

## Product Datasheet - Technical Specifications



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# ACM4520 Automatic Calibration Module

The ACM contains four RF connectors for connection to VNA test ports, USB Type B control port, several different transmission and reflection impedance states and electronic changeover switches. ACM4520 has 12 reflection states (three for each port) and a Thru. The precise S-parameters of the calibration impedance states are stored in the ACM memory (factory characterization data).

## Measurement Range

<b>Impedance</b>	50 Ohm
<b>Number of ports</b>	4
<b>Frequency range</b>	100 kHz to 20 GHz*
<b>Number of characterization points</b>	up to 1601

## Hardware Specifications

Model	Connector type	
	Port A/C	Port B/D
ACM4520 - 01111	type N, female	type N, female
ACM4520 - 01212	type N, male	type N, female
ACM4520 - 11111	3.5 mm, female	3.5 mm, female
ACM4520 - 11212	3.5 mm, male	3.5 mm, female

## Effective System Data<sup>2,3</sup>

100 kHz to 10 MHz	
Directivity	40 dB
Source match	30 dB
Load match	40 dB
Reflection tracking	0.05 dB
Transmission tracking	0.10 dB
10 MHz to 4 GHz	
Directivity	46 dB
Source match	40 dB
Load match	46 dB
Reflection tracking	0.04 dB
Transmission tracking	0.06 dB
4 GHz to 20 GHz	
Directivity	40 dB
Source match	36 dB
Load match	40 dB
Reflection tracking	0.05 dB
Transmission tracking	0.10 dB

## Port Input

<b>Max power</b>	0 dBm
<b>Max DC voltage<sup>4</sup></b>	10 V
<b>Damage level<sup>5</sup></b>	+18 dBm
<b>Damage DC voltage<sup>5</sup></b>	16 V



## Interface and Power

<b>Interface</b>	USB 2.0
<b>Connector type</b>	USB B
<b>Support standart</b>	USBTMC-USB488
<b>Power consumption</b>	0.4 W

## Dimensions

ACM4520 - 01111, ACM4520 - 01212	
Length	110 mm
Width	89 mm
Height	27 mm
Weight	0.9 kg (31.7 oz)
ACM4520 - 11111, ACM4520 - 11212	
Length	98 mm
Width	89 mm
Height	27 mm
Weight	0.8 kg (28.2 oz)

## Environmental Specification

<b>Operating temperature</b>	+5 °C to +40 °C (41 °F to 104 °F)
<b>Storage temperature</b>	-50 °C to +70 °C (-58 °F to 158 °F)
<b>Humidity</b>	90 % at 25 °C (77 °F)
<b>Atmospheric pressure</b>	70.0 kPa to 106.7 kPa

\*All N-type models are only operational up to 18 GHz instead of 20 GHz. [1] All specifications subject to change without notice. [2] VNA maximum effective parameters after calibration. [3] All parameters are determined in the temperature range of 23±5 °C with the temperature variation after calibration of no more than ±1 °C and output power of -5 dBm output. [4] Exceeding max values reduces VNA measurement accuracy. [5] Exceeding limit values results in ACM failure. Rev. 2019Q4



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