# R&S®ZNrun-K1 Automated Test Software VNA Specifications



# **Specifications**

The specifications of the R&S<sup>®</sup>ZNrun PC-based server platform for automated VNA tests are based on the data sheet specifications of the R&S<sup>®</sup>ZVA/R&S<sup>®</sup>ZVB/R&S<sup>®</sup>ZNBT network analyzer, have not been checked separately and are not verified during instrument calibration. Measurement uncertainities are given as 95 % confidence intervals. The specified level measurement errors do not take into account systematic errors due to reduced signal to noise ratio (S/N).

#### **Recommended system configuration**

| Operating system     | Windows XP Service Pack 3 (32 bit), Windows Vista (32 bit), Windows 7 (32/64 bit)       |  |
|----------------------|---|--|
| Free hard disk space | 600 Mbyte (32 bit), 1.5 Gbyte (64 bit)  |  |
| Free RAM             | 512 Mbyte   |  |
| Other requirements   | Microsoft .NET Framework 4.0 or higher,   |  |
|                      | Virtual Instrument Software Architecture (VISA),  |  |
|                      | Microsoft Visual Studio 2010 (only for developing plugins and using the .NET interface) |  |

#### PC based server platform for automated VNA tests

The R&S<sup>®</sup>ZNrun PC based server platform for automated VNA tests is compatible with

| Device                                  | Full compatibility | Limited compatibility | Not supported |
|---|--------------------|-----------------------|---------------|
| Vector network analyzers                | · · · ·            | · · ·                 | ••            |
| R&S®ZVA                                 |                    | •                     |               |
| R&S <sup>®</sup> ZVT                    |                    | •                     |               |
| R&S <sup>®</sup> ZNB                    | •                  |                       |               |
| R&S <sup>®</sup> ZNBT                   | •                  |                       |               |
| Switching matrices                      |                    |                       |               |
| R&S <sup>®</sup> ZN-Z84                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z81                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z82                 | •                  |                       |               |
| Calibration units                       |                    |                       |               |
| R&S <sup>®</sup> ZV-Z51                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z52                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z53                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z54                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z55                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z58                 | •                  |                       |               |
| R&S <sup>®</sup> ZV-Z59                 | •                  |                       |               |
| Manual calibration kits                 | · · ·              |                       |               |
| All calibration kits from Rohde & Schwa | rz •               |                       |               |

#### Frequency

| Frequency range | RF output/input | The respective frequency range of the   |
|-----------------|-----------------|---|
|                 |                 | analyzer as stated in the data sheet is |
|                 |                 | supported.                              |

#### Level

| Level range | RF output/input | The respective level range of the analyzer |
|-------------|-----------------|--|
|             |                 | as stated in the data sheet is supported.  |

#### Bandwidth

| Bandwidth range | The respective IF bandwidth range of the |
|-----------------|--|
|                 | analyzer as stated in the data sheet is  |
|                 | supported.                               |

#### Number of sweep points

| Sweep points range | The respective number of points of the  |
|--------------------|---|
|                    | analyzer as stated in the data sheet is |
|                    | supported.                              |

# Number of ports

| Number of ports | The respective number of physical ports of  |
|-----------------|---|
|                 | the analyzer as stated in the data sheet is |
|                 | supported.                                  |

# Measurement configuration

| Device control (VNA) | connection              | controls compatible Rohde & Schwarz<br>devices via VISA (either GPIB or VXI-11)   |
|----------------------|-------------------------|---|
| DUT                  | VNA port connection     | RF  |
|                      | state switch            | GPIO/RFFE with R&S <sup>®</sup> ZNB-B15 or<br>customer specific with plugins  |
| Measurement          | parameters <sup>1</sup> | insertion loss, ripple, VSWR, reflection,<br>attenuation, isolation, phase, group delay,<br>lin. magnitude, real, imaginary |
|                      | result evaluation       | pass/fail limit check based on the<br>analyzer's measurement evaluation<br>capabilities as stated in the user's manual      |

### Calibration

| Calibration    | types          | based on the analyzer's calibration         |
|----------------|----------------|---|
|                |                | capabilities as stated in the user's manual |
|                | procedures     | choose from either full calibration of the  |
|                |                | complete measurement setup or               |
|                |                | calibration of individual paths             |
| User interface | production use | shows simplified step-by-step guide         |
|                | laboratory use | provides the user with enhanced             |
|                |                | calibration options                         |

## **Measurement execution**

| Measurement    | control                | start, abort or repeat measurements           |
|----------------|------------------------|---|
|                | DUT handling           | auto-numbering for DUT names                  |
| Results        | measurement parameters | pass/fail check                               |
|                | statistics             | check pass/fail against a previously          |
|                |                        | defined target yield; additionally, the yield |
|                |                        | trend is shown                                |
| User interface | production use         | shows simplified step-by-step guide           |
|                | laboratory use         | provides the user with powerful debug         |
|                |                        | options: breakpoints, single step, skipping   |
|                |                        | measurement steps                             |

# **Ordering information**

| Designation                 | Туре                      | Order No.    |
|-----------------------------|---------------------------|--------------|
| Automated Test Software VNA | R&S <sup>®</sup> ZNrun-K1 | 1326.7124.02 |
| License Dongle              | R&S <sup>®</sup> ZNPC     | 1325.6601.02 |

<sup>&</sup>lt;sup>1</sup> The availability of measurements depends on the selected measurement path.

#### Service that adds value

- Uncompromising qualityLong-term dependability

#### About Rohde & Schwarz

The Rohde&Schwarz electronics group is a leading supplier of solutions in the fields of test and measurement, broadcasting, secure communications, and radiomonitoring and radiolocation. Founded more than 80 years ago, this independent global company has an extensive sales network and is present in more than 70 countries. The company is headquartered in Munich, Germany.

#### Sustainable product design

- I Environmental compatibility and eco-footprint
- I Energy efficiency and low emissions
- I Longevity and optimized total cost of ownership

Certified Quality Management ISO 9001

Certified Environmental Management ISO 14001

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