas may be initially available depending on setup and completion status.



11 Exit Button – Exits the PVS application

Figure 1-5. VNA Master Verification Program Main Screen

# 1-7 SVS VNA Master Calibration/Verification Test Sequence and Reports

Any combination of tests can be selected. If all are selected, then the sequence is: VNA Calibration first, and then verification tests of Airline (DAT), Airline (UNC), Beatty Airline (DAT), Beatty Airline (UNC), 20 dB Offset (Pad) (DAT), 20 dB Offset (Pad) (UNC), 50 dB Offset (Pad) (DAT), and 50 dB Offset (pad) (UNC). Each verification test generates CSV DAT and TXT UNC reports. The CSV DAT reports are the current measured data for the user devices. The TXT UNC reports are the calculated uncertainty based on the measured data and the verification kit certification data. The reports can be viewed and printed. Other applications, such as spreadsheets or word processors, can easily import the report data.





Anritsu Company 490 Jarvis Drive Morgan Hill, CA 95037-2809 USA http://www.anritsu.com

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