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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 35651C

HP Agilent 35651C 3565S Signal Processing Module The HP 35651C is the signal-processing module for the 3565S / 35650A multichannel dynamic-signal system. OEM 3565S descriptions list 35651C as executing downloadable programs from application software, transferring measurement data to the host via HP-IB, directing throughput to disk, synchronizing multiple systems, and providing hardware diagnostics on RS-232. Aerospace listings identify a Motorola 56002 DSP and 1 MB RAM on 35651C. FFT, MIMO, and downloaded DSP in a 3565S system that already has analog input modules. The HP 35651C is the signal-processing module for the 3565S / 35650A multichannel dynamic-signal system. OEM 3565S descriptions list 35651C as executing downloadable programs from application software, transferring measurement data to the host via HP-IB, directing throughput to disk, synchronizing multiple systems, and providing hardware diagnostics on RS-232. Aerospace listings identify a Motorola 56002 DSP and 1 MB RAM on 35651C. FFT, MIMO, and downloaded DSP in a 3565S system that already has analog input modules.



MODEL

**Agilent / Keysight
35651C**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

35651C

LISTING

<https://aumictechlabs.com/products/35651c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 35651C is the central processing module for the HP 3565S Multichannel Measurement System, managing system operations, data acquisition, and real-time signal processing across multiple measurement channels. It executes downloadable measurement

programs, controls data flow to disk storage, and communicates with host computers via HP-IB while supporting external synchronization and triggering of multiple systems.

Technical Specifications

Processor: Motorola MC68020 CPU at 20 MHz with MC68881 floating-point coprocessor

Digital Signal Processor: One Motorola 56002 DSP chip

RAM: 1 Mbyte standard; expandable to 4 Mbytes (Option 104) or 16 Mbytes (Option 116)

DSP Memory: 64k × 24 SRAM (X/P and Y configurations); 64k × 32 ROM (ROM0 and ROM1)

System Clock: 20 MHz

FFT Performance: 4.0 ms nominal for 1K complex block size with windowing and bit reversal

Real-time Bandwidth: 51.2 kHz

Module-to-Module Transfer Rate: 2.5 Msamples/sec maximum

Signal Processing to Host Transfer Rate: 329 kbytes/sec

Module-to-Signal Processing Memory Transfer Rate: 1.7 Msamples/sec

Maximum Throughput: >1.3 Msamples/sec with HP 35659A module and Option AT3

Key Features

HP-IB (IEEE 488) interface conforming to IEEE Std 488-1978 for host communication

RS-232 port for hardware diagnostics

External SMB connectors for multi-system synchronization and triggering

System synchronization and triggering support

Flexible program download capability for custom measurement configurations

Typical Applications

Multi-channel dynamic signal analysis

Real-time FFT-based signal processing

Disk-based data acquisition and throughput management

Networked measurement systems requiring external trigger synchronization

Compatibility & Integration

Designed as the control module for HP 3565S systems.

Interfaces with measurement modules via internal system bus and communicates with host computers and external systems through HP-IB, RS-232, and SMB connectors.

35651C Characteristics / Specifications

PARAMETER	VALUE
Model	35651C
Instrument Type	Signal processing module
Host Mainframe	35650A / 3565S
Dsp	Motorola 56002 (aerospace 35651C listing)
Ram	1 MB (aerospace 35651C listing)
Host Interface	HP-IB
Diagnostics Port	RS-232
Role	execute downloadable programs from application software
Throughput	directs measurement data throughput to disk
Sync	synchronizes multiple 3565S systems
Family	HP 3565S
Related Mainframe	35650A eight-slot cage
Related Input	35652A DC to 51.2 kHz input
Form Factor	3565S plug-in
Manufacturer	HP Agilent Keysight
Use Case	3565S measurement processor
System Frequency	64 uHz to 102.4 kHz system class
Operating Temperature Class	3565S laboratory window
Power	from 35650A backplane
Literature	HP 3565S technical reference 35651C
One Per System	each 3565S system must contain one signal processing module
Documentation Type	OEM module description
Operating temperature	Class: 3565S laboratory window

35651C Specifications

PARAMETER	VALUE
HP Agilent 35651C 3565S Signal Processing Module	Overview
Applications	FFT, MIMO, and downloaded DSP in a 3565S system that already has analog input modules.
Key Features	Required processor in every 3565S system
Technical Specifications	Model: 35651C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: 3565S laboratory window
Operating Temperature	Class: 3565S laboratory window
Operating Temperature Class	3565S laboratory window
Power	from 35650A backplane
Literature	HP 3565S technical reference 35651C
One Per System	each 3565S system must contain one signal processing module
Documentation Type	OEM module description Notes From HP 3565S 35651C signal-processing-module listings (HP-IB, downloadable programs, 56002/1 MB RAM in NSN-style descriptions). Clock rate and FFT length are properties of the loaded application software.

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