

# R&S® ZN-Z3x Inline Calibration Units

## Calibration refresh at the push of a button



The perfect choice for	
Testing satellite components	Ensuring stable quality in production testing
Testing under changing environmental conditions	Testing multiport devices

### When calibration gets challenging

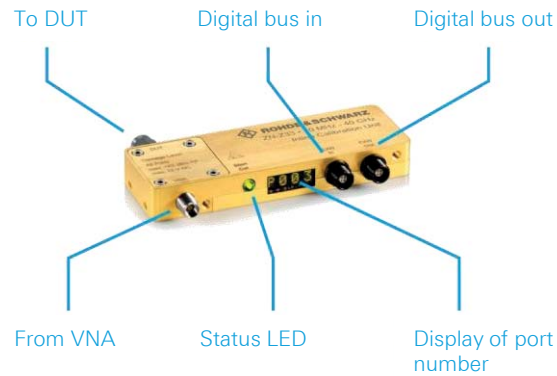
System error correction of network analyzer setups requires repeated (dis-)connection of calibration devices – which may be laborious with multiport setups, or even impossible when testing satellites in thermal vacuum chambers (TVAC). The R&S® ZN-Z3x units are the best choice when accurate and reliable measurements are required. With the units permanently connected between the test cable and the DUT, and remote controlled by CAN bus, calibration is possible at a keystroke at any time without operator intervention.

Key specifications	
Frequency range	10 MHz to 8.5 GHz, 40 GHz
Effective directivity	38 dB (typ.)
Effective port match	37 dB (typ.)
Insertion loss	1.5 dB (typ.)
1 dB compression	> 32 dBm
Number of modules per R&S® ZN-Z30 controller	48
Operating temperature range	5°C to 40°C (-30°C to 80°C, TVAC model)
Input level range	-45 dBm to 10 dBm

Your benefit	Features
UOSM support	No need for an extra calibration kit for initial calibration
Simple and straightforward setup	Just one ZN-Z30 controller unit required for up to 48 units/ports. Automatic detection of calibration units and assignment of port index (non-TVAC: always know what module is connected to what VNA port and minimize the risk of mixing up ports in complex setups)
Temperature characterization ex factory	All units are temperature-characterized over the operating temperature range ex factory, no user characterization required

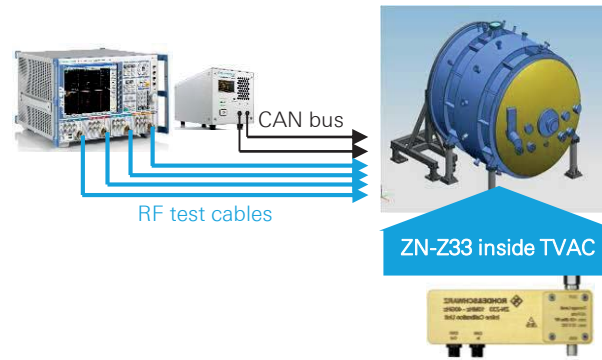
► For more information, visit [https://www.rohde-schwarz.com/catalog/networkanalyzer\\_acc\\_znz3](https://www.rohde-schwarz.com/catalog/networkanalyzer_acc_znz3)

## Status information on each calibration module



Easy-to-use inline calibration modules with status indicator and port information on each module (TVAC model w/o display an LED knob)

## Eliminate drift during long-term measurements



Easy, automatic recalibration inside the thermal vacuum chamber, after applying vacuum and on change of temperature

## Calibrate multiport setups with ease



Control up to 48 calibration modules with one single controller; use multiple controllers for higher port count. Ensure stable, repeatable accuracy by easy and fast recalibration

## Models

- | R&S®ZN-Z32:  
10 MHz to 8.5 GHz,  
5°C to 40°C  
built-in temperature sensor
- | R&S®ZN-Z33  
10 MHz to 40 GHz,  
5°C to 40°C  
built-in temperature sensor
- | R&S®ZN-33 TVAC  
10 MHz to 40 GHz,  
-30°C to 80°C  
built-in temperature sensor



## Software

- | **Inline calibration tool**  
Free download
- | **Operation modes:**  
Install on VNA  
Run on remote computer
- | **Connection type**  
Local  
LAN  
GPIB
- | **Typical functions**  
Setup of controller, detect calibration modules  
Perform initial calibration  
Perform calibration refresh  
Monitor temperature for each module



## Configuration information

Description	Item
Inline calibration module controller to control up to 48 modules	ZN-Z30
Calibration module, 10 MHz to 8.5 GHz	ZN-Z32
Calibration module, 10 MHz to 40 GHz	ZN-Z33 (TVAC)
Test port cables, 2.92 mm (f), 2.92 mm (m), 40 GHz	ZV-Z195
High-end vector network analyzer, 10 MHz to 40 GHz	ZVA40
True multiport vector network analyzer, 100 kHz to 20 GHz, up to 24 ports	ZNBT20