

Service Center 16 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
- **Optical Built-In Self-Test**
 - 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
 - SMART Thresholds
- **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 Short Self-Test
 - NVMe Extended Self-Test
- **MMC Storage**
 - Wear Level
- **Optane**
 - Status Test
- **NVDIMM**
 - Status Test
- **SMART**
 - Conveyance Self-Test
 - Extended Self-Test
 - Short Self-Test
 - Status
 - Thresholds
- **Tape Drive**
 - Backup
 - Linear Seek

System

- **PCMCIA Bridge**
 - Status
- **CardBus Bridge**
 - Status

- **IEEE 1394**
 - Bus Reset
 - Config ROM
- **Battery**
 - Life
 - Status
- **CMOS**
 - Checksum
 - Pattern
- **CPU**
 - 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
 - Pattern
 - Walking Ones Left
 - Walking Ones 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
 - TPM Self-Test
- **USB**
 - Status
- **USB Ports**
 - USB Ports Interactive
- **Standby/Hibernate**
 - Standby Test
 - Hibernate Test
 - Simple Hibernation
 - Simple Modern Standby
 - Simple Standby

Audio

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

Video

- **Video Card**
 - NVIDIA GSync

- AMD Free Sync
- Multiple Rendering DX9
- Shader Rendering DX10
- Shader Rendering DX11
- Shader Rendering DX12
- 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
- SLI
- **CUDA Video Memory**
 - Address Fault
 - Standard Mathematical Operations
 - Block Move
 - Memory Fault
 - Modulo X
 - Moving Inversion
 - Own Address
 - Pattern
 - Random Number Sequence
 - Advanced Mathematical Operations
- **Vulkan Video Memory**
 - Advanced Pattern
 - Matrix Multiplication Stress (NEW)
 - Pattern
- **Video Capture**
 - Digital TV Signal
 - Clear QAM Digital Tuner Signal
- **Multimedia**
 - Video Interactive
- **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**
 - Backlight (NEW)
 - 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
 - Data Transfer Verification
 - Intel NAL Combination
- **Bluetooth**
 - Bluetooth Interactive
- **Mobile Broadband**
 - Connectivity
 - Signal Strength
- **Antenna**

- Signal Strength Interactive
- **Near Field Communication (NFC)**
 - NFC Read
 - NFC Write

Sensor Devices

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

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 Detection
- **AlienFX LED Verification**
 - AlienFX Interactive
- **Lid Closure**
 - Lid Closure Interactive

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
 - Thresholds
- **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
 - NVMe Short Self-Test
- **NVDIMM**
 - Status Test
 - Wear Level
- **Removable Storage**
 - Pattern
 - Linear Read
 - Random Read
- **MMC Storage**
 - Linear Read
 - Pattern
 - Random Read
 - Wear Level
 - 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 Ones Left
 - Walking Ones 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
 - TPM Self-Test
- **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
 - Basic Render
- **Video Ports**
 - Video Ports Interactive
- **Monitor**

- Backlight (NEW)
- Monitor Interactive
- EDID Checksum
- **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
- **CUDA Video Memory**
 - Address Fault
 - Advanced Mathematical Operations
 - Block Move
 - Memory Fault
 - Modulo X
 - Moving Inversion
 - Own Address
 - Pattern
 - Random Number Sequence
 - Standard Mathematical Operations
- **Vulkan Video Memory**
 - Advanced Pattern
 - Matrix Multiplication Stress (NEW)
 - Pattern

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 NAL Combination

- **Bluetooth**

- Communication
- Detection

Other Devices

- **Keyboard**

- Key Test
- Volume Button Test

- **Mouse**

- Mouse Interactive
- Touchpad

- **Lid Closure**

- Lid Closure Interactive

Other Utilities

- **Drive Erase**

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

Intel-Based Apple Macs

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
 - Thresholds
- **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
 - NVMe Short Self-Test
- **NVDIMM**
 - Status Test
 - Wear Level
- **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
- Wear Level
- 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 Ones Left
 - Walking Ones 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
 - TPM Self-Test
- **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

- **Video Ports**
 - Video Ports Interactive
- **Monitor**
 - Backlight (NEW)
 - Monitor Interactive
 - EDID Checksum
- **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
- **CUDA Video Memory**
 - Address Fault
 - Advanced Mathematical Operations
 - Block Move
 - Memory Fault
 - Modulo X
 - Moving Inversion
 - Own Address
 - Pattern
 - Random Number Sequence
 - Standard Mathematical Operations
- **Vulkan Video Memory**
 - Advanced Pattern
 - Matrix Multiplication Stress (NEW)
 - Pattern

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 NAL Combination
- **Bluetooth**
 - Communication
 - Detection

Other Devices

- **Keyboard**
 - Key Test
 - Volume Button Test
- **Mouse**
 - Mouse Interactive
 - Touchpad
- **Lid Closure**
 - Lid Closure Interactive

Other Utilities

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

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**
 - Arithmetic
 - Cache
 - Register
 - Stress

Storage

- **Internal Storage**
 - Pattern

Video

- **Video Card**
 - Basic Render
 - Video Memory
- **Monitor**
 - Brightness
 - Pixel
- **Touch Screen**

- Touchscreen
- Touchscreen Coverage
- Multi-Touch Touchscreen

- **Camera**

- Camera Flash
- Camera
- Camera Barcode
- Edge Detection
- Luminance Depth
- RGB Channel
- RGB Color Depth
- RGB Line Amplifier
- RGB Line Driver
- RGB Pixel

Sensor Devices

- **GPS**
 - Any Signal
 - Minimum Location Signals
- **Accelerometer**
- **Gyroscope**
- **Ambient Light**
- **Magnetic Field Sensor**
- **Proximity**
- **Vibration**

Audio

- **Microphone**
 - Microphone
- **Sound Card**
 - Headset Connectivity
 - Speaker

Communications

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

PC-Doctor Service Center 16 Test List

- SIM Detection
- **Near Field Communication (NFC)**
 - Detection
 - NDEF Read
- **Wireless**
 - Wireless Scan

Other Utilities

- **Device Factory Reset**

Chrome OS Devices

Linux 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
 - Thresholds
- **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
 - NVMe Short Self-Test
- **NVDIMM**
 - Status Test
 - Wear Level
- **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
 - Wear Level
 - Read Speed

- Read/Write Speed

System

- **IEEE 1394**
 - Bus Reset
 - Config ROM
- **Battery**
 - AC
 - Life
- **CMOS***
 - Checksum
 - Pattern
- **CPU***
 - AVX
 - Cache
 - MMX
 - Math Register
 - Register
 - SSE2
 - SSE3
 - SSE
 - Stress
- **CPU ARM****
 - Arithmetic
 - Cache
 - Register
 - Stress
- **Memory**
 - Address
 - Advanced Pattern
 - Auxiliary Pattern
 - Bit High
 - Bit Low
 - Checkerboard
 - Modulo20
 - Moving Inversion
 - Nibble Move
 - Walking Ones Left
 - Walking Ones 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
 - TPM Self-Test
- **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

- Basic Render
- **Video Ports**
 - Video Ports Interactive
- **Monitor**
 - Backlight (NEW)
 - Monitor Interactive
 - EDID Checksum
- **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
- **CUDA Video Memory***
 - Address Fault
 - Advanced Mathematical Operations
 - Block Move
 - Memory Fault
 - Modulo X
 - Moving Inversion
 - Own Address
 - Pattern
 - Random Number Sequence
 - Standard Mathematical Operations
- **Vulkan Video Memory***
 - Advanced Pattern
 - Matrix Multiplication Stress (NEW)
 - Pattern

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 NAL Combination*
- **Bluetooth**
 - Communication
 - Detection

Other Devices

- **Keyboard**
 - Key Test
 - Volume Button Test*
- **Mouse**
 - Mouse Interactive
 - Touchpad
- **Lid Closure**
 - Lid Closure Interactive

* Not available on ARM systems

** Only available on ARM systems

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