



# Pc-Check® UEFI Diagnostic Software

*Pc-Check UEFI, combined with Pc-Check, challenges the widest testing landscape with 'bare-metal testing' dedicated to all your PC assembly, integration, services, installations, repair and refurbishing.*

Unreliable testing of computers cost companies and technicians valuable time and money. Inaccurate test results impact operations, leading to more technical support calls, unnecessary rework, product returns and customer dissatisfaction.



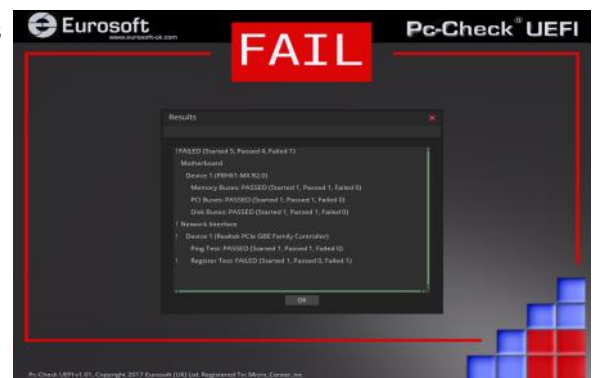
Fully compatible with UEFI hardware, Pc-Check® UEFI includes Pc-Check® self-boot, providing a testing advantage with both legacy and the latest computers. Unlike other so called “native” UEFI diagnostics, Pc-Check UEFI delivers **direct, legacy**

**free hardware testing regardless of BIOS.** Independently test hardware – not the drivers – directly accessing essential UEFI components. No operating system in the way – no Linux, no Windows, no secure boot or BIOS

interference – **only pure UEFI testing in real UEFI mode.** Giving you the latest

tests you can count on, Pc-Check UEFI masters all UEFI PC problems with state-of-the-art diagnostics that solve testing dilemmas.

**Pc-Check UEFI finds the hardware faults that other test products can't or won't reveal.**



**Dual testing advantage for old and new systems**

✓ Including Pc-Check as part of the package, Pc-Check® and Pc-Check® UEFI form the **ultimate testing solution for legacy, and new UEFI based PCs.**

**Direct test access to UEFI enabled hardware**

✓ **Fastest loading, true native UEFI testing** for the latest PCs. Pre-boot diagnostics run even with Secure Boot enabled.

**'Bare metal' hardware testing**

✓ Test the hardware, not the drivers. **No operating system, interference** or updating Linux and Microsoft.

**Test the fullest range of installed components and storage**

✓ **Identify the individual memory stick from 256 DIMM up to 2-Exabytes;** and drives with **'Multi-Exabyte'** sizes; plus CPU packages to **1024** under UEFI.

**Large detection of hardware device testing, specialist test groups, unlimited scripting**

✓ Validate the PC products and services you sell, support and service: **servers, embedded, laptops, notebooks, desktops.**

**Microsoft® digitally signed boot loader**

✓ No need to rely on 3rd party boot solutions like Linux. Maintain the 'chain of trust' avoid infection from malware and viruses.

**Scripting or selected: Component and Burn-in tests, Duration, any Number of passes**

✓ **Total control of your diagnostic process – you define the test requirements. Reveal hard-to-find intermittent errors. Proves working hardware.**

# Use true UEFI tests to fully validated components

## Native UEFI diagnostics



## Diagnostic Test Scripts



## Comprehensive System Information



**True 64 Bit UEFI tests**  
**No resource**

**Fast test load—under 20 seconds**



**Legacy free**  
**BIOS independent**

## Test outside of operating systems with Self-Booting UEFI diagnostics

No concern of OS driver stack filtering or blocking commands.

No concerns of OS modifying or redacting returned system information.

No abstraction or virtualisation of hardware.

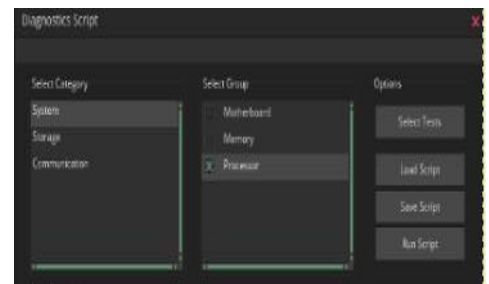
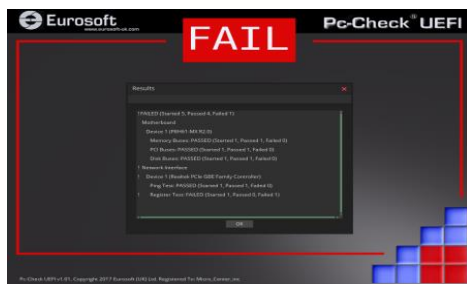
## Dual bare metal testing options

Pc-Check® UEFI and Pc-Check® combine for the ultimate bare metal testing solution for legacy, and new UEFI based PCs all in one single package. Add on Pc-Check® Windows, expanding your range of diagnostics to a perfect 3-point test plan.

## Create and Automate Test Tools

Create different diagnostic test routines for manufacture, refurbishing, service and support.

UEFI testing can be started and scripted from a UEFI shell, allowing use alongside other third party UEFI tools.



## Maximize profits by reducing hardware return costs

- Reduce asset identification, assembly, upgrade, and repair test workloads.
- Reduce returns and repairs.
- Reduce support calls.
- Increase profitability by improving PC reliability during system manufacturing integration, upgrading and servicing.

## Control and contain errors

- Reveal hard-to-find intermittent errors.
  - Log faults and unreliable computers.
  - Test the bare hardware, no driver intervention.
- Increase throughput by reducing human errors**
- Standardized test scripts control unauthorised users and test usage.
  - Identify hardware faults quickly, save hundreds of man-hours in fault testing.
  - Versatile for variable user skill levels

## One USB device, two diagnostics solutions

Containing **both Pc-Check and Pc-Check UEFI diagnostic software** the presence of legacy or UEFI compliant hardware is automatically detected.

If the system is a legacy device, Pc-Check will boot and execute; if the device is UEFI compliant, Pc-Check UEFI will boot and execute – even with secure boot turned on.

# Diagnostic coverage for all major hardware groups in a native UEFI pre-boot, Self-Boot and Microsoft Windows or Microsoft Windows Preinstallation Environment.

## Native UEFI Diagnostics

### Network

Ping Test  
Self Test  
ICMP

### Hard Drives

S.M.A.R.T. Immediate  
S.M.A.R.T. Short Self Test  
S.M.A.R.T. Conveyance  
S.M.A.R.T. Extended Self Test  
Butterfly Seek  
Random Read  
Linear Read  
Standby  
Non-Destructive Write  
Internal Cache

### Solid State Drives

Linear Read  
Random Read  
S.M.A.R.T. Immediate Test  
S.M.A.R.T. Short Self Test  
S.M.A.R.T. Extended Self Test  
S.M.A.R.T. Conveyance  
Internal Cache  
S.M.A.R.T. Wear Levelling

### Memory

Block Rotation  
Quick  
Stride Isolation  
Seating  
Inversion Tree  
Microtopology  
Pseudo-random Data  
Pseudo-random Address  
BIOS Fault Detection

### NVMe Drives

Random Read  
Linear Read  
Internal Cache  
S.M.A.R.T. Health

### System Block Devices

Linear Read  
Random Read

### System Information

System Overview  
PCI Information  
SMBIOS Information  
System Variables (NVRAM)

### Keyboard

Keyboard Test  
Keyboard Lights

### Processor

Core Instruction Set  
Floating Point Instruction Set  
SSE Instruction Set  
SSE2 Instruction Set  
SSE3 Instruction Set  
SSSE3 Instruction Set  
SSE4 Instruction Set  
Pairing Symmetry  
Execution Symmetry  
Cache Coherency

### Serial Ports

Line Control  
Handshake  
External Loopback  
Internal Loopback  
FIFO  
Divisor Clock  
Endurance

### Audio

Direct PCM  
Stream PCM  
Direct SPDIF

### Mouse

Mouse Test

### Optical

Linear Read  
Random Read  
Butterfly Seek  
Deep Read  
Laser Refocus

### USB

Quick Test  
NRZI Max Bit Stuffing  
NRZI Glitch Zero  
NRZI Oscillation Type 1/2/3/4  
Max Disparity  
Random Data

### Motherboard

Memory Buses  
PCI Buses  
Disk Buses  
Non-Volatile Storage  
Real Time Clock

### Monitor

Panel Test

### Touch Device

Touch Test

### Trusted Platform Module

Basic Functionality

## Self-Boot Legacy Diagnostics

### Memory

Module Seating  
Inversion Tree  
Stride Isolation  
Small Block Stride  
Chaotic Addressing  
Block Rotation  
Microtopology  
Microtopology (Quick)  
Microtopology (long)

### Hard Drives

Read Quick/Standard/Full/Custom  
Read Verify Quick/Standard/Full/Custom  
Non-Destructive Write Quick/Standard/Full/Custom  
Destructive Write Quick /Standard/Full/Custom  
Mechanics Stress Quick /Standard/Full /Custom  
Internal Cache  
Standby  
Performance  
Standby  
S.M.A.R.T. Immediate  
S.M.A.R.T. Short  
S.M.A.R.T. Extended  
S.M.A.R.T. Conveyance

### SSD Drives

Read Quick/Standard/Full/Custom  
Read Verify Quick/Standard/Full/

Custom

Non-Destructive Write Quick/Standard/Full/Custom  
Destructive Write Quick/Standard/Full/Custom  
S.M.A.R.T. Immediate  
S.M.A.R.T. Short  
S.M.A.R.T. Extended  
S.M.A.R.T. Conveyance  
Performance

### NVMe Drives

Read Quick/Standard/Full/Custom  
Read Verify Quick/Standard/Full/Custom  
Non-Destructive Write Quick/Standard/Full/Custom  
Destructive Write Quick/Standard/Full/Custom  
S.M.A.R.T. Immediate  
S.M.A.R.T. Short  
S.M.A.R.T. Extended  
S.M.A.R.T. Conveyance  
Performance

### Processor

Core Instruction Set  
AMD64 Core  
Intel64 Core  
Coprocesor Core  
Known Design Faults  
3DNow! Extensions  
MMX Extensions  
SSE (SIMD) Extensions  
Multi Processor Symmetry

### Motherboard

DMA Controller  
System Timer  
Interrupt Controller  
Keyboard Controller  
PCI Bus  
Real-Time Clock Chip

### Trusted Platform Module

Self Test  
Subversion Attempt

### Input Peripherals

Keyboard  
Mouse

### Video Memory

Inversion Tree  
Stride Isolation  
Small Block Stride  
Chaotic Addressing  
Inverse Mesh  
Block Rotation  
Microtopology

### FireWire

Controller Test

### Cache Memory

Inversion Tree  
Stride Isolation  
Chaotic Addressing  
Block Rotation  
Microtopology

### Component Audit

Compare

### Audio

Real-time PCM  
Streaming PCM  
SPDIF Run DMA

### Internal Speaker

BEEP Test

### PCI Express

Link Width Configuration

### Video Adapter

Colour Purity  
True Colour  
Alignment  
LCD  
Test Card

### Optical

Transfer  
Random Seek  
Test Disc Read  
Laser Refocus

### ATA Controller

Parallel  
Serial

### Serial Ports

Line Control  
Handshake  
Loop-back  
Internal FIFO  
Internal Loop-back  
Divisor Clock

## Windows Diagnostics

### Parallel Ports

Data Port/ External Loop-back  
Status Register

### Memory

Quick  
Pseudo Random Data  
Walking Bit Left/ Right  
Inverse Walking Bit Left/Right  
Chequerboard  
Bit Stuck High/Low  
Pseudo Random Address

Micro-topology  
Memory Mismatch

Data Route

### Gyroscope

[Quick Status/Core Recognition](#)  
[Simple Roll Test/Gyroscope Roll](#)

### Accelerometer

[Core Recognition/Quick Status](#)  
[Acceleration](#)

### Location

[Core Recognition/Quick Status](#)  
[Location](#)

### Bluetooth

Device Search  
Device Pairing

### Network

Configuration  
IPv4 Connection  
[Wireless Strength](#)  
[Wireless Connection](#)  
System Connected  
[Ethernet Connectivity](#)  
Loopback Signal

### Hard Drives

Butterfly Seek  
Random Read, Linear Read  
S.M.A.R.T. Failure  
S.M.A.R.T. Short  
S.M.A.R.T. Conveyance  
S.M.A.R.T. Extended  
Idle Temperature  
Instantaneous Temperature  
S.M.A.R.T. Threshold  
S.M.A.R.T. Custom  
Drive Health

### Optical

Linear Read, Random Read  
Advanced Movement  
Media Erase  
Directory Write  
ISO Image Write  
Media Eject

### Compass

[Core Recognition](#)  
[Quick Status](#)  
[Direction](#)

### NVMe Drive

Random Read/Linear Read  
S.M.A.R.T. Failure  
Idle Temperature  
Instantaneous Temperature

### USB

Detected Devices  
Connectivity  
Quick Test  
NRZI Max Bit Stuffing  
NRZI Glitch Zero  
NRZI Oscillation Type 1/2/3/4  
Max Disparity  
Random Data  
Speed  
Connection Verification

### Floppy Drives

Butterfly Seek/ Linear Read  
Read Write/Media Change  
Write Protect

### Monitor

Red /Green/Blue Purity  
Mesh/Inverse Mesh  
White/ Green MEME  
Tonality /Grid/ LCD Dead Pixel  
Monitor Count  
Internal Monitor Count  
VGA/DVI/HDMI Monitor Count

Display Port Monitor Count  
Wireless Monitor Count  
EDID Checksum  
Monitor Brightness

### Serial Ports

Configuration Registers  
Quick Loop-back  
Baud Rates  
Sustained Loop-back  
Priority Transmit

### Removable Media

Linear Read/Random Read  
Connectivity

### System

Stress  
[Sleep](#)  
[Hibernate](#)  
[Quick Blue Screen Dump](#)  
[Lid Detect](#)  
[Convertible System](#)  
Operator Response  
[Blue Screen Event](#)

### Battery

Voltage  
Performance  
Quick State  
Core Recognition  
Advanced State  
Charge Level  
Charge Life  
Battery Presence

### Processor

Core Instruction Set  
Floating Point Instruction Set  
SSE/2/3 Instruction Set  
SSE 4.1/ 4.2/ 4A Instruction Set  
Cache Functionality  
Multi-core  
Multi-processor  
Core Priority  
Thermal Stress  
Power Stress  
CPU Fan Test  
CPU Temperature  
AVX Instruction Set  
SSSE3 Instruction Set  
FMA3/FMA4 Instruction Set  
CLMUL Instruction Set

### Audio

Audio Connection  
[Loop-back Count](#)  
[Advanced Quality](#)  
[Quick Microphone](#)  
[Quick System Sound](#)  
[Volume Change](#)  
[Playback](#)

### Display Adapter

[Linear Memory](#)  
[Micro-topology Memory](#)  
[Chaotic Addressing Memory](#)  
[Hardware Acceleration](#)  
Graphics Card Temperature  
[Default Driver](#)  
OpenCL Bandwith  
OpenCL Walking Zeros  
OpenCL Walking Ones  
OpenCL Moving Inversion  
OpenCL Integer Logic  
OpenCL Integer Logic -Local Memory  
OpenCL Random  
OpenCL Modulo  
CUDA Bandwidth  
CUDA Walking Zeros  
CUDA Walking Ones  
CUDA Moving Inversion  
CUDA Integer Logic  
CUDA Integer Logic - Local Memory  
CUDA Random  
CUDA Modulo  
CUDA Compute  
CUDA Stress

### Video Capture

Capture Driver  
[Composite Capture Driver](#)  
[S-Video Capture Driver](#)  
[TV Capture Driver](#)  
[RGB Capture Driver](#)  
[Capture](#)  
[Composite Capture](#)  
[S-Video Capture](#)  
[TV Capture](#)  
[RGB Capture](#)

### Motherboard

North-bridge/South-bridge  
CMOS Clock/CMOS Checksum  
CMOS Battery  
System Fan  
Voltage Core Detection  
System Temperature

### Operating System

[License](#)  
Windows 10 Support  
[Event Log](#)  
Kernel Response  
[Driver/Signed Driver](#)  
Security Support

### Hardware Monitor

System Temperature  
CPU Temperature  
CPU Fan  
System Fan  
Voltage Core Detection Test  
Drive Temperature  
Graphics Card Temperature

### Solid State Drives (SSD)

Linear Read  
Random Read  
S.M.A.R.T. Failure  
S.M.A.R.T. Short  
S.M.A.R.T. Conveyance  
S.M.A.R.T. Extended  
Idle Temperature  
Instantaneous Temperature  
S.M.A.R.T. Threshold  
S.M.A.R.T. Custom  
Wear Range Delta  
Drive Health

### Touch Screen

Pen Grid, Pen Axis,/Pen Accuracy  
Touch Multi-Touch  
Touch Ghost-Touch  
Touch Path Continuity  
Touch Curve Continuity  
Touch Primary Touch  
Touch Width/Touch Grid  
Touch Axis,/Touch Accuracy

### [Touch Gesture](#)

### Input Peripherals

Keyboard/Keyboard LED  
Quick Mouse/Mouse Button  
Movement/Quick Keyboard  
Keyboard Dock Detect  
Keyboard Connection

### Ambient Light

[Core Recognition/ Quick Status](#)  
[Ambient Light Level](#)

### Server

IPMI System Event Log  
IPMI Health/ Sensor/ Alarm  
Temperature Sensor

### FireWire

IEEE 1394

The test groups or tests noted in [BLUE](#) require a full Windows environment. Example (see above for all): Video | Biometric Devices | Capture Card\* | Network Interface tests for wireless network interfaces | System Sleep Test | System Hibernate Test | Battery Voltage Test | Server Group | Sensors \*Generic Capture Driver Test available in Microsoft Windows Preinstallation Environment (WinPE). Eurosoft test accessories required for peripheral ports and media trays: USB, serial, audio, DVD/CDROM. Mac® Boot Camp® drivers required in WinPE or use Pc-Check® WinPE Image Creator build tool without drivers (all tests non-native, Intel Architecture only). 3rd-party vendor tools must be UEFI compatible.

# Who Uses the Pc-Check® Diagnostic Software Suite?

Solutions for an ever changing landscape...

Testing PCs has financial reward. Starting with a series of simple test steps, you gain immediate cost savings.

Computer manufacturing and system integrating rely on diagnostics to form standard test practices. Repair, services and support are blending with field technicians, backing MSP's who remotely manage all varieties of computers. Critical assessment of systems situated publicly: government, military, education, healthcare, as well as private verticals expect compliant, running systems. Refurbishing has taken off, extracting re-workable components to balance a broad eco-system, recycling where they can't. Everywhere, demand for reliably running PCs is required and expected.

**Ensuring reliability requires quality testing. The Pc-Check diagnostic suite takes on the widest testing landscape,** instilling quality, combining bare-metal UEFI and legacy testing, plus Microsoft Windows/WinPE too. The end result: components are reliably tested and validated independent of the operating system [and] within the Microsoft Windows environment whether new or old devices. Proven diagnostics, capable of assisting all sizes of companies and skill sets, loads of testing features and unlimited ways of using them. **Testing brings reward.**

## Manufacturing

OEM/ODM

System Builders

Assemblers

System Integrators

## Refurbishing

Microsoft Authorised Refurbishers

ITAD

Rentals and Leasing

Recyclers

## Services

Break-Fix Operations

Field Technicians

Computer Shops

Consultants

## Support

Network Administrators

I.T. Professionals

Managed Service Provider

Help Desk

Manufacturers and system integrating of all sizes, those who build fresh and new, use the **PC Builder™ Test Management Suite** and **Pc-Check® diagnostic suite** to validate new hardware and system configurations prior to investing time in loading an operating system, and shipping into the channels.

Refurbishers, eco-committed, re-manufacturing, repurposing or IT asset disposing PCs, use **PC Builder™** and **Pc-Check® diagnostic suite** to quickly and reliably validate inbound and outbound hardware assets for suitability of reuse, before upgrading, re-imaging and hard drive data erasing with **Eurosoft's ZeroData™ Windows® drive erasure software**. **data erasing with Eurosoft's ZeroData™ Windows drive erasure software.**

Servicing has a wide commitment, bringing consumers and industry closer to the repair process. The full Pc-Check® diagnostic suite brings portable testing to the PC with pre-boot options, multiple script creation, and recordation, reaching a variety of diverse PC customers. **ZeroData™ Windows® securely clears data.**

Support can involve deployment and online technical sessions. Preventative maintenance, secure hardware platforms and rapid diagnosis for disaster recovery is required. Each **Pc-Check®** program gives a fast and flexible approach to assessing hardware issues at the start, and end point of a support session. **ZeroData™ Windows® securely clears data.**

## Flexible user and licensing options to perfectly fit your costs and needs.

Eurosoft (UK) Ltd are dedicated to offering a variety of diagnostic and test management solutions as standalone packages, bundled with systems and services, as well as site licenses of all sizes. Fully commercially supported, and maintained to test the widest range of PC-based hardware, regardless of brand. Whether you are responsible for 1, 100 or 1000+ test stations or have as many technicians at your disposal, the Pc-Check diagnostic suite offers flexible testing solutions, giving you maximum reliability over your entire operation.

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