PC-Doctor Service Center™ Data Sheet

PC-Doctor Service Center is the diagnostic toolkit used by repair organizations, IT professionals, system builders and others to troubleshoot and isolate hardware issues, and to verify system integrity on servers, desktops, notebooks and mobile devices. The Service Center Kit includes diagnostics for Windows, DOS, Android, and Bootable Diagnostics that includes support for PCs and Intel-based Macs.

Each kit contains a bootable USB key, CD and DVD test media, loopback adapters for serial, parallel, audio, and RJ45 ports, and a professional carrying case. In addition, the Service Center Premier Kit includes a power supply tester and PCI and miniPCI POST cards with remote display.

What's New?

- Drive Erase – Certified NIST-Compliant!
    - o Firmware-based erasure across NVMe, ATA, SCSI/SAS, and MMC drives.
    - o Cloud storage for reports
- Android version 8.x Oreo and 9.x Pie support
- Support for NVDIMM testing
- DirectX 12 testing
- Storage testing improvements
    - o Improved SAS drive coverage
    - o Improved Intel Optane support
    - o Expanded NVMe testing
- Improved processor support
    - o AMD Ryzen Mobile CPUs
    - o Skylake-W Xeon processors
    - o AVX2 for AMD CPUs
- Windows Server 2016 support
- Updated Video Interactive testing
- AMD FreeSync testing
- Improved Power State testing
- NVIDIA CUDA testing for Bootable Diagnostics
- Diagnostic refresh – newer drivers, diagnostics and chipset support
- And more…

Features

Sessions

Automatically saves system information, test results and system snapshots to the Multipurpose USB Device (MUD) or to the cloud via Service Center Remote:

- Organize by customer, system or other desired parameters
- Store test results from multiple test environments in one place as organized by your choice of sessions

My Links

Create shortcuts to the most used utilities, test scripts, or websites: The first five links are added to the main application screen for easy access.

System Snapshots

Snapshots provide a one-click solution to save a detailed system inventory on PCs and Macs:

- All hardware devices
- (Windows) OS, virus protection, web browser, Windows startup programs and device drivers

Compare two system snapshots to visually display all hardware and driver changes—great for auditing and building customer confidence.

Reporting

Create and save professional and printable reports for your customers. Customize the report to include:

- Report header with your company information and logo
- System Information: a quick summary or a more detailed view
- Tests performed and their Pass/Fail status
- System Snapshot comparisons for PCs and Macs
- Save, view and print reports in the cloud using a Free Service Center Remote account!

Personal Computers (PCs)

Hardware and Tests

The following infomation highlights key hardware support and tests. A complete list of all 500 diagnostics is available at:
http://www.pcdservicecenter.com/diagnostics.php

CPU

Chipset support:

• Support of the latest Intel and AMD chipsets

CPU/CoProcessor testing:

• Instruction Sets – MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, SSE4A, AVX, AVX2
• Buffer, Cache, Commands, Exceptions, Floating Point Unit, Interrupts, Operations, Prime Number Generation, Registers
• Stress test

Memory

• Improved coverage in Windows
• Extended memory
• 17 testing algorithms for maximum coverage
• Low-level testing in protected-mode:
    o Supports 96GB+ (DOS), unlimited in Windows and Bootable
    o Five testing algorithms that implement research done in conjunction with the University of Nevada, Reno (view here): http://tinyurl.com/pcdmemory

Storage

Supported controllers: PATA, SATA, SCSI, SAS

Supported devices:

• Hard Drives, Solid State Drives, SCSI Drives, USB Drives, Card Readers, eMMC, Floppy Drives, NVMe Drives, SAS Drives
• Optical Drives:
    o Blu-ray/BD-R/BD-RE, HD DVD
    o CD-ROM/-R/-RW/+R/+RW
    o DVD-ROM/+R DL/-R DL/+R/-R/RAM/+RW/-RW

Available testing:

• S.M.A.R.T. Status and Conveyance Tests, Short and Long Self-Tests, Log Viewer
• Targeted Read Test algorithm created from a hard drive study done in conjunction with an OEM (view here): http://tinyurl.com/hddcasestudy

• Test individual hard drives within RAID configurations
• 40 Hard Drive, 23 Solid State Drive, 18 SCSI, 75 Optical Drive, 21 Floppy Drive, 5 MMC Storage, 12 Removable Storage, 6 NVMe Drive tests

System Board

Supported chipsets: AMD, ATI, Intel, nVidia, SiS, VIA

Available testing:

• BIOS Timer, CMOS, CMOS RAM, RTC
• DMA Channels, IRQ Controller, RAM Refresh, SMBus, System Timer
• PCI, PCIe, miniPCI, miniPCIe, PCMCIA, PCMCIA Detection, CardBus
• 8042 keyboard controller, USB
• IEEE1394, USB
• 14 serial port tests
• 6 parallel port tests

Multimedia

Verify advanced audio and video capabilities through Windows or basic audio and video capabilities through Bootable/DOS diagnostics:

• DirectX (support through DX12) and CUDA video cards, Video Ports
• Audio testing up to 7.1 surround sound
• TV tuner cards – analog and digital
• Multi-Touch Touch Screen
• Webcam
• RealSense 3D Camera

Available Windows testing:

• 26 Video Card tests
• 6 TV Tuner Card tests
• 3 Touch Screen tests
• 3 Sound Card tests
• 9 Webcam tests
• 2 Display tests
• 1 Video Port test

Available Bootable Diagnostics/DOS testing:

• 12 Video Card tests
• 9 Webcam tests
• 3 Touch Screen tests
• 7 Audio tests
• 1 Display test

Personal Computers (PCs) Continued

Communication

Available testing:

- 29 Network tests:
  - o Wired tests (10/100/1000Mb/10Gig)
  - o Wireless tests (802.11a/bt/g/n)
- 3 Bluetooth tests
- 9 Modem tests
- 2 Mobile broadband tests
- 2 NFC tests

Sensors

- Accelerometer
- Ambient Light Sensor
- Gyrometer
- Magnetometer
- GPS
- Fingerprint Reader
- Eye Tracker
- Biometrics Camera

Power State

- Hibernate
- Modern Standby
- Standby

Miscellaneous

- 18 Interactive tests
  - o Alien FX LED Verification
  - o 4 Digitizer Stylus
  - o Keyboard
  - o Mouse
  - o Trackpad
  - o Trackpoint
  - o Lid Sensor
  - o 2 Microphone
  - o Joystick
  - o Printer
  - o Standby
  - o Hibernate
  - o USB Ports
  - o Video
- 4 Battery tests
- 4 IPMI tests

Drive Erase

- Certified NIST-Compliant erasure solution
- Two ATA Secure Erase methods
- Three ATA Sanitize Erase methods
- Two NVMe Secure Erase methods
- Two NVMe Sanitize Erase methods
- MMC Secure Erase
- Three Block Erase methods (based on DoD 5022 guideline)
  - o 1-pass
  - o 3-pass
  - o 7-pass
- Two methods to erase in DOS (based on DoD 5022 guideline)
  - o Clear – single pattern
  - o Sanitize – three patterns + verify
- Erase multiple drives simultaneously

Automation

Using built-in command-line and boot functions, you can:

- Launch test scripts or individual tests
- Save test logs and reports

System Events

Conveniently locate problems reported by Device Manager or the Windows Event Log, including devices without an installed driver, Application Crashes, and OS Crashes (BSOD). BSOD entries with available Windows dump files are analyzed to root cause the device driver that caused the BSOD.

Test Scripts

Test scripts are sequences of tests that run sequentially or in parallel, which can be saved for reuse. Create scripts in Windows or Bootable using the Script Editor to:

- Perform testing in parallel–put extra load on the system to better locate intermittent issues and speed up test time
- Specify minimum time per test or number of times to run each test
- Customize testing parameters: default values have been set to balance accuracy and speed

Intel-Based Apple Macs

Hardware and Tests

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CPU/CoProcessor testing:

• Instruction Sets – MMX, SSE, SSE2, SSE3, SSSE3, SSE4.1, SSE4.2, SSE4A, AVX, AVX2
• Buffer, Cache, Commands, Exceptions, Floating Point Unit, Interrupts, Operations, Prime Number Generation, Registers
• Stress test

Memory

• Same proven test algorithms used for years by PC-Doctor
• 14 memory tests

Storage

Supported controllers: SATA, SCSI, SAS

Supported devices:

• Hard Drives, Solid State Drives, SCSI Drives, USB Drives, Card Readers, Floppy Drives, Zip Drives, NVMe Drives
• Optical drives:
    o Blu-ray/BD-R/BD-RE, HD DVD
    o CD-ROM/-R/-RW/+R/+RW
    o DVD-ROM/+R DL/-R DL/+R/-R/RAM/+RW/-RW

Available testing:

• S.M.A.R.T. Status and Conveyance Tests, Short and Long Self-Tests, Log Viewer
• Targeted Read Test algorithm created from a hard drive study done in conjunction with an OEM (view here): http://tinyurl.com/hddcasestudy
• 13 Hard Drive, 12 Solid State Drive, 3 SCSI, 26 Optical Drive, 5 MMC Storage, 8 Removable Storage, 4 NVMe Drive tests

Multimedia

• 5 Video Card tests
• 9 Webcam tests
• 5 Audio tests
• 1 Display Test
• 3 Touch Screen tests

Communications

• 16 Network tests:
    o Wired tests (10/100/1000Mb/10Gig
    o Wireless tests (802.11a/b/g/n)
• 4 Modem tests
• 2 Bluetooth tests

Miscellaneous

• 4 Interactive tests
    o Keyboard
    o Mouse
    o Microphone
    o USB Ports
• 2 Battery tests

Drive Erase

• Certified NIST-Compliant erasure solution
• Two ATA Secure Erase methods
• Three ATA Sanitize Erase methods
• Two NVMe Secure Erase methods
• Two NVMe Sanitize Erase methods
• MMC Secure Erase
• Three Block Erase methods (based on DoD 5022 guideline)
    o 1-pass
    o 3-pass
    o 7-pass
• Erase multiple drives simultaneously

Automation

Using built-in and boot functions, you can:

• Launch test scripts or individual tests
• Save test logs and reports

Intel-Based Apple Macs Continued

Test Scripts

Test scripts are sequences of tests that run sequentially or in parallel, which can be saved for reuse. Create scripts using the visual Script Editor to:

• Perform testing in parallel – put extra load on the system, to better locate intermittent issues and speed up test time
• Specify minimum time per test or number of times to run each test
• Customize testing parameters – the default values have been set to balance accuracy and speed

Android Devices

Hardware and Tests

The following information highlights key hardware support and tests. A complete list of all 68 diagnostics is available at:
http://www.pcdservicecenter.com/diagnostics.php

Supported Devices:

• Android version 4.1 – 7.1.2
• All form factors

CPU

Supports ARM, 64-bit ARM, and Intel x86.

• 4 ARM CPU tests
• 9 x86 CPU tests

Storage

• 1 internal storage test

Memory

• Same proven test algorithms used by PC-Doctor for years, ported to Android
• 12 tests

Multimedia

• 6 Screen tests including support for screens of all sizes, up to 10-point multi touch
• 9 Camera tests including support for multiple cameras
• 3 Audio tests
• 1 Video test

Sensors

• Accelerometer
• Gyroscope
• Ambient Light
• Magnetic Field Sensor
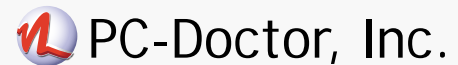• Proximity
• Vibration

Communications

• 1 Wireless Network test
• 2 Bluetooth tests
• 3 Mobile Connection tests
• 2 GPS tests
• 2 NFC tests

Miscellaneous

• 3 Battery tests
• 2 Button tests
• 1 PCI test

Drive Erase

• Device Factory Reset

PC-Doctor, Inc.

Information and Ordering

For more information and to order, visit:
    www.pcdservicecenter.com

To speak with an account manager, contact us:
    United States: 1-866-289-7237
    International: 1-775-336-4000
    sales@pc-doctor.com