

## Calibration kits and automatic calibrators

Analyzer software provides one-port, full two-port, one-way two-port calibrations and frequency response normalization of transmission or reflection paths. Analyzer may be calibrated using calibration kits or automatic calibrator.

### R4M-EK4 automatic calibrators

R4M-EK4 automatic calibrators provide automated calibration of vector network analyzers. The key feature of R4M-EK4 is an integrated circuit of electronically switched loads manufactured by Micran. To connect the vector network analyzer ports with automatic calibrator additional adapters with NMD connectors on one side and standard 3.5/1.52 mm or 7.0/3.04 mm path connectors on the other side are included.

In contrast with calibration kit, automatic calibrator has an advantage due to convenient operation and quick calibration with comparable accuracy, lower wear and longer retaining of metrological properties.

#### R4M-EK4 key features:

- automatic detection of VNA port connection (patent No. 2513647);
- specific small-scale IC GaAs with constant phase relations between calibration standards throughout the frequency range (Certificate No.2016630144);
- various connection paths available;
- control via USB 2.0.

#### Automatic calibrator provides:

- lower labour intensity and shorter calibration process;
- lower probability of operator's errors;
- lower wear of calibration standards and cable assemblies, analyzer ports



### Calibration kits

The calibration kits are used for calibration of vector network analyzers in 3.5/1.52 mm and 7.0/3.04 paths. Each kit includes loads and adapters required for calibration. The kits also include torque and support wrenches and adapters with ruggedized NMD connectors on one side and standard 3.5/1.52 mm or 7.0/3.04 mm path connectors on the other side. Measuring accuracy of complex S-parameters of various devices connected to VNA may be evaluated in combination with a particular calibration kit only. Total measurement error will be determined by description accuracy of calibration standards, retaining their parameters throughout operation period, calibration technique and VNA instability. For details, refer to EST section.