



Get Your *Bluetooth*[®] & WLAN Devices to Market Quickly and Reduce Test Cost

Agilent's N4019C *Bluetooth* and WLAN Wireless Test Manager (WTM) software provides ready-to-use tests, test plans, test sequencing, and menu-selectable hardware support for quick and easy automation of the wireless device calibration and test processes. An integrated test development wizard simplifies making software modifications and adding user-defined tests.

The N4019C is the development and run-time version, which includes the source code to allow you to customize the product to your own needs. The N4018C Wireless Test Manager is a run-time only version.



Simplify Your Automated Test Development and Support

- Achieve time-to-market goals with Agilent's test manager for *Bluetooth* and Wireless LAN (WLAN)
- Reduce programming with Agilent's test wizard, letting you focus on test development
- Quick and easy optimization of *Bluetooth* and WLAN module calibration or device testing
- Improve product design by using automated menu-driven device characterization
- Customize test development with the power of Microsoft[®] Visual Studio[®].NET



Agilent Technologies

Automate Tests Quickly with the *Bluetooth* and WLAN Wireless Test Manager

The *Bluetooth* and WLAN Wireless Test Manager software saves time and resources when automating device testing. Designed for use with Agilent's N4010A Wireless Connectivity Test Set, the test manager makes test development, test execution, and support easier than ever. Applicable to manufacturing, integration, and development, the test manager includes a test executive, *Bluetooth*- and WLAN-specific tests, easy-to-use interfaces, Visual Basic® .NET programming and Windows® PC compatibility.

Simplify and Expedite Test Efforts

Designed specifically for test engineers, the test manager eliminates the frustrating complexity associated with automating and optimizing device testing. Why struggle with computer control and data management issues, when the test manager lets you focus on test and supplements your *Bluetooth* and WLAN testing expertise with Agilent experience and measurement knowledge? The *Bluetooth* and WLAN test manager makes it simple to configure system hardware. It provides for point and click set-up of the N4010A test set and selected power supplies, bar code readers, test fixtures, and printers.

Use Agilent or Custom Test Plans

Run a pre-defined Agilent test plan, customize an existing plan, or create your own custom test plan. The test manager makes it easy to modify test parameters, adjust test limits, change the order of test steps, or build your own test plan – without programming.

Create Custom Test Steps, Support Additional Hardware

With the N4019C development version, you can customize your test routines to add new measurements, device control, and calibration routines. A test wizard guides you through adding custom steps, and a device control template file is provided for easy insertion of device-specific control commands. The wizard automatically adds most of the programming code required for a new step. To complete the step, add the Visual Basic programming code for calculation, device control, and instrument control. Once added, custom steps become part of the test menu and can be used without additional programming.

Control Your *Bluetooth* and WLAN Devices

Device control is built-in to both the N4019C and N4018C to support *Bluetooth* devices connecting with RS232, using the H4 UART protocols, and certain manufacturer's devices using USB drivers or proprietary interfaces.

The flexibility of the N4019C development version allows you to customize your device control and build control commands specific to your *Bluetooth* or WLAN device. A template file is supplied for insertion of device-specific commands – making it easy to control and set up your devices using the test manager.

Flexibility to Meet Your Test Needs

The *Bluetooth* and WLAN test manager allows you to use GPIB, LAN, USB, and serial interfaces to control instruments, devices, and fixtures. Test manager utilities allow you to run the *Bluetooth* and WLAN test manager as a remote application, manage path loss, convert the user interface to local language, limit user capability, run two systems with one PC, and move test plans between systems. Run conditions can be set to stop, continue, or retry on failure.

Wireless Test Manager allows you to:

- Integrate with other test executives
- Generate custom XML measurement reports
- Produce graphs from measurement data
- Export results for off-line analysis

Common Software Savings

The *Bluetooth* and WLAN test manager is easy to learn and simple to use. You will not have to learn complex applications and multiple programming languages to support test. Since Agilent's interfaces and development tools are the same across all of its test manager products, leveraging your test manager knowledge with other technologies has never been easier.

Multiple Technologies

Also available for the key wireless technologies, other Wireless Test Manager products support W-CDMA, cdma2000, 1xEV-DO, IS-95, GSM, GPRS, EGPRS, and AMPS testing.

Order Information

- N4019C *Bluetooth* and WLAN Wireless Test Manager, development licence and software
- N4018C *Bluetooth* and WLAN Wireless Test Manager, run-time licence and software

Tests Supported for *Bluetooth*

Bluetooth 1.2 tests

Transmitter

- Output power
- Power control
- Modulation characteristics
- Initial carrier frequency tolerance
- Carrier frequency drift

Receiver

- Single slot sensitivity
- Multi-slot sensitivity
- Maximum input level

Bluetooth v2.0 + EDR tests

Transmitter

- EDR relative transmit power
- EDR modulation accuracy and carrier frequency stability
- EDR differential phase encoding

Receiver

- EDR Rx sensitivity
- EDR Rx BER floor performance
- EDR Rx maximum input level

Tests Supported for WLAN

Transmitter

- Average power (802.11a/b/g/CW)
- EVM (802.11a/b/g)
- Frequency error (802.11a/b/g)
- Center frequency leakage (802.11a/g)
- Carrier suppression (802.11b)
- Symbol clock frequency error (802.11a/g)
- Chip clock frequency error (802.11b)
- Transmit spectral mask (802.11a/b/g)
- Spectral flatness (802.11a/g)
- Power ramp up time (802.11b)
- Power ramp down time (802.11b)
- CW frequency offset
- IQ offset

Receiver

- PER (802.11a/b/g)

Hardware Supported

Test instruments

- Agilent N4010A Wireless Connectivity Test Set
- N4010A Option 101 required for *Bluetooth* 1.2 tests
- N4010A Option 101 and 107 required for *Bluetooth* v2.0 + EDR tests
- N4010A Option 102 or 103 required for WLAN tests
- Agilent 66311B, 66319B, and 66321B power supplies
- Agilent 34970A with 34901A, 34903A, and 34907A data acquisition/switch unit

Fixtures

- Tescom TC-5941, TC5942, and TC-5952B

Adapters

- Agilent 82357A USB/GPIB interface
- National Instruments GPIB-USB-A USB to GPIB

PC cards

- Agilent GPIB
- National Instruments GPIB
- Advantech PCI 1750 digital I/O
- Control RocketPort 95870-3 and 99096-3 multi-port serial card

Peripherals

- Symbol LS-1220-1200A fixed bar code reader
- Symbol LS-3603MX-1200A, P300FZY, and LS40041-1100 handheld bar code reader
- HP printers
- Epson TM-U200D and TM-U220D strip printer

PC Requirements

- Operating system: Microsoft® Windows XP Professional® Service Pack 2
- Windows 2000® Professional Service Pack 4
- Microsoft Visual Studio .NET (for N4019C development only)
- Microsoft Internet Explorer® Version 5.0 or later
- 600 MHz Pentium® III or higher (1 GHz Pentium III or higher for extended capability)
- 256 MB RAM minimum (512 MB is recommended for normal development and is required for extended capability operation)
- 200 MB free hard drive space
- CD-ROM drive
- GPIB card or converter with VISA drivers (one per test system)
- USB port for security key connection
- Serial ports for fixtures, device control, and bar code reader

Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your Agilent equipment throughout its lifetime. Your equipment will be serviced by Agilent-trained technicians using the latest factory calibration procedures, automated repair diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

Agilent offers a wide range of additional expert test and measurement services for your equipment, including initial start-up assistance onsite education and training, as well as design, system integration, and project management.

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For More Information

Further information on the N4019C *Bluetooth* and WLAN Wireless Test Manager is available at:

www.agilent.com/find/N4019C

Further information on the N4010A Wireless Connectivity Test Set is available at:

www.agilent.com/find/N4010A

Further information on Agilent's *Bluetooth* solutions is available at

www.agilent.com/find/bluetooth

Further information on Agilent's WLAN solutions is available at

www.agilent.com/find/WLAN

For more information on the adaptable Wireless Test Manager, visit the product pages at

www.agilent.com/find/wtm

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

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