

# Automatic Calibration Modules

100 kHz to 12,18 & 26.5 GHz 2-Port & 4-Port

withwave

Versatile RF & MW Test Solutions

**Withwave's Automatic Calibration Modules** are ideal for users who want fast and easy calibration for various Vector Network Analyzers (VNA). This module is powered up via USB or  $\Phi 5.5$  DC connector and communicate with VNA via USB or LAN and designed for full one-port through four-port calibrations of VNAs by **One-Push START button**.

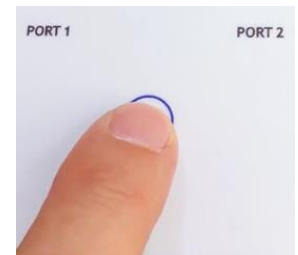
This module works as host systems, measures and calculates calibration coefficients and sends it to VNA easily.

Most of Electronic Calibration Kits work for same manufacturer's VNAs only.

But, this module provides cost-effective calibration solution for users by supporting various VNA models as below.

It's compatible with following VNAs:

- **Keysight PNA series, ENA series**
- **Rohde & Schwarz ZNB, ZVL, ZVA series, ZVT series**
- **Anritsu ShockLine Series**



One-Push START button



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## ■ Specification

Scope	Items	Specification
Electrical & Environmental	Freq. range	100 kHz to 12 GHz (W1202A, W1204A) 100 kHz to 18 GHz (W1802A, W1804A) 100 kHz to 26.5 GHz (W2602A, W2604A)
	Impedance	50 Ohm
	Port Power	+ 10 dBm (Max)
	Port DC Voltage	10 V (Max)
	DC Supply	5V/500mA, $\Phi$ 5.5
	Ethernet interface	LAN/micro USB
	Operating Temperature	+20~+30 (degree)
Mechanical	Port Configuration	Port 1: 3.5 mm, Female Port 2: 3.5 mm, Female Port 3: 3.5 mm, Female Port 4: 3.5 mm, Female
	Size	94.5 x 108 x 28.5 (mm)
	Weight	455 g (2-Port) 469 g (4-Port)



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## Ordering Information

# W1202A

**Frequency**      **# of Port**      **Interface type**

12 : 12 GHz  
18 : 18 GHz  
26 : 26.5 GHz

02 : 2-Port  
04 : 4-Port

A : 3.5 mm(F)  
B : N-type(F)



### 2-Port



### 4-Port



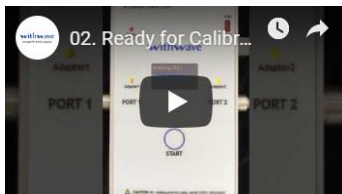
## Calibration Procedure (Keysight VNA : 2-Port)



### ① USB Driver Installation



### ② Ready for Calibration



Zoom in Video



### ③ Calibration



Please click pictures for Watching YouTube Videos



## Calibration Procedure (Rohde & Schwarz VNA : 4-Port)

### ① USB Driver Installation



### ② Ready for Calibration



### ③ Calibration



**Two-Channel Calibration**



Please click pictures for Watching YouTube Videos

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## ■ Contents Information



Index	Description
1	Automatic Calibration Module (2 Ports/ 4 Ports)
2	Torque Wrench (8 mm, 0.9 N·m)
3	Power Supply - Input : AC 100~240V, 50~60 Hz - Output : USB, Type A Female, 5V/2.1A
4	DC Power Cable - Connector type : USB Type-A male to $\Phi$ 5.5 DC plug
5	USB Cable - Connector type : USB 2.0 Type-A male to micro-USB(5 pin)
6	<b>[OPTION]</b> : Data-based Microwave Adapters (TBD) - 3.5 mm adapter series - 3.5 mm to N adapter series

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## Revision History

Revision	Date	Changes
Ver 1.0	Mar.01, 2019	Release Automatic Calibration Module (300 kHz to 12 GHz)
Ver 1.1	Apr.22, 2019	Add 18 GHz & 26.5 GHz version
Ver 2.0	Aug.01, 2019	Change low freq. specification (300 kHz → 100 kHz)
Ver 3.0	Sep.01, 2019	Add 4-Port version (12, 18 & 26.5 GHz)
Ver 3.1	Sep.20, 2019	Add 4-Port Calibration Procedure

