


Aumictech

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 85102B

HP Agilent 85102B 8510 IF Detector Module The HP 85102B is the IF/detector (bottom box) of 8510B/8510C network analyzer systems. OEM 8510C data sheet 5091-8484E and 8510C service documentation describe the 85102 IF/detector as the receiver that processes downconverted IF from 851XA test sets for magnitude, phase, and group delay from 45 MHz to 110 GHz depending on test set and source. IF detection and analog processing for 8510B/C VNA systems with 8514/8515/8517 test sets and 8360 sources. Supports 45 MHz to 50 GHz coax and to 110 GHz waveguide systems The HP 85102B is the IF/detector (bottom box) of 8510B/8510C network analyzer systems. OEM 8510C data sheet 5091-8484E and 8510C service documentation describe the 85102 IF/detector as the receiver that processes downconverted IF from 851XA test sets for magnitude, phase, and group delay from 45 MHz to 110 GHz depending on test set and source. IF detection and analog processing for 8510B/C VNA systems with 8514/8515/8517 test sets and 8360 sources. Supports 45 MHz to 50 GHz coax and to 110 GHz waveguide systems



MODEL

**Agilent / Keysight
85102B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

85102B

LISTING

<https://aumictechlabs.com/products/85102b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 85102B is an IF detector module and signal converter designed to extend the measurement capabilities of the 8510 network analyzer series. This S-parameter test set component enables two-port device characterization through magnitude, phase, and group delay

measurements across extended frequency ranges. Operating as part of a modular system architecture, the 85102B integrates with the 8510 platform to deliver precise RF and microwave component analysis in development and manufacturing environments.

Technical Specifications

Measurement Type: S-parameter characterization of two-port devices

Measurement Parameters: Magnitude, phase, and group delay

System Dynamic Range: Up to 106 dB receiver dynamic range and 93 dB system dynamic range (configuration-dependent)

Frequency Coverage: Supports system operation from 45 MHz to 110 GHz with appropriate test sets and accessories

Key Features

Modular IF detector design integrates within 8510 system architecture

Configuration-dependent dynamic range optimization for frequency band selection

Signal conversion functionality enables extended measurement bandwidth

System Integration The 85102B functions as a plug-in module within the 8510 network analyzer family. System configuration flexibility allows users to select specific sources, S-parameter test sets, and detector modules to match measurement requirements.

Compatibility & Integration

Compatible Systems: Agilent/Keysight 8510A, 8510B, and 8510C network analyzer platforms

Interface: GPIB control and data transfer

System Source Control: Compatible with source control cable integration for external source operation

Restriction: Do not use with certain 8510C configurations or older revisions to prevent system lock-up or malfunction

The 85102B represents a core component in the 8510 modular ecosystem, delivering specialized signal detection and conversion for demanding characterization applications.

85102B Characteristics / Specifications

PARAMETER	VALUE
Model	85102B
Instrument Type	8510 IF/detector module
Family Frequency Coax 2p4 Mm	45 MHz to 50 GHz
Family Frequency Coax 1p0 Mm	45 MHz to 110 GHz
Family Frequency Waveguide	33 GHz to 110 GHz
Partner Display 85101B	8510B display/processor
Partner Display 85101C	8510C display/processor
Partner Test Set 8515A	45 MHz to 26.5 GHz
Partner Test Set 8517A	to 50 GHz 2.4 mm
Partner Source	8360 series synthesized sweeperSParameters: S11 S21 S12 S22
Measurement Types	magnitude phase group delay
Time Domain	Option 010 inverse FFT impulse/step
Manufacturer	HP Agilent Keysight
Form Factor	8510 bottom-box IF/detector
Related If Detector 85102C	later 8510C IF/detector
If Path	downconverted IF from S-parameter test set
Dynamic Range Class	set by paired 8517A/8515A test set
Sweep Modes	step ramp frequency list on 8510C with 8360
Calibration Temperature Class	23 C plus or minus 3 C kits
Use Case	VNA IF detection
Bus	HP-IB via 85101 display/processor
Two Port Networks	linear characterization

85102B Specifications

PARAMETER	VALUE
HP Agilent 85102B 8510 IF Detector Module	Overview
Applications	IF detection and analog processing for 8510B/C VNA systems with 8514/8515/8517 test sets and 8360 sources.
Key Features	8510 IF/detector receiver bottom box
Works with 85101B/C display processors	Supports 45 MHz to 50 GHz coax and to 110 GHz waveguide systems
Technical Specifications	Model: 85102B

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	
Technical Specifications	
PARAMETER	VALUE
Model	85102B
Instrument Type	8510 IF/detector module
Family Frequency Coax 2p4 Mm	45 MHz to 50 GHz
Family Frequency Coax 1p0 Mm	45 MHz to 110 GHz
Family Frequency Waveguide	33 GHz to 110 GHz
Partner Display 85101B	8510B display/processor
Partner Display 85101C	8510C display/processor
Partner Test Set 8515A	45 MHz to 26.5 GHz
Partner Test Set 8517A	to 50 GHz 2.4 mm
Partner Source	8360 series synthesized sweeper
S Parameters	S11 S21 S12 S22
Measurement Types	magnitude phase group delay
Time Domain	Option 010 inverse FFT impulse/step
Manufacturer	HP Agilent Keysight
Form Factor	8510 bottom-box IF/detector
Related If Detector 85102C	later 8510C IF/detector
If Path	downconverted IF from S-parameter test set
Dynamic Range Class	set by paired 8517A/8515A test set
Sweep Modes	step ramp frequency list on 8510C with 8360
Calibration Temperature Class	23 C plus or minus 3 C kits
Use Case	VNA IF detection
Bus	HP-IB via 85101 display/processor
Two Port Networks	linear characterization
Specifications	

PARAMETER	VALUE
Model	85102B
Instrument Type	8510 IF/detector module
Family Frequency Coax 2p4 Mm	45 MHz to 50 GHz
Family Frequency Coax 1p0 Mm	45 MHz to 110 GHz
Family Frequency Waveguide	33 GHz to 110 GHz
Partner Display 85101B	8510B display/processor
Partner Display 85101C	8510C display/processor
Partner Test Set 8515A	45 MHz to 26.5 GHz
Partner Test Set 8517A	to 50 GHz 2.4 mm
Partner Source	8360 series synthesized sweeperSParameters: S11 S21 S12 S22
Measurement Types	magnitude phase group delay
Time Domain	Option 010 inverse FFT impulse/step
Manufacturer	HP Agilent Keysight
Form Factor	8510 bottom-box IF/detector
Related If Detector 85102C	later 8510C IF/detector
If Path	downconverted IF from S-parameter test set
Dynamic Range Class	set by paired 8517A/8515A test set
Sweep Modes	step ramp frequency list on 8510C with 8360
Calibration Temperature Class	23 C plus or minus 3 C kits
Use Case	VNA IF detection
Bus	HP-IB via 85101 display/processor
Two Port Networks	linear characterization

Notes

From HP/Agilent 8510C family data sheet 5091-8484E and 8510C service IF/detector identification. System dynamic range and noise floor follow the paired test set, not the 85102B alone.

Ordering Information

OPTION	DESCRIPTION
Option 010	processing path
Option 008	path on 8510C

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>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.