

Network Analyzer Accessories

Overview

Accessories for the HP 8753D, 8720D, and the 8510C series network analyzers include a variety of calibration kits, verification kits, cables, and adapters from dc to 110 GHz.

Calibration Kits

Error-correction procedures require that the systematic errors in the measurement system be characterized by measuring known devices (standards) on the system over the frequency range of interest. HP offers two types of calibration kits: mechanical and electronic.

Electronic Calibration (ECal) Kits

ECal kits consist of connector specific modules, adapters for test ports and a torque wrench for proper connection.

Mechanical Calibration Kits

All network analyzer mechanical calibration kits contain precision standard devices to characterize the systematic errors of the HP 8753 series, 8720 series or 8510C network analyzer system. Each mechanical calibration kit also contains adapters for test ports and a torque wrench for proper connection.

Verification Kits

Measuring known devices, other than the calibration standards, is a straightforward way of verifying that the network analyzer system is operating properly. HP offers verification kits that include precision airlines, mismatch airlines, and precision fixed attenuators. Traceable measurement data is shipped with each kit on disk. Verification kits may be recertified by Hewlett-Packard. This recertification includes a new measurement of all standards and new data with uncertainties.

Network Analyzer Accessories

Electronic Calibration Kits ¹

| HP Model | Connector | Frequency Range (GHz) | Description |
|-------------------|--------------|-----------------------|---|
| 85060A | 7 mm | 1 to 18 | One two-port ECal module and collet remover |
| Option 001 | 7 mm | 0.045 to 2 | Adds lowband ECal module |
| 85062A | 3.5 mm (m-f) | 1 to 26.5 | One two-port ECal module and m-m and f-f adapters |
| Option 001 | 3.5 mm (m-f) | 0.045 to 2 | Adds lowband ECal module |
| Option 00F | 3.5 mm (f-f) | | Changes connectors to f-f |
| Option 00M | 3.5 mm (m-m) | | Changes connectors to m-m |
| 85064A | Type-N (m-f) | 1 to 18 | One two-port ECal module |
| Option 001 | Type-N (m-f) | 0.045 to 2 | Adds lowband ECal module |
| Option 00F | Type-N (f-f) | | Changes connectors to f-f |
| Option 00M | Type-N (m-m) | | Changes connectors to m-m |

¹ Must have an HP 85060C control unit to perform electronic calibration.

Mechanical Calibration Kits ^{2,3,4,5}

| HP Model | Connector | Frequency Range (GHz) | Type |
|----------------------------|---------------|-----------------------|-----------|
| 85036B | Type-N (75 Ω) | DC to 6 | Economy |
| 85039A | Type-F (75 Ω) | DC to 3 | Economy |
| 85031B | 7 mm | DC to 6 | Economy |
| 85050B | 7 mm | 0.045 to 18 | Standard |
| 85050C | 7 mm | 0.045 to 18 | Precision |
| 85050D | 7 mm | 0.045 to 18 | Economy |
| 85033D | 3.5 mm | DC to 6 | Economy |
| 85052B | 3.5 mm | 0.045 to 26.5 | Standard |
| 85052C | 3.5 mm | 0.045 to 26.5 | Precision |
| 85052D | 3.5 mm | 0.045 to 26.5 | Economy |
| 85032B | Type-N | DC to 6 | Economy |
| 85054B | Type-N | 0.045 to 18 | Standard |
| 85054D | Type-N | 0.045 to 18 | Economy |
| 85056A | 2.4 mm | 0.045 to 50 | Standard |
| 85056D | 2.4 mm | 0.045 to 50 | Economy |
| 85056K ⁶ | 2.92 mm | 0.045 to 50 | Economy |
| 85058D | 1.85 mm | 0.045 to 65 | Standard |
| X11644A | WR-90 | 8.2 to 12.4 | Precision |
| P11644A | WR-62 | 12.4 to 18 | Precision |
| K11644A | WR-42 | 18 to 26.5 | Precision |
| R11644A | WR-28 | 26.5 to 40 | Precision |
| Q11644A | WR-22 | 33 to 50 | Precision |
| U11644A | WR-19 | 40 to 60 | Precision |
| V11644A | WR-15 | 50 to 75 | Precision |
| W11644A | WR-10 | 75 to 110 | Precision |

² Unless stated otherwise, all calibration kits are 50 ohms.

³ Economy calibration kits contain fixed loads.

⁴ Standard calibration kits contain sliding loads.

⁵ Precision calibration kits contain TRL calibration standards.

⁶ Option 001 adds a sliding load.

Verification Kits

| Verification Kit | 85029B | 85051B | 85053B | 85055A | 85057B | R11645A | Q11645A | U11645A | V11645A | W11645A |
|------------------------------|---------|-------------|---------------|-------------|-------------|------------|----------|----------|----------|-----------|
| Connector Type | 7 mm | 7 mm | 3.5 mm | Type-N | 2.4 mm | WR-28 | WR-22 | WR-19 | WR-15 | WR-10 |
| Frequency Range (GHz) | DC to 6 | 0.045 to 18 | 0.045 to 26.5 | 0.045 to 18 | 0.045 to 50 | 26.5 to 40 | 33 to 50 | 40 to 60 | 50 to 75 | 75 to 110 |

Network Analyzer Accessories

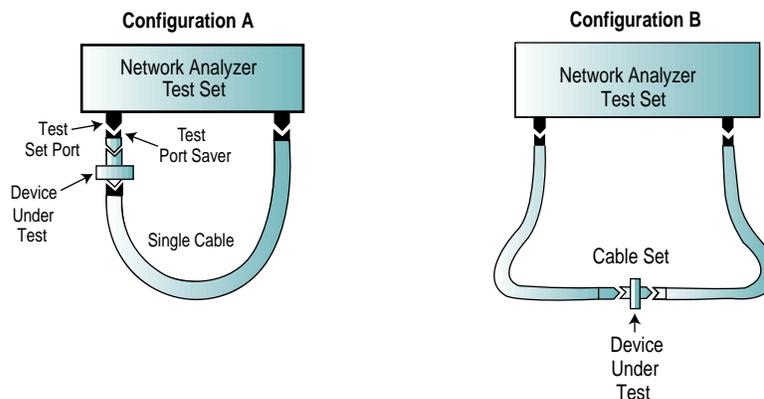
Test Port Cables and Adapters

Test port cable and adapter sets are available for various connector types. The cable/adapter configurations are described below. All cables are designed with one end that connects directly to the special rugged ports of the network analyzer test set, and one end that connects to the device under test.

Special test port adapter sets are also available to convert the rugged ports of the network analyzer test set to the desired connector interface. Each kit contains two adapters, one male and one female.

Cables and special adapters have a 3.5 mm or 2.4 mm ruggedized female connector on one end which is designed to connect to HP network analyzer two-port test sets. This connector cannot be mated to standard 3.5 mm or 2.4 mm connectors. However, the other end of the cable or adapter has a connector that can be mated to standard 3.5 mm or 2.4 mm connectors.

Test port cables are available for two test configurations as shown below. Configuration A utilizes a single test port cable for use when the device under test (DUT) is connected directly to the port on the test set. Configuration B utilizes two test port cables. It provides more flexibility since the DUT is connected between the test port cables. See next page for recommended cables/adapters associated with each configuration.



Network Analyzer Accessories

Configuration A

3.5 mm test set ports

| DUT Connector | Cables/adapters |
|---------------|--|
| 3.5 mm | HP 85131C Semi-rigid Cable with a 3.5 mm (f) connector |
| | HP 85131E Flexible Cable with a 3.5 mm (f) connector |
| | HP 85130D Adapter Set with 3.5 mm (m,f) connectors |
| 7 mm | HP 85132C Semi-rigid Cable with 7 mm connector |
| | HP 85132E Flexible Cable with a 7 mm connector |
| | HP 85130B Adapter Set with 7 mm connectors |
| Type-N | Use 7 mm cables and the 7 mm to Type-N adapters included in the HP 85054B,D calibration kit. |

Configuration A

2.4 mm test set ports

| DUT Connector | Cables/adapters |
|---------------|--|
| 2.4 mm | HP 85133C Semi-rigid Cable with a 2.4 mm (f) connector |
| | HP 85133E Flexible Cable with a 2.4 mm (f) connector |
| | HP 85130G Adapter Set with 2.4 mm (m,f) connectors |
| 3.5 mm | HP 85134C Semi-rigid Cable with a 3.5 mm (f) connector |
| | HP 85134E Flexible Cable with a 3.5 mm (f) connector |
| | HP 85130F Adapter Set with 3.5 mm (m,f) connectors |
| 7 mm | HP 85135C Semi-rigid Cable with a 7 mm connector |
| | HP 85135E Flexible Cable with a 7 mm connector |
| | HP 85130E Adapter Set with 7 mm connectors |

Accessories

HP 86211A 75 ohm type-N to type-F adapter kit
Adapter kit which provides type-N to type-F adapters necessary when measuring type-F devices on a network analyzer with 75 ohm type-N test ports.

Configuration B

3.5 mm test set ports

| DUT Connector | Cable set |
|---------------|--|
| 3.5 mm | HP 85131D Semi-rigid Cable Set with 3.5 mm (m,f) connectors |
| | HP 85131F Flexible Cable Set with 3.5 mm (m,f) connectors |
| 7 mm | HP 85132D Semi-rigid Cable Set with 7 mm connector |
| | HP 85132F Flexible Cable Set with 7 mm connector |
| Type-N | Use 7 mm cables and the 7 mm to Type-N adapters included in the HP 85054B,D calibration kit. |

Configuration B

2.4 mm test set ports

| DUT Connector | Cable set |
|---------------|---|
| 2.4 mm | HP 85133D Semi-rigid Cable Set with 2.4 mm (m,f) connectors |
| | HP 85133F Flexible Cable Set with 2.4 mm (m,f) connectors |
| 3.5 mm | HP 85134D Semi-rigid Cable Set with 3.5 mm (m,f) connectors |
| | HP 85134F Flexible Cable Set with 3.5 mm (m,f) connectors |
| 7 mm | HP 85135D Semi-rigid Cable Set with 7 mm connectors |
| | HP 85135F Flexible Cable Set with 7 mm connectors |

HP 11742A Blocking Capacitor

The HP 11742A blocking capacitor blocks dc signals below 45 MHz and passes signals up to 26.5 GHz. Ideal for use with high frequency oscilloscopes or in biased microwave circuits, the HP 11742A will suppress low frequency signals that can damage expensive measuring equipment or will affect the accuracy of your RF and microwave measurements.