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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 59551A GPS Measurements Synchronization Module

HP 59551A GPS Measurements Synchronization Module The HP 59551A isaGPS-based measurements synchronization module focused on power-industry transmission protection and wide-area synchronization. It provides highly accurate timing outputs including 1 pps, IRIG-B, programmable pulse/TOD, and multiple time-tag inputs for sequence-of-events recording. On loss of satellites it enters SmartClock holdover that maintains synchronization for up to 24 hours with specified accuracy loss. Dual RS-232C ports (rear primary, front secondary) allow command/monitoring without interrupting outputs. The HP 59551A isaGPS-based measurements synchronization module focused on power-industry transmission protection and wide-area synchronization. It provides highly accurate timing outputs including 1 pps, IRIG-B, programmable pulse/TOD, and multiple time-tag inputs for sequence-of-events recording. On loss of satellites it enters SmartClock holdover that maintains synchronization for up to 24 hours with specified accuracy loss. Dual RS-232C ports (rear primary, front secondary) allow command/monitoring without interrupting outputs. Electric power transmission protection and control synchronization; sequence-of-events timestamping; IRIG-B distribution; laboratory GPS timing where time-tag inputs are required.



MODEL

**HP / Agilent
59551A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

59551A

LISTING

<https://aumictechlabs.com/products/59551a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 59551A GPS Measurements Synchronization Module delivers precise timing and frequency references for distributed measurement systems using GPS satellite signals. It automatically maintains synchronization during signal loss via holdover mode, sustaining accuracy for up to 24 hours. The module interfaces with external instruments and computers through dual RS-232C ports and outputs multiple time-reference formats: 1 PPS (One-Pulse-Per-Second), programmable pulse signals, IRIG-B time-code, 10 MHz frequency reference, and TTL time-tag inputs. Four front-panel LED indicators display power status, GPS lock condition, holdover mode activation, and system alarms. Technical Specifications Synchronization Source: GPS satellite signals Primary Timing Output: 1 PPS (One-Pulse-Per-Second) continuous signal Holdover Duration: Up to 24 hours with accuracy degradation Frequency Reference Output: 10 MHz Power Input: 90–132 VAC or 198–264 VAC AC Jack Option 002: One-Pulse-Per-Two-Seconds (PP2S) output synchronized to even GPS time seconds Key Features Four front-panel LEDs: Power, GPS Lock, Holdover, Alarm indicators Dual RS-232C serial interfaces DB-25 (rear panel) and 9-pin (front panel) connectors Programmable pulse output for user-defined timing requirements IRIG-B formatted time-code output for time distribution and magnetic tape annotation Alarm BITE relay output for external device signaling TTL time-tag input connectors for conditioned time signals N-type (female) GPS antenna connector Remote control, monitoring, and firmware identification via RS-232C using standard SCPI commands (*IDN?) Typical Applications Telecommunications network synchronization Aerospace and research timing systems Utility substation and power plant frequency references Multi-site coordinated data acquisition Magnetic tape annotation and time distribution networks Compatibility & Integration The 59551A integrates with measurement systems requiring distributed GPS-disciplined timing through industry-standard serial interfaces and multiple output formats. RS-232C connectivity enables PC-based remote operation and firmware management.

Features & description

From manufacturer datasheet

Features

- GPS synchronization with SmartClock holdover to 24 hours • IRIG-B formatted time-code output • Programmable pulse / TOD output • Three time-tag inputs for edge timestamping • Separate front and rear RS-232C ports

59551A Characteristics / Specifications

PARAMETER	VALUE
Model	59551A
Manufacturer	Hewlett Packard / Agilent / Symmetricom
Instrument Type	GPS measurements synchronization module
Alias	HP 59551A; Agilent 59551A
Primary Application Class	power industry transmission synchronization
Holdover Duration Class	up to 24 hours with some accuracy loss
Reference Technology	GPS with SmartClock learned aging/temperature compensation
Output 1 PPS	yes
Output IRIG B	yes
Output Programmable Pulse TOD	yes
Time Tag Inputs	Time Tag 1; Time Tag 2; Time Tag 3
Time Tag Signal Class	TTL edges
Alarm BITE Output	yes
Antenna Input	GPS antenna connector
RS232 Ports	Port 1 rear primary; Port 2 front secondary
Firmware Upgrade Port	Port 1 rear only
AC Power Standard	120-240 VAC 50/60 Hz; 50 VA max
DC Power Standard Class	plus/minus 129 VDC via XLR
Serial Prefix Supported In Guide	3542 and above
Firmware Revision In Guide	3543 and above
Related Time Frequency Receiver	58503A / 58503B
XLR Pin	dc supply positive
Status Indicators	GPS lock; holdover; outputs valid/reduced accuracy
Command Interface	RS-232C SCPI-style command set in operating guide
Time Zone Offset	programmable local offset

PARAMETER	VALUE
Leap Second Status	readable via interface

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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Output 1 PPS	yes
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Time Tag Inputs	Time Tag 1; Time Tag 2; Time Tag 3
Time Tag Signal Class	TTL edges
Alarm BITE Output	yes
Antenna Input	GPS antenna connector
RS232 Ports	Port 1 rear primary; Port 2 front secondary
Firmware Upgrade Port	Port 1 rear only
AC Power Standard	120-240 VAC 50/60 Hz; 50 VA max
DC Power Standard Class	plus/minus 129 VDC via XLR
Option AWM: +48 Vdc power supply Option 170: 90-264 Vac power supply Option 1CM: 19 inch (483 mm) rack mount Option AXB: 23 inch (584 mm) rack mount	
Specifications	
PARAMETER	VALUE
Serial Prefix Supported In Guide	3542 and above
Firmware Revision In Guide	3543 and above
Related Time Frequency Receiver	58503A / 58503B

PARAMETER	VALUE
XLR Pin 1	dc supply positive
XLR Pin 2	dc return
XLR Pin 3	chassis ground
Status Indicators	GPS lock; holdover; outputs valid/reduced accuracy
Command Interface	RS-232C SCPI-style command set in operating guide
Time Zone Offset	programmable local offset
Leap Second Status	readable via interface

Notes

Rows from HP 59551A Getting Started and Operating/Programming guides (shared with 58503A). Dense frequency-accuracy numbers for the companion 58503A 10 MHz receiver must not be copied onto 59551A without the 59551A specifications appendix. Confirm power option (AC vs plus/minus 129 VDC / 48 V) on the serial plate.

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

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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.