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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight S9101A 5G Multi-Band Vector Transceiver

Agilent Keysight S9101A 5G Multi-Band Vector Transceiver The Keysight S9101A isanon-signaling 5G NR multi-band vector transceiver for infrastructure manufacturing test. OEM startup guide 9018-80095 lists FR1 380 MHz to 6 GHz, FR2 24.25 to 43.5 GHz, TR1/BK1/TR2 configurations, and chassis power up to 1200/1300 W. Automated 5G NR base-station, RRH, DU, active-antenna, amplifier, and chipset manufacturing test in FR1 and FR2. OTA-friendly remote mmWave head (S9101RH) to shorten cable runs The Keysight S9101A isanon-signaling 5G NR multi-band vector transceiver for infrastructure manufacturing test. OEM startup guide 9018-80095 lists FR1 380 MHz to 6 GHz, FR2 24.25 to 43.5 GHz, TR1/BK1/TR2 configurations, and chassis power up to 1200/1300 W. Automated 5G NR base-station, RRH, DU, active-antenna, amplifier, and chipset manufacturing test in FR1 and FR2. OTA-friendly remote mmWave head (S9101RH) to shorten cable runs Blocker-capable BK1 configuration withasecond M9410A

MODEL **Agilent / Keysight S9101A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **S9101A**	LISTING **https://aumictechlabs.com/products/s9101a-2/**

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This unit

The Keysight S9101A is a versatile and compact 5G Multi-Band Vector Transceiver designed for high-volume testing of 5G NR network equipment and radio components, including base station

transceiver systems, remote radio heads (RRHs), distributed units (DUs), active antenna arrays, amplifiers, and chipsets. It supports testing in both the sub-6 GHz (FR1) and millimeter-wave (FR2) frequency bands, offering a solution for 5G development and manufacturing. The S9101A integrates vector signal analyzer (VSA) and vector signal generator (VSG) functionalities within a PXIe chassis, combined with an external mmWave transceiver. This architecture allows for efficient testing with reduced footprint and high test throughput, contributing to a lower cost of test. It is engineered for manufacturing effectiveness with features like 1.2 GHz bandwidth for transmit (Tx) and receive (Rx), low Error Vector Magnitude (EVM), and Adjacent Channel Leakage Ratio (ACLR). The "OTA-friendly" expandable architecture minimizes losses from switching and long cable runs, supporting multiple remote mmWave heads and polarizations for flexible Over-the-Air (OTA) testing. Technical Specifications Frequency Bands: FR1 (sub-6 GHz): 380 MHz to 6 GHz FR2 (mmWave): 24.25 GHz to 43.5 GHz Bandwidth: Supports up to 1.2 GHz of signal generation and analysis bandwidth Configurations: The Agilent/Keysight S9101A is available in three standard configurations: S9101A-TR1 (One-Channel): Includes one RF transceiver and one mmWave transceiver, providing one Tx channel and one Rx channel. Operates in either FR1 or FR2 at a time. S9101A-BK1 (One-Channel with Blocker): Includes two RF transceivers and one mmWave transceiver. This configuration supports Rx testing with a blocking signal, enabling simultaneous generation of a wanted signal and a blocking signal. Operates in either FR1 or FR2 at a time. S9101A-TR2 (Two-Channel): Includes two RF transceivers and two mmWave transceivers, providing two independent channels of Tx and Rx capabilities. Each channel operates in either FR1 or FR2 at a time. Measurement Capabilities: High-volume testing of 5G NR network equipment and radio components Supports 5G NR (3GPP Release 15 and higher) waveforms Enables automated testing of 5G NR equipment in both FR1 and FR2 spectrum bands Delivers ACLR and EVM performance for improved measurement insight and reduced uncertainty Capable of testing receiver sensitivity, transmitter output power, EVM, ACLR, and more Supports capture and playback depth of up to 512 MSa Frequency Reference: High accuracy, aging rate, and stability 100 MHz Ref Out, Frequency Reference: Accuracy < ± 16 Hz, typical, within 1 year since last calibration, from 20 to 30°C. 10 MHz Ref Out, Frequency Reference: Accuracy < ± 1.6 Hz, typical, within 1 year since last calibration, from 20 to 30°C. Supports 10 MHz or 100 MHz inputs. Recommended Calibration Cycle: 1 year Performance Characteristics: Low EVM and ACLR Delivers best Power and EVM at chamber for OTA readiness System Performance Conditions: System performance documented in the data sheet is valid under specific conditions including: Ambient temperature of 25 °C (unless otherwise noted) System within its calibration cycle System stored within allowed operating range for at least two hours before power-on Minimum two hours continuous power-on warm-up time with the analyzer or X-Series application running and mmWave transceiver powered on "Align Now All" alignments run in the M9410A PXIe VXT module within the previous 7 days after warm-up "Fast Alignment" run within the previous 8 hours or if temperature has changed by more than 5 °C Amplitude accuracy characteristics apply after system calibration and if humidity has not changed by more than ± 10% Insertion Loss: Approximately 0.25 to 0.5 dB of insertion loss between the S9101A front panel connectors and the M9410A module due to the M9155C switch module and cabling. Interfaces Ethernet: Two, 10/100/1000BASE-T (RJ-45) Gigabit

S9101A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	5G NR multi-band vector transceiver system
Series Family	Keysight S910xA 5G manufacturing transceivers
FR1 Frequency Range	380 MHz to 6 GHz
FR2 Frequency Range	24.25 to 43.5 GHz
Waveform Class	5G NR 3GPP Release 15 and higher
RF Port Frequency	380 MHz to 6 GHz Type-N female 50 ohm nominal
RF Maximum Safe Input Power	plus 27 dBm; 0 VDC
RF Maximum Reverse Input Power	plus 30 dBm; 0 VDC
Reference Out Amplitude	9.5 dBm nominal 10 MHz and 100 MHz BNC female
External Reference In	10 MHz or 100 MHz sinewave lock
Trigger Logic	3.3 V CMOS TTL compatible 5 V tolerant
Trigger Input Threshold	1.65 V typical; minimum swing 250 mV typical
Minimum Trigger Pulse Width	100 ns typical
Chassis Height With Feet	197.8 mm (7.79 in)
Chassis Height Feet Removed	192.4 mm (7.6 in)
Chassis Width	449.5 mm (17.70 in) with rugged panel
Chassis Depth	568.9 mm (22.40 in) with rugged panel
Weight Option TR	20.4 kg (45.0 lb)
S9101RH Height	66 mm
S9101RH Width	139 mm
S9101RH Depth	183 mm
S9101RH Weight	2.2 kg (4.85 lb)
AC Power Lower Range	1200 W maximum
AC Power Upper Range	1300 W maximum
Line Frequency	50/60 Hz

PARAMETER	VALUE
Vent Clearance	at least 50 mm around chassis vent holes
S9101RH Power Feed	DC over RF cable assembly to LO/Pwr/Ctrl/IF In; no AC inlet on the head
Embedded Controller	M9037A PXIe embedded controller
Chassis Model	M9019A PXIe chassis
RF Transceiver Module	M9410A PXIe VXT vector transceiver
Application Software	N90E1S91A 5G Multi-Band Vector Transceiver X-Apps

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

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Option TR1: one M9410A PXIe RF vector transceiver plus one S9101RH mmWave transceiver
Option BK1: two M9410A transceivers (wanted plus blocker) plus one S9101RH
Option TR2: two M9410A transceivers plus two S9101RH mmWave transceivers

Specifications

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Notes
Numeric rows from Keysight S9101A 5G Multi-Band Vector Transceiver Startup Guide 9018-80095.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

Aumictech
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

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