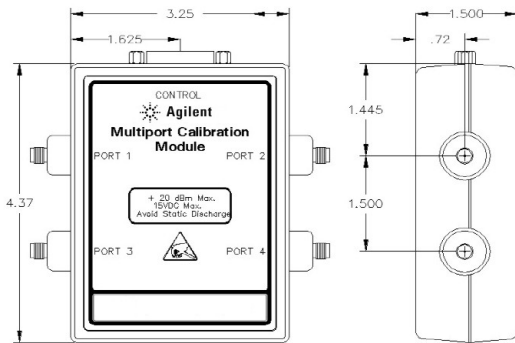


## N4430A ECal module (ATN-4801A)

- Fast, single-connection electronic calibration
- Easy to use
- Accurate transfer standard with excellent repeatability



The N4430A 4-port ECal module is the perfect companion for Agilent's balanced measurement solutions. Fast, and easy-to-use, this ECal module replaces the standard SOLT-based mechanical calibration kit with a solid-state transfer standard.

With a single set of connections, the ECal module cycles through all of the impedance states required for a full, four-port, vector error-corrected calibration in under a minute. A comparable calibration, using the operator-intensive mechanical-standard technique, could easily take five times longer. Not only is ECal fast, it is also extremely repeatable and accurate. Control of the ECal module is built into the balanced-measurement application software – the same software that controls the measurement and provides the differential analysis. Ease of use is provided through an intuitive graphical user interface.

### Product configuration

A complete system includes an Agilent vector network analyzer, an Agilent N441xA S-parameter test set, Agilent balanced-measurement application software, a Windows®-based PC with IEEE-488 control, and the N4430A electronic calibration module.

### Performance summary

These specifications show the residual uncertainties for corrected data using four-port error correction. They apply for 25 °C with less than 1 °C variation from calibration, and are applicable for a system in the following configuration:

Network analyzer: 8753ES Options 006, 014  
 Test set: N4415A S-parameter test set  
 Test port cables: N4415A Option B20

### Measurement port specifications

| Frequency range     | 30-300 kHz | 0.3-300 MHz | 0.3-3 GHz | 3-6 GHz |
|---------------------|------------|-------------|-----------|---------|
| Directivity         | 50 dB      | 52 dB       | 50 dB     | 45 dB   |
| Source match        | 48 dB      | 48 dB       | 45 dB     | 43 dB   |
| Load match          | 50 dB      | 50 dB       | 46 dB     | 42 dB   |
| Refl. tracking (±)  | .04 dB     | .02 dB      | .02 dB    | .04 dB  |
| Trans. tracking (±) | .06 dB     | .02 dB      | .022 dB   | .022 dB |

### Typical performance

|                         |                  |
|-------------------------|------------------|
| Frequency range         | 30 kHz - 6.0 GHz |
| Impedance               | 50 ohms          |
| Maximum operating level | +20 dBm          |
| Damage level            | +30 dBm          |
| RF port connectors      | 3.5 mm (f)       |
| Control connector       | DB-15            |
| Weight                  | 12 oz.           |

### Supported peripheral equipment

|                              |   |
|------------------------------|---|
| S-parameter test sets        | N4413/14/15/16A   |
| Balanced measurement systems | N4441/42/43/44A   |
| Computer                     | Pentium II with ≥64 MB RAM, Windows 95/98/NT              |
| Monitor                      | 1024 x 768 minimum resolution                             |
| IEEE-488 card                | Agilent 82340, 82341, or National Instruments (any model) |

### Ordering information

|               |  |
|---------------|--|
| <b>N4430A</b> | Four-port electronic calibration module, 30 kHz to 6 GHz |
|---------------|--|