

Service Center 12 Test List

PC

Windows Diagnostics

Storage

- **Blu-Ray Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
 - Read Performance
- **BD-R Drive**
 - Read/Write
- **BD-RE Drive**
 - Read/Write
- **Removable Storage**
 - Pattern
 - Linear Read
- **CD-ROM Drive**
 - CD Audio
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
 - Read Performance
- **CD-R Drive**
 - Read/Write
- **CD-RW Drive**
 - Read/Write
- **DVD Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
 - Read Performance
- **DVD+R DL Drive**
 - Read/Write
- **DVD-R DL Drive**
 - Read/Write
- **DVD+R Drive**
 - Read/Write
- **DVD-R Drive**
 - Read/Write
- **DVD-RAM Drive**
 - Funnel Seek
 - Linear Seek
 - Pattern
 - Random Seek
 - Linear Read Compare
 - Read Performance
- **DVD+RW Drive**
 - Read/Write
- **DVD-RW Drive**
 - Read/Write
- **OBIST Drive**
 - DRAM
 - Flash ROM
 - Main IC
 - Opu
 - Spindle
 - Tray In
 - Tray Out
- **Floppy Drive**
 - Funnel Seek
 - Linear Seek
 - Pattern
 - Random Seek
 - Linear Read
- **Hard Drive**
 - Linear Seek
 - Random Seek
 - Funnel Seek
 - Linear Read

- Pattern
- Cache
- Targeted Read
- **SCSI Command Set**
 - Self-Test
 - Background Short Self-Test
 - Background Extended Self-Test
- **Solid State Drive**
 - Linear Read
 - Pattern
 - Random Seek
 - Wear Level
 - Intel Wear Level
 - Targeted Read
 - SCSI Wear Level
- **NVMe Drive**
 - NVMe Status
 - NVMe Wear Level
- **NVDIMM (NEW)**
 - Status Test (NEW)
- **HD DVD Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
 - Read Performance
- **SMART**
 - Conveyance Self-Test
 - Extended Self-Test
 - Short Self-Test
 - Status
 - Thresholds
- **Tape Drive**
 - Backup
 - Linear Seek
- **Zip Drive**
 - Pattern
 - Linear Read

System

- **PCMCIA Bridge**
 - Status

- **CardBus Bridge**
 - Status
- **IEEE 1394**
 - Bus Reset
 - Config ROM
- **Battery**
 - Life
 - Status
- **CMOS**
 - Checksum
 - Pattern
- **CPU**
 - Level 2 Cache
 - Math Register
 - MMX
 - Register
 - SSE
 - SSE2
 - SSE3
 - SSSE3
 - SSE4A
 - SSE4.1
 - SSE4.2
 - AVX
 - AVX2
 - Stress
 - Floating Point Unit
 - Prime Number Generation
- **Memory**
 - Address
 - Advanced Pattern
 - Auxiliary Pattern
 - Bit High
 - Bit Low
 - Checkerboard
 - Modulo20
 - Moving Inversion
 - Nibble Move
 - Walking One Left
 - Walking One Right
 - Windows Memory
- **Parallel Port**

- External Read and Write
- Internal Read and Write
- **PCI Express**
 - Status
- **PCI**
 - Configuration
- **Smart Card**
 - APDU
 - Answer To Reset
 - Card Attributes
- **Serial Port**
 - External Loopback
 - External Register
 - Internal Control Signals
 - Internal Register
 - Internal Send and Receive
- **System Board**
 - RTC Accuracy
- **USB**
 - Status
- **USB Ports**
 - Status
- **Standby/Hibernate**
 - Standby Test
 - Hibernate Test
 - Simple Hibernation (NEW)
 - Simple Modern Standby (NEW)
 - Simple Standby (NEW)

Audio

- **Microphone**
 - Microphone Interactive Test
 - Frequency Tone Test (NEW)
- **Sound Card**
 - Rough Audio
 - Playback Mixer State
 - Sound Interactive Test

Video

- **Video Card**
 - AMD Free Sync (NEW)

- Multiple Rendering DX9
- Shader Rendering DX10
- Shader Rendering DX11
- Shader Rendering DX12 (NEW)
- Wireframe Shader Rendering
- Shader Rendering
- Stereo 3D Rendering
- GPU Pipeline Data
- Transformation and Lighting Stress
- Wireframe Stress
- Fixed Transformation and Lighting
- Wireframe Line
- Primary Surface
- Thermal Cycle
- Video Memory
- Address Fault
- Standard Mathematical Operations
- Block Move
- Memory Fault
- Modulo X
- Moving Inversion
- Own Address
- Pattern
- Random Number Sequence
- Advanced Mathematical Operations
- SLI
- **Video Capture**
 - Digital TV Signal
 - Clear QAM Digital Tuner Signal
- **Multimedia**
 - Video Interactive (NEW)
- **WebCam**
 - Capture To Screen
 - Capture To File
 - RGB Pixel
 - RGB Line Driver
 - RGB Channel
 - RGB Line Amplifier
 - RGB Color Depth
 - Luminance
 - Edge Detection
- **Video Ports**

- Video Ports Interactive
- **Monitor**
 - Monitor Interactive
 - EDID Checksum
- **Touch Screen**
 - Calibration
 - Coverage
 - Multi-Touch
- **RealSense 3D Camera**
 - RealSense 3D Camera Interactive

Communications

- **Modem**
 - Dial Tone
 - Fax Command
 - Last Call
 - Modem Loopback
 - Modem Self-Testing Loopback
- **Network Card**
 - Network Cable
 - Network External Loopback
 - Network Link
 - TCP/IP Internal Loopback
 - Local Network Communication
 - Wireless Connectivity
 - Wireless Signal Strength
 - Internet Communication
 - Signal Strength
 - Data Transfer Verification
 - Intel Network Combination
- **Bluetooth Port**
 - Bluetooth Interactive Test
- **Mobile Broadband**
 - Connectivity
 - Signal Strength
- **Near Field Communication (NFC)**
 - NFC Read
 - NFC Write

Sensor Devices

- **Biometrics Camera**

- Face Detection
- **GPS**
 - Communication
 - Lock
 - Interactive
- **Fingerprint Reader**
 - Swipe
- **Ambient Light Sensor**
- **Accelerometer**
- **Magnetometer**
- **Gyrometer**
- **Eye Tracker**

Other Devices

- **Joystick**
 - Joystick Interactive
- **Keyboard**
 - Keyboard Interactive
- **Mouse**
 - Mouse Interactive
 - Touchpad
 - TrackPoint
- **Printer**
 - Printer Interactive
- **Digitizer Stylus**
 - Corners
 - Pressure
 - Stylus Barrel Switch
 - Stylus Eraser
- **AlienFX LED Verification**
 - AlienFX LED Verification Interactive
- **Lid Closure**
 - Lid Closure Interactive

DOS Diagnostics

Storage

- **Diskette Drive**

- Hi-Low Seek
- Funnel Seek
- Track to Track Seek
- Random Seek
- Linear Verify
- Random Verify
- Linear Write/Read
- Linear Write/Random Read
- Random Write

- **Fixed Disk**

- Controller
- Funnel Seek
- Random Seek
- Linear Verify
- Random Verify
- SMART Status Check
- SMART Self-Test Short
- SMART Self-Test Long
- SMART Conveyance
- SMART Attribute Check
- Inner/Outer Surface Read
- Read Surface Scan
- Write Surface Scan
- Drive Cache
- Spin Down/Spin Up

- **Optical Drive Scan**

- Insert Media
- Linear Seek
- Random Seek
- Funnel Seek
- Remove Media

- **Optical Drive Write**

- CD-RW Drive
- DVD-RW Drive
- DVD+RW Drive
- DVD-RAM Drive

- HD DVD-RAM Drive
- BD-RE Drive

- **SCSI Fixed Disk**

- Controller
- Funnel Seek
- Track To Track Seek
- Random Seek
- Linear Verify
- Random Verify
- Read Surface Scan
- Write Surface Scan
- Short Self-Test
- Extended Self-Test
- Inner/Outer Read Surface Scan
- Spin Down/Spin Up Test

System

- **CPU/CoProcessor**

- CPU Registers
- CPU Arithmetics
- CPU Logical Operations
- CPU String Operations
- CPU Misc Operations
- CPU Interrupts/Exceptions
- CPU Buffers/Cache
- CoProc Registers
- CoProc Commands
- CoProc Arithmetics
- CoProc Transcendental
- CoProc Exceptions
- MMX Test
- SSE
- SSE2
- SSE3
- SSSE3
- SSE4A
- SSE4.1
- SSE4.2

- **System Memory**
 - Memory Fault
 - Address Fault
 - Random Pattern
 - Short Advanced Pattern
 - Extended Advanced Pattern
- **Parallel Port**
 - Command and Data Port
 - External Loopback and IRQ
- **Serial Port**
 - Registers and Interrupts
 - Internal Loopback
 - External Loopback
 - FIFO Buffers (16550A)
- **System Board**
 - System Timer
 - BIOS Timer
 - IRQ Controller
 - DMA Channels
 - RAM Refresh
 - RTC Clock
 - CMOS RAM
 - Keyboard
 - PCI
 - PCMCIA
 - PCMCIA Detection
 - USB Port
 - USB Port External Loop
 - IEEE1394 Controller
 - SMBus

Interactive

- **Keyboard**
- **Video**
- **Internal Speaker**
- **Mouse**
- **Diskette**
- **LCD Panel**
- **System Load**

Utility

- **Edit CMOS RAM**
- **Benchmark System**
- **Memory Debugger**
- **Battery Rundown**
- **Erase Drive Contents**
- **View SMART Logs**
- **View PCDR Host Logs**

Video

- **Video Adapter**
 - Video Memory
 - Video Pages
 - VGA Controller Registers
 - VGA Color-DAC Registers
 - VESA Full Video Memory
 - AGP
 - PCI Express

Bootable Diagnostics

Storage

- **Blu-Ray Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
- **CD-ROM Drive**
 - CD Audio Digital Extraction
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
- **DVD Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
- **DVD-RAM Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
- **Floppy Drive**
 - Funnel Seek
 - Linear Read
 - Linear Seek
 - Pattern
 - Random Seek
- **Hard Drive**
 - Cache
 - Funnel Seek
 - Linear Read
 - Linear Seek
 - Pattern
 - Random Seek
 - Targeted Read
- **SMART**
 - Conveyance Self-Test
 - Extended Self-Test
 - Short Self-Test
 - Status
 - Thresholds
 - Selective Self Test
- **SCSI Command Set**
 - Self-Test
 - Background Short Self-Test
 - Background Extended Self-Test
- **Solid State Drive**
 - Linear Read
 - Pattern
 - Random Seek
 - Wear Level
 - Intel Wear Level
 - Targeted Read
 - SCSI Wear Level
- **NVMe Drive**
 - NVMe Status
 - NVMe Wear Level
 - NVMe Extended Self-Test (NEW)
 - NVMe Short Self-Test (NEW)
- **NVDIMM (NEW)**
 - Status Test (NEW)
 - Wear Level (NEW)
- **DVD Drive**
 - Funnel Seek
 - Linear Read Compare
 - Linear Seek
 - Random Seek
 - Read Performance
- **Removable Storage**
 - Pattern
 - Linear Read
 - Random Read
- **MMC Storage**
 - Linear Read
 - Pattern
 - Random Read
 - Read Speed

- Read Write Speed

System

- **IEEE 1394**
 - Bus Reset
 - Config ROM
- **Battery**
 - AC
 - Life
- **CMOS**
 - Checksum
 - Pattern
- **CPU**
 - Cache
 - MMX
 - Math Register
 - Register
 - SSE2
 - SSE3
 - SSE
 - AVX
 - Stress
- **Memory**
 - Address
 - Advanced Pattern
 - Auxiliary Pattern
 - Bit High
 - Bit Low
 - Checkerboard
 - Modulo20
 - Moving Inversion
 - Nibble Move
 - Walking One Left
 - Walking One Right
 - Pattern
- **Parallel Port**
 - Loopback
 - Register
- **PCI**
 - Configuration
- **PC Card**

- CIS Validation
- **Serial Port**
 - External Loopback
 - External Register
 - Internal Control Signals
 - Internal Register
 - Internal Send and Receive
- **System Board**
 - RTC IRQ Accuracy
- **USB**
 - USB Standard Device Requests
 - USB Device Enumeration
 - USB Port Detection
 - Read Speed
 - Read Write Speed
- **IPMI**
 - Chassis Identify
 - Chassis Status
 - Controller Communication
 - Self Test

Audio

- **Microphone**
 - Microphone Recording
- **Sound Card**
 - Midi
 - Surround Sound
 - Wave Test Both
 - Wave Test Left
 - Wave Test Right

Video

- **Video Card**
 - Video Data
 - Video Memory
 - Video Text
 - AGP Configuration
 - Basic Render
- **Monitor**
 - Monitor Interactive
- **Touch Screen**

- Multi-Touch
- Calibration
- Coverage
- **Webcam**
 - Capture To Screen
 - RGB Pixel
 - RGB Line Driver
 - RGB Channel
 - RGB Line Amplifier
 - RGB Color Depth
 - Luminance
 - Edge Detection

- **NVIDIA Graphics (CUDA) (NEW)**
 - Address Fault (NEW)
 - Advanced Mathematical Operations (NEW)
 - Block Move (NEW)
 - Memory Fault (NEW)
 - Modulo X (NEW)
 - Moving Inversion (NEW)
 - Own Address (NEW)
 - Pattern (NEW)
 - Random Number Sequence (NEW)
 - Standard Mathematical Operations (NEW)

Communications

- **Modem**
 - Dial Tone
 - Fax Command
 - Modem Loopback
 - Modem Specific
- **Network Card**
 - ICMP Network Communications
 - Network Connectivity
 - Network External Loopback
 - Network Offline Self Test
 - Network Online Self Test
 - Wireless Connection
 - Wireless Scan
- **Intel Network Card**
 - Intel NIC AMT Test

- Intel NIC EEPROM
- Intel NIC FIFO
- Intel NIC IP Security
- Intel NIC Interrupt
- Intel NIC Link
- Intel NIC Loopback
- Intel NIC Register
- Virtual LAN

- **Bluetooth Port**
 - Bluetooth Communication
 - Bluetooth Detection

Other Devices

- **Keyboard**
 - Key Test
- **Mouse**
 - Mouse Test

Other Utilities

- **Drive Erase**
 - ATA Enhanced Secure Erase (NEW)
 - ATA Sanitize Block Erase (NEW)
 - ATA Sanitize Crypto Erase (NEW)
 - ATA Sanitize Overwrite (NEW)
 - ATA Secure Erase (NEW)
 - Drive Wipe
 - MMC Secure Erase
 - NVMe Secure Erase
 - NVMe Advanced Secure Erase
 - NVMe Sanitize Block Erase (NEW)
 - NVMe Sanitize Crypto Erase (NEW)
 - SCSI Sanitize Block Erase
 - SCSI Sanitize Crypto Erase
 - SCSI Sanitize Overwrite
- **Network Configuration Utility**

Intel-Based Apple Macs

Bootable Diagnostics

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 - NVMe Status
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- **NVDIMM (NEW)**
 - Status Test (NEW)
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 - Linear Seek
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 - Read Performance
- **Removable Storage**
 - Pattern
 - Linear Read
 - Random Read
- **MMC Storage**

- Linear Read
- Pattern
- Random Read
- Read Speed
- Read Write Speed

System

- **IEEE 1394**
 - Bus Reset
 - Config ROM
- **Battery**
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 - Life
- **CMOS**
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- **Parallel Port**
 - Loopback
 - Register

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 - Configuration
- **PC Card**
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 - Basic Render

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 - Monitor Interactive
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 - Calibration
 - Coverage
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- Wireless Scan
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 - Intel NIC EEPROM
 - Intel NIC FIFO
 - Intel NIC IP Security
 - Intel NIC Interrupt
 - Intel NIC Link
 - Intel NIC Loopback
 - Intel NIC Register
 - Virtual LAN
- **Bluetooth Port**
 - Bluetooth Communication
 - Bluetooth Detection

Other Devices

- **Keyboard**
 - Key Test
- **Mouse**
 - Mouse Test

Other Utilities

- **Drive Erase**
 - ATA Enhanced Secure Erase (NEW)
 - ATA Sanitize Block Erase (NEW)
 - ATA Sanitize Crypto Erase (NEW)
 - ATA Sanitize Overwrite (NEW)
 - ATA Secure Erase (NEW)
 - Drive Wipe
 - MMC Secure Erase
 - NVMe Secure Erase
 - NVMe Advanced Secure Erase
 - NVMe Sanitize Block Erase (NEW)
 - NVMe Sanitize Crypto Erase (NEW)
 - SCSI Sanitize Block Erase
 - SCSI Sanitize Crypto Erase
 - SCSI Sanitize Overwrite
- **Network Configuration Utility**

Android Devices

Android Diagnostics

System

- **Memory**
 - Address
 - Advanced Pattern
 - Auxiliary Pattern
 - Bit High
 - Bit Low
 - Checkerboard
 - Modulo20
 - Moving Inversion
 - Nibble Move
 - Pattern
 - Walking Ones Left
 - Walking Ones Right
- **Battery**
 - Health
 - Temperature
 - USB Charge
- **Buttons**
 - Rotation Lock
 - Volume Keys
- **CPU - ARM**
 - Arithmetic
 - Cache
 - Register
 - Stress
- **CPU - x86**
 - Cache
 - Math Register
 - MMX
 - Register
 - SSE2
 - SSE3
 - SSE
 - Stress
 - AVX
- **PCI - x86**
 - Config
- **Internal Storage**

- Pattern

Multimedia

- **Video Card**
 - Basic Render
- **Screen**
 - Brightness
 - Pixel
 - Touchscreen
 - Touchscreen Coverage
 - Multi-Touch Touchscreen
 - Video Memory
- **Camera**
 - Camera Flash
 - Camera
 - Edge Detection
 - Luminance Depth
 - RGB Channel
 - RGB Color Depth
 - RGB Line Amplifier
 - RGB Line Driver
 - RGB Pixel
- **Sensors**
 - Accelerometer
 - Gyroscope
 - Ambient Light
 - Magnetic Field Sensor
 - Proximity
 - Vibration
- **Audio**
 - Headset Connectivity
 - Microphone
 - Speaker

Communication

- **Bluetooth**
 - Communication
 - Detection
- **Mobile**
 - Cell Signal Strength Test
 - SIM Communication

PC-Doctor Service Center 12 Test List

- SIM Detection
- **GPS**
 - Any Signal
 - Minimum Location Signals
- **NFC**
 - Detection
 - NDEF Read
- **Wireless**
 - Wireless Scan

Other Utilities

- **Device Factory Reset**

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