



# Advantech Global Distribution Software License Product Guide

## What's Inside

---

### Windows Embedded

Windows 10 IoT  
Windows Embedded Standard  
Windows Embedded Professional  
Windows Embedded POSReady  
Windows Embedded CE/Compact  
Windows Embedded Server  
SQL Server for Embedded System  
Windows Licensing Process  
Windows Embedded Utility Services

### Embedded Security

Intel® Security - McAfee Embedded Solutions  
Intel® Security - McAfee Endpoint Protection  
Intel® Security Licensing Process  
Intel® Security Utility Services  
Acronis Personal Version  
Acronis Full Version

**ADVANTECH**

*Enabling an Intelligent Planet*



**Acronis**

[sw-licensing.advantech.com](http://sw-licensing.advantech.com)

# Accelerate your IoT application development with Advantech Software Services

Advantech, a global leader in embedded computing and Internet of Things (IoT) technology, is recognized as a Microsoft Global IoT Valued Partner and Authorized Embedded Distributor. We provide complete IoT solutions to customers who integrate Advantech hardware products and software for distribution. Also, we support the most popular open source projects and leading technologies to provide the best software solutions.

For operating systems, Advantech provides Microsoft Windows Embedded OS that are designed to be run and used on embedded systems such as POS, kiosk, digital signage, automotive computers, automation devices, and devices of small-footprint, real-time, and handheld. We offer a ready to use embedded OS image. It provides a complete set of components that enables rapid proto-typing and application development.

As for security solutions, more and more devices are being connected together and security has become a significant issue in the IoT era. Our tailored security solutions – Intel® Security Solution and Acronis Backup and Recovery can meet the specific design requirements for data and devices protection in embedded applications. These help decrease design effort and project complexity, and accelerate application development.

Advantech offers more than just a distributing license; it offers a series of value-added services, including hosting embedded solution seminars, hands-on training, and software APIs and utilities. Customers can leverage Advantech's professional embedded solution development capability to streamline their businesses.



# Windows 10 IoT

## Introduction

Windows 10 IoT is an edition of Windows 10 family targeted towards a wide range of intelligent devices, from small industrial gateways to larger more complex devices like point of sales terminals and ATMs. Combined with the latest Microsoft development tools and Azure IoT services partners can gather, store and process data, creating actionable business intelligence and effect business outcomes. Partners building solutions based on Windows 10 IoT will realize expanded opportunities when they harness the full breadth of Microsoft technologies to offer end-to-end solutions.

## Features

### Productive

- Universal Windows apps (UAP)  
Leverage the same code to deliver an intuitive experience across a wide range of Windows 10 devices. Tools like Visual Studio work across all Windows 10 editions and Azure to help reduce time and complexities of building IoT solutions for the enterprise.
- Support UnifiedPOS Implementation  
Application developers can build Classic Desktop applications using a UnifiedPOS implementation to integrate retail peripherals into solutions. UnifiedPOS implementations for Classic Desktop include POS for .NET, OPOS, JavaPOS

### Trusted

- Embedded lockdown capabilities  
Additional capabilities help create a purpose-built device experience for a line of business applications. Whether it's booting to a desired Universal app and/or locking down access to unauthorized USB peripherals, Windows 10 IoT provides these capabilities and more to help create a dedicated device experience.
  - Unified Write Filter
  - USB Access
  - Layout Control
  - Shell Launcher
  - Assigned Access
- Enterprise grade security  
With security threats on the rise, Windows 10 delivers entirely new ways to protect your systems and data. Windows 10 has built-in defenses to help protect your critical business information from leaks or theft. Technologies like Secure Boot, BitLocker, and Device Guard help ensure your devices are protected from power-on to power-off.
  - Advanced Device Security – Secure IoT Devices with Trusted Platform Modules (TPM)
  - Next Generation Credentials – two-factor authentication
  - Device Guard – Protect operating system from running unwanted apps and increase security on mission critical devices.
  - BitLocker – Full disk encryption
  - AppLocker – Prevent users from installing and using unauthorized applications.
  - HORM – Boot fast to a known state on the device

## Connectivity

- Full-spectrum Interconnectivity

Windows 10 IoT introduces full – spectrum interconnectivity – from the smallest devices all the way to the cloud – enabling interoperability and connectivity at every step.

- The latest connectivity options – Ethernet, Mobile Broadband – MBB USB Class driver, OEM BSP support Wi-Fi, Wi-Fi Direct, Bluetooth, BTLE

- Sensor access from Universal Windows apps – With Window 10 IoT you can directly communicate from a Universal Windows app to hardware busses like GPIO, I2C, etc., to create innovative and modern IoT devices.

- Sensor to Cloud – This portfolio of Microsoft Azure services ranges from the devices themselves that produce data to the process of connecting them to cloud storage and driving analytics to gain valuable business insights that allow enterprises to take action.

- Microsoft Azure IoT services

Windows 10 IoT is designed to work with Microsoft Azure IoT services, so you can monitor assets in the cloud to improve efficiencies, drive operational performance to enable innovation, and leverage advanced data analytics to transform your company.

## Flexible Activation

- Deferred activation – PKEA (5x5 Multi Activation key) & EPKEA (Single Activation key)

- No Activation request for device without connection to internet

- No activation needed for Windows 10 IoT Core Pro Version

## Tools

- Windows Assessment and Deployment Kit (ADK) – Customize, assess, and deploy Windows operating systems to new devices.

- Image Configuration Designer (ICD) – Easily customize the device experience/image

## Specifications and Versions

### Windows 10 IoT Enterprise

This is a full version of Windows 10 with advanced lockdown capabilities that powers a range of industry devices across retail, manufacturing, health, or any other industries. Windows 10 IoT Enterprise targets the x86 and x64 (32bit and 64bit) chipsets with support for Universal apps as well as classic Win32 and .NET apps; there are also lockdown capabilities to enable industry-specific device scenarios.

SKU	Silicon Placemat
Windows 10 IoT 2016 LTSB/CBB Enterprise High End List Price: USD \$\$\$\$ (i7)	Intel® : Core™ i7, Xeon® AMD: Selected FX models (FX 7500, FX 9370, FX 9590, FX 7600P)
Windows 10 IoT 2016 LTSB/CBB Enterprise Value List Price: USD \$\$\$ (i3/i5/Celeron®)	Intel®: Core™ i3, Core™ i5, Core™ M, Pentium®, Celeron® AMD: R-Series, A10, A8, Rest of FX Models
Windows 10 IoT 2016 LTSB/CBB Enterprise Entry List Price: USD \$\$ (Atom™)	Intel®: Atom, Celeron® Small Core (N3160, N3060, N3010, N2930, N2807, J1900) AMD: E1, E2, A4, A6, G-Series

### Windows 10 IoT Core

Windows 10 IoT Core is designed for smaller and lower cost industry devices such as IoT gateways or micro-kiosks, which target both ARM and x86 and only support Universal apps (no classic Win32/.NET app); however, IoT Core also targets devices with lower system requirements, i.e., processor speed, RAM, storage, etc.

## Version Comparison

Features	Window10 IoT Enterprise	Windows 10 IoT Core Pro
What is it?	Full version of Windows 10 with advanced lockdown capabilities powering a range of industry devices across retail, manufacturing, health, government, and many other industries	An optimized version of Windows that enables building smaller footprint and lower cost devices but still delivers the same capabilities customers expect in Windows.
Key Features	Full version Windows Support Win32 and Universal Windows App Support Universal Driver Advanced lockdown capabilities	No shell (UI customizable for your brand) Support single Universal Windows App only Support Universal Driver Boot straight to application
Usage Scenarios	Industry tablets/ POS/ Kiosk/ Digital signage/ ATM/ Medical devices/ Manufacturing devices/ Thin client	Digital signage/ Smart building/ IoT gateway/ Smart home devices
Product Lifecycle	10-years product availability 10-years product support	TBD
Activation	Activation works both online and offline 5x5 Single(PKEA)/ Multi(EPKEA) Activation key	No Activation Requirement
Lockdown Features	EFW & Overlays USB filter Dialog and Notice filters Input Filter AppLocker and Layout Control Shell and App Launcher	USB filter Shell and App Launcher
Support Model	CBB/LTSB	CBB

## Hardware Requirements

Version	Window 10 IoT Enterprise		Window 10 IoT Core Pro	
	32-bit	64-bit	No Display	Display
Minimum Memory	2G	2G	256MB	512MB
Minimum Storage	16GB	20GB	2GB	2GB
Processor	x86 (Intel®, AMD)		ARM or x86 (Intel®, Qualcomm, Broadcom)	
Display	XGA (1024 x 768) or higher with 32 bits of color per pixel (1024 x 600 scaling in driver layer)		None or Frame buffer graphics and 2D optional (720p HDMI / 1080p+ HDMI / 3D GPU optional for modern UI support)	
Min. CPU power	Dual Core, 1GHz		Single Core, 400 MHz	

# Windows Embedded Standard

## Introduction

Choose Windows Embedded Standard to enable advanced enterprise devices to run thousands of existing Windows applications and drivers. Experience a rich set of componentized embedded OS technologies. Specific embedded enabling features allow you to tailor the OS to your device. With Windows Embedded Standard, you can optimize the size of the OS footprint on your device by selecting only the drivers, services, and applications you need.

## Key Benefits

- Componentized operating system lets you create a custom operating system image to deliver the necessary functionality for the device
- Provide device users with a unique and powerful branded experience
- Improve mobility and access with new power management and wireless technologies
- Use the enhanced security technologies to protect your device, data, and network Access IT systems and the cloud to keep devices connected to the information that matters most
- Improve time to market with new operating system development and customization tools

## Feature

### Increased flexibility to build special purpose devices

- Flexibility to add features, drivers and language packs either directly to the device or to the image on the developer machine.
- Hardware flexibility with support for 64 bit (x64) in addition to the 32 bit (x86) to build high end embedded systems

### Experience touch

Windows Embedded 8 devices enable a more natural user experience through fast, fluid, and responsive controls, supporting multi-touch capabilities

### Create unique operating system configurations

Benefit from a module-based approach to device operating system creation.

- Drive efficiencies by creating a custom image with only necessary functionality included
- Module Designer simplifies custom operating system design by integrating third-party modules

### Apply custom branding

Present your unique brand experience to users by delivering a custom experience from startup through shut-down.

### Harness connectivity

Integrate a multitude of connectivity options to keep devices portable and connected to networks and business critical data.

- New and improved connectivity options include NFC, USB 3.0, Bluetooth LE, and Wi-Fi

- Connected Standby uses very low power when in an idle state to help a device remain connected to the Internet, helping to ensure applications are always current

### **Enjoy improved power management**

- Smart power management extends the usable life of the embedded device
- Developers will be able to build in more energy efficiency

### **Rest assured with technologies you can rely on**

Windows Embedded standard is built with security, management, availability, and reliability in mind.

- BitLocker technologies help ensure data protection and hard drive encryption
- Trusted Boot and Measured Boot add early malware protection and help guarantee that only the verified operating system image can boot

### **Stay protected with windows embedded lockdown**

Windows Embedded Lockdown features help original equipment manufacturers (OEMs) control the industry device configuration and user experience.

- Protect application and operating system changes by writing data to the abstraction layer using write filters
- Keyboard Filter protects a consistent user experience by blocking special key combinations on both physical and virtual keyboards
- Suppress Windows system dialogs with the Dialog Filter
- Help ensure consistent application experience with the Gesture Filter
- Hibernate Once/Resume Many feature helps ensure that the devices restart the same way every time
- Application Launcher allows devices to boot directly into a line-of-business application and allows the users to access the desired device experience directly
- Easily manage and configure lockdown technologies with an improved Embedded Lockdown Manager

## **Specifications and Versions**

### **Windows Embedded Standard 8**

Windows Embedded Standard 8 is a modular operating system that provides enterprises and device manufacturers the freedom to choose which capabilities will be part of their industry devices and intelligent system solutions. The latest operating system innovations help shorten the device development cycle with specialized technologies designed for the industry devices.

### **Windows Embedded Standard 7 E/P**

Windows Embedded Standard 7 delivers the power, familiarity, and reliability of the Windows 7 operating system in a componentized form for developers to create advanced commercial and consumer devices running thousands of existing Windows applications and drivers. NEW: Windows Embedded Standard 7 Service Pack 1 includes these technologies; Remote Desktop Protocol, SD Boot, and SKU Compliance Package.

### **Windows Embedded Standard 2009**

Windows Embedded Standard delivers the power, familiarity, and reliability of the Windows operating system in a componentized form for developers to create advanced commercial and consumer devices running thousands of existing Windows applications and drivers.

# Windows Embedded Professional

## Introduction

These products are fully functional versions of Microsoft's desktop OS intended for use in an embedded solution consisting of purpose-built hardware and application software. Developers use Windows for Embedded Enterprise for its visual and differentiated user interfaces, connectivity capabilities, and reliability in building secure applications. It's for dedicated embedded devices that require custom interfaces and fully functioning of Windows desktop.

## Key Benefits

- Take advantage of Full Windows to provide a high degree of cross-platform application compatibility
- Deliver an immersive, natural user experience with multi-touch and Kinect for Windows
- Easily implement retail peripherals with built-in plug and play capabilities
- Improve mobility and access with new power management and wireless technologies
- Use the enhanced security technologies to protect your device, data and network
- Reduce custom development with advanced lockdown features and secure your device from unintended interactions

## Features

### Experience touch and multi-sensory input

- Windows Embedded 8.1 Professional/Industry supports multi-touch gesture input, Internet Explorer 11, HTML 5, and Kinect for Windows -- opening the door to a user experience that is more intuitive, more natural, and more engaging
- Windows Embedded 8.1 Professional/Industry also provides support for multi-sensory input and sensory fusion, offering device manufacturers new opportunities to offer customers benefits from new streams of data

### Harness connectivity

Integrate multitude of connectivity options to keep devices portable and connected to networks and business critical data.

- New and improved connectivity options include NFC, or Near Field Communication, printer support, enhancements to USB, Bluetooth 4.0, and Roaming Enhancements

### Build with trusted technologies

Windows Embedded Professional/Industry is built with security, management, availability, and reliability in mind.

- BitLocker technologies ensure data protection and hard drive encryption
- Trusted Boot and Measured Boot guarantees that only a verified operating system image can boot and adds early malware protection thus preventing malicious software from running
- Windows Defender and System Center Endpoint Protection help protect devices from malware providing a solution for businesses of all sizes



## Embedded Lockdown Features

Enable a Consistent Application Experience with Windows Embedded Lockdown Features fully controlling the device configuration and user experience.

- Ensure consistent touch interactions with the Gesture Filter
- Protect application and operating system by writing data to abstraction layer using Unified Write Filter
- Leverage deeper lockdown control options with new USB and Hardware Buttons lockdown
- Keyboard Filter protects consistent user experience by blocking special key-combinations on both physical and virtual keyboards
- Suppress Windows system dialogs with the Dialog Filter
- Hibernate-Once-Resume-Many feature restarts devices the same way every time
- Application Launcher allows devices to boot directly into a line-of-business application and allows the users to access the desired device experience directly
- Easily Manage and configure lockdown technologies remotely with Embedded Lockdown Manager

## Specifications and Versions

### Windows Embedded 8.1 Industry

Windows Embedded 8.1 Industry extends Windows 8.1 to a range of edge devices across retail, manufacturing, healthcare, and any other industries in which powerful line-of-business applications and the ability to perform a specialized function in a secure and reliable way are paramount. In order to help OEMs and their customers maintain a competitive edge, Microsoft extends the power of Windows 8.1 to industry devices to help OEM Partners address today's most challenging business needs.

### Windows Embedded 8.1 Pro

Windows Embedded 8.1 Pro delivers the full power of the Windows 8.1 operating system in a version designed specifically for industry devices within intelligent systems. Gain improvements in power management, connectivity, and enterprise integration with a Windows 8.1-based intelligent system that advances business growth.

### Windows 7 Ultimate for Embedded Systems

Windows 7 Ultimate for Embedded Systems provides new levels of protection against theft of important business data stored on the embedded device and access to multi-language support. All the features found in Windows 7 Professional for Embedded Systems are also found in Windows 7 Ultimate for Embedded Systems.

### Windows 7 Professional for Embedded Systems

Windows 7 Professional for Embedded Systems operating system provides infrastructure improvements that enable you to spend less time on the day-to-day maintenance of embedded devices and more time adding value to applications. Build in a familiar environment while improving existing or creating new embedded devices. The Windows 7 Professional Service Pack 1 for Embedded Systems includes previously released updates and hotfixes as well as RemoteFX, which, with Windows Server 2008 R2 with SP1, creates a media-rich user environment for virtual desktops, session-based desktops, and remote applications.

# Windows Embedded POSReady

## Introduction

Windows Embedded POSReady is a flexible OS designed to seamlessly connect point-of-service solutions with peripherals, servers, and services. In this increasingly connected world, businesses need a platform to help the transition from transaction processing to enhanced customer service and relationship building.

## Key Benefits

- Flexibility to customize the OS image to suit specific hardware requirements
- Small operating system footprint can be integrated on new and existing POS systems
- Connectivity to peripherals, remote deployment capabilities, and installation options using a selection of storage media
- For retail device peripherals such as scanners, Modern Status Registers, and receipt printers
- Easy to deploy remotely and easy to install using a selection of storage media
- Helps reduce costs and increase security by customizing the OS to use only the components required for a POS solution

## Features

### Retail-optimized OS platform for POS devices

- Plug and play functionality for retail devices Familiar setup and installation
- Extend your existing investments in management and infrastructure
- Dual display capability

### Embedded Enabling Features

Protect your configuration using filter drivers like the Enhanced Write Filter, File Based Write Filter, Registry Filter, boot from USB and customize the shell the way you need it. Additionally the system allows you to block certain keys and key combination using the new Keyboard Filter.

### Reliability and security

- PCI compliance through tools to lock/harden image and reduce the attack surface of the image
- Group and local policy support
- Professional grade platforms tested to help ensure a solid development framework
- Use AppLocker to only run predefined software or use BitLocker to completely encrypt your device's system drive.

### Tools and technologies

- Built-in networking capabilities
- Microsoft Internet Explorer web browser software is included
- Internet Explorer 9 is available for download
- Windows Media® Player 12 is included for checkout lane advertising and training

- Microsoft Silverlight 4.0 Support
- .NET Framework 3.5 Support
- POS for .NET 1.12
- Global ecosystem of partners, professional developers, and enthusiasts
- Third-party sites provide technical resources and connecting community

### **Application and device peripheral support**

Support for device peripherals that implement the unified POS interoperability specifications

### **Language Packs**

Windows Embedded POSReady offers many language packs, which can be integrated into the image. The UI language can be changed on the fly in the running image.

### **No Activation**

Windows Embedded POSReady does not need to be activated. Once a product key has been entered on build-time the image is fully activated. The image can be cloned as often as needed without any need to re-activate.

## **Specifications and Versions**

### **Windows Embedded 8.1 Industry Pro Retail**

Windows Embedded 8.1 Industry Pro Retail is the successor of Windows Embedded POSReady 7. It is based on the new Windows 8.1 technology and includes all Embedded Lockdown Features to make the device secure.

### **Windows Embedded POSReady 7**

Windows Embedded POSReady 7 is an operating system optimized for POS solutions that unleashes the power and features of Windows 7 for in-store devices. It is the platform of choice for retailers looking to replace in-store transaction devices with cutting edge POS systems designed to enhance the customer experience and increase customer loyalty.

### **Windows Embedded POSReady 2009**

Windows Embedded POSReady 2009 is a flexible operating system based upon Windows XP Embedded. A graphical wizard allows you to setup POSReady 2009 very easily directly on your target device. Also embedded enabling features such as the File Based Write Filter, Registry Filter and USB Boot are included in POSReady 2009.

# Windows Embedded CE / Compact

## Introduction

Windows Embedded CE/Compact is a componentized, realtime and small footprint operating system with full access to the systems source code. Create devices with an immersive user interface, a rich browsing experience, and a unique connection to Windows PCs, servers and services by using familiar tools such as Visual Studio.

## Key Benefits

- Microsoft Silverlight-based UI development framework enables device manufacturers to differentiate with attractive, intuitive user interfaces
- Reduces the time and cost needed to deliver a rich experience with 3D transformation, Pixel/Shader effects, and multi-touch support
- End-to-end development portfolio to help you easily configure, build, and ship new devices
- Integrated development emulator eliminates the need to use multiple tools from various sources
- Several hundred test components ready to use
- More source code access to help you debug, test, and make changes to an operating system image
- 10-year extended technical support
- Worldwide partner base and community collaboration
- Free evaluation kit to evaluate and test your system for 180 days

## Features

### Utilize familiar tools and high performance technologies

- Familiar Visual Studio and Expression Blend tools

### Silverlight for Windows Embedded

- Silverlight allows developers and UI designers to rapidly create multi-touch user interfaces that are powered by the speed of native code. The UI is separated from the business logic which makes it easy to iterate on device and application UIs without affecting core development tasks.

### Multi-touch and Gestures

New multi-touch support adds to existing plug-in engine enabling intuitive, natural input capabilities and gesture-based interactions.

### Media Player

Perform multiple actions beyond play, rewind, fast forward, pause, and stop. A new, powerful interface provides better web compatibility for Windows Embedded CE/Compact by supporting media player OCX when browsing to sites.

### Internet Explorer Embedded

- Integrated Flash in browser powers playback of Flash content and Flash content can be run full-screen without browser UI.

- Customizable UI with Silverlight for Windows Embedded
- Panning and zooming experience optimized by device

### **Office and PDF Viewers**

Updated applications for Office and PDF viewing capabilities will enable users of CE/Compact devices to access their important information through devices beyond the phone and the PC.

### **Connectivity**

- CE/Compact adds Connection Manager to the end to end connectivity infrastructure
- Enhanced connectivity to other devices, PCs, servers, and services via LAN, Wi-Fi, GPRS, Bluetooth or USB.

### **Connection Manager & Windows Device Stage**

Connection Manager provides infrastructure technology to manage multiple network transports on the device. Use Windows Device Stage to allow users to easily transfer media and content between devices and PCs

### **Remote Desktop Protocol**

Enable Windows Embedded CE/Compact-based thin clients to connect using the latest version of Windows Server remote computing technologies with the Remote Desktop Protocol.

## **Specifications and Versions**

### **Windows Embedded Compact 2013**

Windows Embedded Compact 2013 is Microsoft's platform for small-footprint devices that need hard, real-time performance and silicon flexibility with ARM and x86. The operating system helps device manufacturers in the retail, healthcare, and manufacturing industries to bring intelligent systems to market that stand out through attractive, intuitive user experiences, and seamless connections to cloud services. Windows Embedded Compact 2013-based industry devices are a critical part of intelligent system solutions, built on tools and technologies that you can trust every step of the way.

### **Windows Embedded Compact 7**

Windows® Embedded Compact 7 is the next generation of Windows Embedded CE. Device manufacturers can use Microsoft's familiar tools to build the next generation of embedded devices with attractive, intuitive user interfaces, real browsing using Windows Internet Explorer® with Flash 10.1, and connections to peripherals, Windows PCs, servers, and networks.

### **Windows Embedded CE 6.0**

Designed specifically for embedded developers who need to bring new devices to market quickly and at the lowest possible cost, Windows Embedded CE 6.0 provides a 32-bit native hard real-time, small footprint operating system, a re-designed kernel, and powerful embedded development tools. CE 6.0 interoperates with industry standards and existing Microsoft desktop and server technologies to help you create differentiated devices for a broad range of device categories, from commercial devices to consumer electronics products.

# Windows Embedded Server

## Introduction

Windows® Embedded Server is binary identical to Windows Server, with built-in security, reliability, and availability features intended for use in an embedded solution consisting of purpose-built hardware and application software. Windows® Embedded Server allows OEMs to more easily design, build, and deploy dedicated solutions.

## Key Benefits

- Windows Server for Embedded Systems offers a dynamic infrastructure that can scale and secure workloads, and increase hardware ROI and reduce total cost of ownership
- The platform features diverse storage choices that can help achieve high-performance, availability and resource efficiency through virtualization and optimization
- Windows Server for Embedded Systems also automates a broad set of management tasks, and simplifies deployment of workloads, helping move an organization toward full, lights-out automation and easy remote management
- Deliver centralized access and audit policies, leverage built-in security capabilities, and help lock down your appliances

## Features

### Server Availability

Network adapter teaming enables multiple network adapters to be placed into a team interface for bandwidth aggregation and traffic failover.

### Data Security and Integrity

- Claims-based file access allows the flexibility to restrict access to files based on various claims.
- Centralized access and audit policies enable targeted auditing of certain data sets.
- Improvements include auto-encryption and file classification.
- Dynamic Host Protocol (DHCP) guard protection helps prevent your server appliance security from being compromised.

### Management Efficiency

- Improved automation with Windows PowerShell helps reduce errors and improves availability of server appliances.
- Remote server administration allows enterprises deploying server appliances to remotely manage server appliances across roles from a single UI.
- Help automate routine tasks.

### Data Deduplication

- Throttles CPU and memory consumption to maintain a low impact on server appliance workloads; can be configured to run at specific times, and is highly scalable.
- Uses checksum, consistency and identity validation, in addition to maintaining redundancy for metadata and data most frequently accessed.

## Storage Reliance

- Create storage reliance and availability with storage spaces and storage pools. Enables you to virtualize storage by grouping industry-standard disks into storage pools and then creating storage spaces from the available capacity in the storage pools. With Windows Server for Embedded Systems, you have the ability to virtualize your storage solution. Storage spaces give you the ability to consolidate all your SAS and SATA connected disks—whether they are SSDs or traditional HDDs—and consolidate them as storage pools.
- Windows Server for Embedded Systems includes a redesigned data persistence layer that is based on a new version of the VHD format called VHDX (VHD 2.0). VHDX has a much larger storage capacity than the older VHD format. iSCSI Target Server also provides data corruption protection during power failures and optimizes structural alignments of dynamic and differencing disks to prevent performance degradation on new, large-sector physical disks.

## Virtual Machine Performance

Use Non-Uniform Memory Access (NUMA) in Hyper-V to speed up the performance of virtual machines.

## Data Availability

Resilient File System (ReFS) helps maximize data availability and online operation, despite errors that would historically cause data loss or downtime.

## Business Intelligence

PowerView, a new feature in the Business Intelligence and Enterprise editions of Microsoft SQL Server for Embedded Systems Reporting Services, provides a method for users who are not business analysts to explore data stored in PowerPivot for SharePoint.

## Cloud Ready

Developer tools provide a rich Microsoft Visual Studio–based developer experience and compose both application code and declarative models (workflow, rules, etc.). Visual Studio and Team Foundation Server (TFS) provide a rich development experience, and offer to .NET developers a complete environment to build cloud and on-premises applications. Technologies such as Service Bus, Azure Connect, and the Access Control service enable hybrid applications that work on-premises and in the cloud.

Integrate your server appliances with applications running in Microsoft Azure by using Microsoft Azure Service Bus, which provides secure messaging and relay capabilities that enable the building of distributed and loosely coupled hybrid applications in the cloud. It enables you to connect and integrate your server appliances more securely with applications running on Microsoft Azure

## Licensing Model

Windows Server 2012 For Embedded Systems and Windows Server 2012 R2 For Embedded Systems		
Feature	Standard	Datacenter
Processors supported	1-4	1-4
Virtualization technology	2 to 4 virtual license instances	unlimited virtual license instances

Windows Server 2008 For Embedded Systems and Windows Server 2008 R2 For Embedded Systems		
Feature	Standard	Enterprise
Processors supported	1-4	1-8
Virtualization technology	2 to 4 virtual license instances	unlimited virtual license instances

## Specifications and Versions

Features		Server 2003	Server 2008 / 2008 R2	Server 2012	Server 2012 R2
Identity and Access	Active Directory Services	●	●	●	●
	Dynamic Access Control			●	●
	AD virtualization support			●	●
Virtualization	Shared-nothing live migration			●	●
	Hyper-V Replica			●	●
	Hyper-V clustering		●	●	●
	Virtual Desktop Infrastructure		●	●	●
Storage	Storage Spaces with tiering				●
	Shared VHDX				●
	Live storage migration			●	●
	Storage QoS				●
	Cluster share volume		●	●	●
Web and App Plat	Multi-tenant high density websites		●	●	●
	NUMA aware scalability			●	●
	Dynamic IP restrictions			●	●
Networking	Hyper-V Network Virtualization			●	●
	NIC teaming			●	●
	IP address management			●	●
Management and Automation	Server Core		●	●	●
	Multiserver management			●	●
	Windows PowerShell	●	●	●	●
	Windows PowerShell Workflow and Web Access			●	●



# SQL Server for Embedded System

## Introduction

Microsoft® SQL Server® for embedded systems is binary identical to Microsoft SQL Server, intended for use in an embedded solution consisting of purpose-built hardware running the Windows Embedded Server Operating System and application software. Microsoft SQL Server for Embedded Systems builds on the strong foundation and proven capabilities, providing OEMs with a robust database for their embedded applications deployed on server appliances.

## Features

### Breakthrough, in-memory performance

With SQL Server, new in-memory capabilities for transaction processing and enhancements for data warehousing complement our existing technologies for data warehousing and analytics. Scale and transform your business with up to 30x performance gain for transaction processing using existing hardware, and a greater-than 100x performance gain for data warehousing.

### Proven, predictable performance

SQL Server consistently leads in TPC-E, TPC-H and real-world application performance benchmarks. SQL Server is SAP-certified to run some of the most demanding workloads. Get more predictable performance of virtualized SQL Server instances with IO governance in Resource Governor.

### High availability and disaster recovery

Gain mission critical uptime, fast failover, improved manageability, and better use of hardware resources through enhanced AlwaysOn in SQL Server, a unified solution for high availability. In SQL Server, setting up AlwaysOn becomes even easier with new Add Replica wizard and if you are looking to implement hybrid HA using Microsoft Azure Virtual Machines you can take advantage of new AlwaysOn templates to automate HA setup.

### Enterprise scalability across compute, networking, and storage

With SQL Server and Windows Server, physical processing now scales up to 640 logical processors, and virtual machines scale up to 64 logical processors. SQL Server also utilizes storage spaces and network virtualization to optimize your resources. It can also run on Windows Server Core to lower the surface area of attack.

### Security and compliance

Help secure data for mission critical workloads with transparent data encryption, robust auditing, extensible key management and encrypted backups. It is even easier to manage permissions for data access to support separation of duties across various users.

### Consistent data platform on-premises to cloud

Leverage existing skills and familiar tools like Active Directory and SQL Server Management Studio across on-premises SQL Server and Microsoft Azure. Have the flexibility to run your SQL Server workloads in Azure Virtual Machines (VM),

giving you complete control of the VM. Or use Azure SQL Database service to further simplify the need to manage your SQL Server instances while providing unique scale-out architecture.

### Corporate business intelligence

Scale your BI models, enrich and help secure your data, and ensure quality and accuracy with a complete BI solution. Build comprehensive, enterprise-scale analytic solutions with Analysis Services and simplify BI model deployment with the BI Semantic Model.

### Access data in familiar tools like Excel

Accelerate time-to-insight using Microsoft Excel. Search, access, and shape internal, external, structured, and unstructured data for analysis in Excel.

### Faster insights for all users with Power BI

Accelerate time-to-insight, on-premises and in the cloud with SQL Server and Power BI. Get richer visualizations using Power Map and Power View. Search, access, and shape internal, external, structured, and unstructured data with Power Query. Access insights from anywhere using Power BI.

### Scalable data warehousing

Scale to petabytes of data for enterprise-grade relational data warehousing using scale out Massive Parallel Processing (MPP) architecture using the Analytics Platform System (APS) and have the ability to integrate with non-relational sources like Hadoop. Support your needs from smaller datamarts to your largest enterprise data warehouses while improving queries by more than 100x faster than your legacy data platform and reduce storage with new enhanced data compression.

### Easy-to-use management tools

SQL Server Management Studio helps you centrally manage your database infrastructure both on-premises and in the cloud. Added support for Windows PowerShell 2.0 automates management tasks and enhancements to let you more efficiently create virtual machines. Simplify application testing on a single database using Distributed Replay.

### Robust development tools

Updated developer tools are integrated into Visual Studio and are available for download to build next-generation web, enterprise, business intelligence and mobile applications across on-premises and cloud. Customers can use industry standard APIs (ADO.NET, ODBC, JDBC, PDO, and ADO) across varied platforms including .NET, C/C++, Java, Linux, and PHP.

## Licensing Model

Version	Licensing Options	
	Server + CAL	Core-based
Enterprise		●
Business Intelligence	●	
Standard	●	●

## Specifications and Version

Features		SQL Server 2008 R2	SQL Server 2012	SQL Server 2014	SQL Server 2016
Performance	In-memory OLTP*			●	●
	In-memory ColumnStore*		●	●	●
	Real-time operational analytics*				●
	Resource Governor*	●	●	●	●
	Query Store				●
Availability	AlwaysOn*		●	●	●
	Enhanced virtualization support and live migration	●	●	●	●
Security	Always Encrypted*				●
	Transparent data encryption*	●	●	●	●
	Row-level security				●
	Dynamic data masking				●
	Backup encryption support			●	●
	Fine-grained auditing	●	●	●	●
Programmability	Separation of duties		●	●	●
	JSON support				●
Programmability	PolyBase queries over Hadoop data**				●
Programmability	Temporal				●
Cloud-ready	SQL Server Stretch Database				●
	Backup to Azure		●	●	●
	Disaster recovery to Azure*			●	●
	Optimized virtual machine images in Azure gallery		●	●	●
Business intelligence	Distributed replay		●	●	●
	Policy-based management	●	●	●	●
	Modernized reports				●
	Mobile BI*				●
	Integration services managed as a server		●	●	●
	Pin reports to Power BI				●
	Multi-dimensional semantic models	●	●	●	●
	Enhanced tabular BI semantic models*				●
	Master data services*	●	●	●	●
Data quality services*		●	●	●	
Advanced analytics	In-database advanced analytics with R Services				●
	Multi-threaded processing of R queries and streaming memory*				●

# Windows Licensing Process

- STEP 1** ● **Evaluation**
- Embedded OEM Customer (OEM) contacts ADVANTECH, Microsoft Authorized Embedded Distributor.
  - OEM obtains evaluation software or purchases a full version toolkit, if needed, from ADVANTECH.
- STEP 2** ● **Sign CLA**
- OEM Customer signs OEM Customer License Agreement (\*CLA) electronically.
- STEP 3** ● **Development and Testing**
- For FES & POSReady products, ADVANTECH provides the OPK (OEM Preinstallation Kits) for installation.
  - For WES & CE products, OEM completes development of the master embedded image.
- STEP 4** ● **Order License**
- OEM contacts ADVANTECH to order Runtime Licenses and Associated Product Materials (APM).
  - For FES and Server products, key is located on the COA (\*Certificate of Authenticity) or on a flyer that comes with the COA.
  - For WES, POSReady, and CE products, customer applies for product key from Microsoft on first order.
- STEP 5** ● **Distribution**
- Customer manufactures and distributes embedded systems with a COA and \*EULA as specified in the CLA.

## Notes

### ***\*Embedded OEM Customer License Agreement (OEM CLA)***

*Standard general terms and conditions that must be signed by and OEM in order to acquire Microsoft Embedded licensed products. See process below for more details.*

### ***\*Certificate of Authenticity (COA)***

*A serialized label, affixed to devices containing Embedded Microsoft operating systems. The COA is the primary anti-piracy and product tracking tool and establishes a proof of license. The product specific name is printed on the label. See section COA for more details.*

### ***\*End User License Agreement (EULA)***

*As the terms and conditions must be passed on to the end user, the EULA needs to be shipped together with the OEM device. See section COA for more details.*

# Windows Embedded Utility Services

## Windows Embedded OS Language Adding Tool



Windows Embedded Language Adding tool is a user interface developed by Advantech. Supporting Windows Embedded 7, 8 & 10, the tool enables the OEM to add up to 4 languages when pre-installing the operation system. Instead of giving a command, the user interface presents an easy and friendly view for developers to create a Windows embedded image more efficiently. After the devices are shipped to end-user site, customer can choose one language they prefer for their operation system, which benefits OEMs that target customers internationally.

## Windows Embedded OS Utility

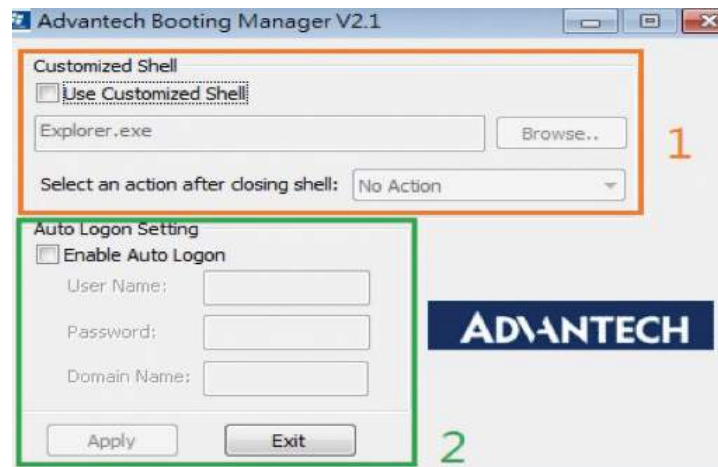
Windows Embedded OS Utility is a tool developed by Advantech integrating five embedded lockdown features into one interface. Instead of giving command lines to change the setting, this utility allows developers and even end users to modify the lockdown function with simple steps.

### Bootling Manager

The Windows Boot Manager is a UEFI application that sets up the boot environment. Inside the boot environment, individual boot applications started by the Boot Manager provide functionality for all customer-facing scenarios before the device boots.

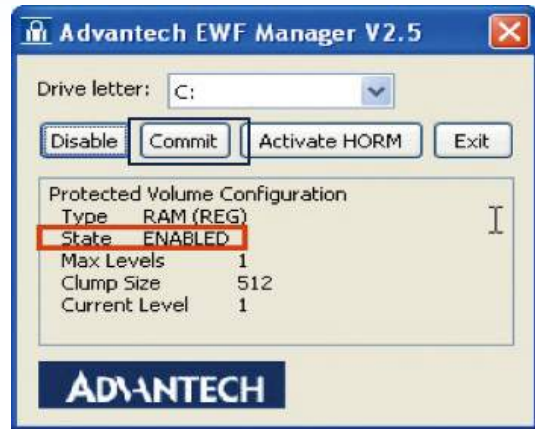
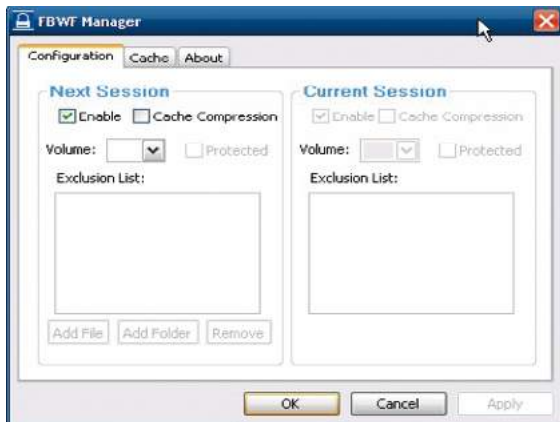
The interface, developed by Advantech, presents the booting manager program shell, which includes two kinds of functions – the “customizing shell”, see orange line, and the “Auto logon setting”, see green line.

“Customized shell” can execute any exe file and set action after closing shell. Users can select action such as no action, shutdown or reboot computer and restart shell. “Auto logon setting” allows the operation system to be automatically logged with default setting account.



## EWF(Enhanced Write Filter) Manager

Enhanced Write Filter (EWF) provides the ability to write-protect a run-time image. By redirecting all write requests to either a separate disk partition or RAM, EWF allows the run-time image to maintain the appearance of a writeable run-time image. Additionally, Enhanced Write Filter provides the ability to deploy a run-time image onto read-only media, such as a CD-ROM.

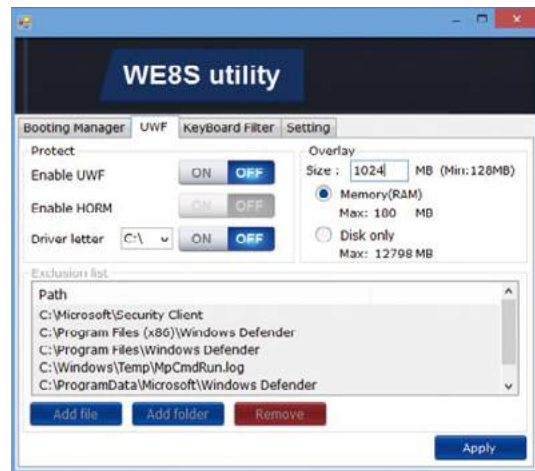
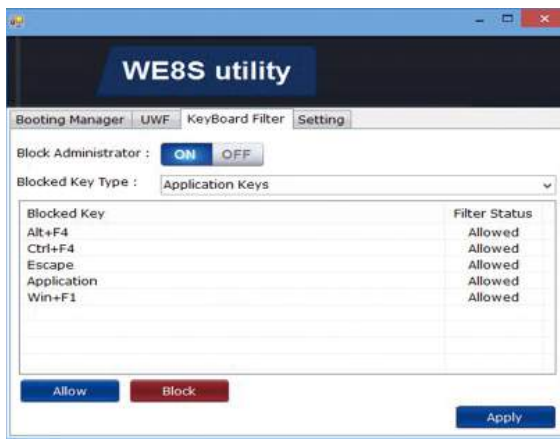


## FBWF(File Based Write Filter) Manager

File-Based Write Filter (FBWF) enables redirection of all changes made to a protected volume to an in-memory overlay. This provides system designers with the option of discarding all changes made to a system in a manner that is transparent to user applications. This inherent feature of FBWF can also be used for booting Windows Embedded Standard images from read-only flash media.

## UWF (Unified Write Filter) Manager

Unified Write Filter (UWF) is a sector-based write filter that user can use to protect the storage media. UWF intercepts all write attempts to a protected volume and redirects those write attempts to a virtual overlay. This improves the reliability and stability of the device and reduces the wear on write-sensitive media, such as flash memory media like solid-state drives.



## Keyboard Filter Manager

Keyboard Filter maintains a consistent user experience by blocking special key-combinations on both physical and virtual keyboards



# Intel® Security - McAfee Embedded Solutions

## Introduction

McAfee Embedded Security Solution is ideal for protecting systems that are fixed-function in terms of CPU or memory resources. Its low overhead does not impact system performance, requires very low initial and ongoing operational overhead, and is equally effective in standalone mode without network access. We provide four different combinations to satisfy different embedded industry needs.

## Features

### Low Overhead

McAfee Embedded Security Solution is a low-overhead software solution featuring easy setup and low initial and ongoing operational overhead. It boasts minimal impact on CPU cycles, and uses less than 10 MB of RAM. There is no file system scanning, and thus no file scan impact on system performance. Designed to work in connected and in offline modes, it requires no signature updates.

### Application Control

Application Control helps provide protection against any existing and unknown, zero-day polymorphic threats via malware such as worms, viruses, Trojans, buffer-overflow threats, etc., thereby ensuring that the operating device is secure and cannot be compromised. It also helps eliminate emergency patching, reduces number and frequency of patching cycles, and enables more time for testing before patching. It also reduces any security risk on difficult-to-patch devices that are remote and distributed in areas with little or no local support. The Application Control feature helps reduce operation costs by reducing both planned patching and unplanned recovery downtime, thereby increasing device availability. This turns out to be an ideal solution, especially for lower end devices as it reduces the support costs by reducing the number of touch points needed.

### Change Control

Change Control allows you to prevent reading/changes to the file system registry. You can view details of who made changes, which files were changed, and when and how the changes were made. You can write-protect critical files and registry keys from unauthorized tampering. You can read-protect sensitive files. To ease maintenance, you can define trusted programs or users to allow updates to protected files and registry keys. Real-time visibility for changes made across all systems is the foundation of the Change Control product framework. It provides real-time change tracking with minimal consumption of CPU, memory, disk, and network resources. It comprehensively logs all change attempts made to files and Windows registry keys on the target systems.

### ePolicy Orchestrator

ePolicy Orchestrator is a complete management software for Intel® Security/McAfee products. It helps McAfee Application Control do central management by remote deployment/configuration and reporting. In McAfee Integrity Control, with ePolicy Orchestrator, file content changes can be viewed and compared side-by-side to see what was added, deleted, or modified. This is handy while troubleshooting configuration-related outages. ePolicy Orchestrator in McAfee Integrity Control may also be utilized to ensure that the control requirements are met for PCI, FDA, HIPAA, and other regulatory mandates. It provides the necessary tamperproof audit logs on the device to prove that regulatory controls are in place.

### Package 1 : McAfee Application Control (MAC) without ePO

McAfee Application Control, protects your system by only allowing authorized code to run. It automatically creates a dynamic whitelist of the “authorized code” on the embedded system. Once the whitelist is created and enabled, the system is locked down to the known good baseline; no program or code outside the authorized set can run.

### Package 2 : McAfee Application Control (MAC) with ePO

With all the functions of Package 1(MAC without ePO), McAfee Application Control with ePolicy Orchestrator centrally manages all McAfee products through remote deployment, remote configuration and report generation. It effectively saves management costs for users who have more than one device with installed McAfee.

### Package 3 : McAfee Embedded Control (MEC)

McAfee Embedded Control combines the functions of application control and change control (i.e., it includes all the functions of package 1 (MAC without ePO), plus the function of change control). With a dynamic whitelist of “authorized code”, the system is locked down to the known good baseline; no program or code outside the authorized set can run, and no unauthorized changes can be made. It blocks unauthorized changes to critical system files, directories, and configurations. It allows you to enforce change-control processes by specifying the authorized means of making changes. You may control who can apply changes, which certificates are required to allow changes, what may be changed (for example, you can restrict changes to certain files or directories), and when changes may be applied (for example, update windows might only be opened during a certain time in the week).

### Package 4 : McAfee Integrity Control (MIC)

McAfee Integrity Control combines application control, change control plus ePolicy Orchestrator (i.e. with all the functions of Package 3 (MEC), and adds in the function of ePolicy Orchestrator). McAfee Integrity Security unifies the management of endpoints, networks, data, and compliance for all the McAfee products. More than remote deployment, remote configuration, and reports generated, McAfee Integrity Control monitors who read and changed protected data, and when, while streamlining the implementation of compliance measures. It effectively saves management costs for users who have more than one device with McAfee installed.

#### level 1- McAfee Application Control

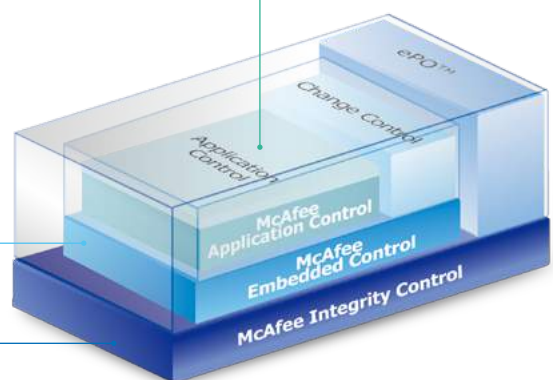
Application Control is McAfee's fundamental product to provide an effective way to block unauthorized applications and code on fixed-function devices.

#### level 2- McAfee Embedded Control

McAfee Embedded Control combines Application Control and Change Control, providing advanced protection by only allowing authorized code to run and only authorized changes to be made.

#### level 3- McAfee Integrity Control

McAfee Integrity Control combines McAfee Embedded Control and McAfee ePolicy Orchestrator® providing integrated audit and compliance reports to help satisfy multiple compliance regulations.







# Intel® Security - McAfee Endpoint Protection

## Introduction

McAfee Endpoint Security 10 is the newest, best-performing, most effective, collaborative protection for McAfee Endpoint Protection Suites customers. It introduces a new framework that allows multiple endpoint defense technologies to communicate in real time and analyze and collaborate against new and advanced threats.

### Endpoint security 3 modules

- Threat Prevention — Checks for viruses, spyware, unwanted programs, and other threats, either by scanning items automatically when users access them, or scanning on demand at any time.
- Firewall — Monitors communication between the computer and resources on the network and the Internet. Intercepts suspicious communications. Stops malicious inbound and outbound network traffic
- Web Control — Displays safety ratings and reports for websites during online browsing and searching. Web Control enables the site administrator to block access to websites based on safety rating or content.

### McAfee endpoint security 10 offers

- Intelligent endpoint protection: You'll get real-time intelligence and actionable threat forensics from defenses that communicate and learn from each other to combat advanced threats.
- Strong and effective performance: You can strengthen your defenses with faster scanning, threat updates, maximized CPU, and protection performance that is proven to be effective in third-party tests.
- Collaborative protection framework : You'll be able to simplify your defenses and remove the complexity of duplicate

## Features

Endpoint protection for targeted attacks	Closes the gap from encounter to containment from days to milliseconds. McAfee Threat Intelligence Exchange collects intelligence from multiple sources, enabling security components to instantly communicate with each other about emerging and multiphase advanced attacks.
Intelligent, adaptive scanning	Improves performance and productivity by bypassing scanning of trusted processes and prioritizing suspicious processes and applications. Adaptive behavioral scanning monitors, targets, and escalates as warranted by suspicious activity.
Advanced anti-malware protection	Ensures safe browsing with web protection and filtering for endpoints.
Proactive web security	Ensures safe browsing with web protection and filtering for endpoints.
Blocks hostile network attacks	Integrated firewall uses reputation scores based on McAfee GTI to protect endpoints from botnets, DDoS, APTs, and suspicious web connections. Firewall protection allows only outbound traffic during system startup, protecting endpoints when they are not on the corporate network.
Actionable threat forensics	Administrators can quickly see where infections are, why they are occurring, and the length of exposure. Threats are understood fast; reactions are fast.
Centralized management (McAfee ePO platform) with multiple deployment choices	True centralized management offers greater visibility, simplifies operations, boosts IT productivity, unifies security, and reduces costs.
Open, extensible endpoint security framework	Integrated architecture allows endpoint defenses to collaborate and communicate for a stronger defense. Results in lower operating costs by eliminating redundancies and optimizing processes. Seamlessly integrates with other Intel® Security and third-party products to reduce protection gaps.



# Intel® Security Licensing Process

**STEP 1** ● **Product Introduction**

**STEP 2** ● **NDA Signed with McAfee**

Need to provide this information for NDA processing

company name :

address :

contact person :

email :

title :

If the info is correct, Intel® Security will send a mail with McAfee (Intel® Security) signature block ready.  
After you e-sign it back, the processes are all done.

**STEP 3** ● **Product Evaluation & Development**

**STEP 4** ● **Indirect OEM Software License Agreement Signed with McAfee**

Need to provide this information for indirect OEM agreement :

Company full name :

Address :

Contact person, title, and email :

Product (combined offering) : (kiosk or ATM or other ???)

Territory :

McAfee product :

Person signing OEM agreement and email :

**STEP 5** ● **License Order**

**STEP 6** ● **Product Distribution**



# Intel® Security Utility Service

## McAfee Manager



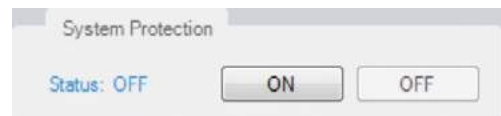
Developed by Advantech, McAfee Manager is a user friendly interface that helps the customer to configure McAfee protection and setting up the whitelist. Users can add/remove authorized application from whitelist and Write & read protect adding/removing without using command line.

This tool includes 6 function groups :

- 1 System protection
- 2 Whitelist
- 3 Updaters
- 4 Certifications
- 5 File Protection
- 6 System Information

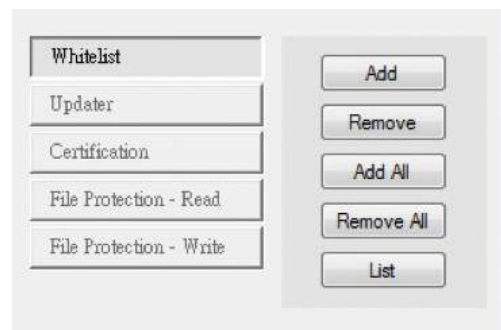
### Function Group 1 : System protection

This function enables/disables system protection. Click either the ON or OFF button; the application asks the system to reboot and enable/disable system protection. Status shows the current status.



### Function Group 2 : Whitelist

This is the list of known trusted files. When system protection is enabled, only files listed in the whitelist can be executed.



### Function Group 3 : Updaters

“Updaters” is also presented on the interface, showing updaters that are permitted to update the system. McAfee blocks all execute/library file which are not on the whitelist. If the 3rd party installer/windows update is configured as an “Updater”, it is allowed to install new software and update existing software components on a protected system.



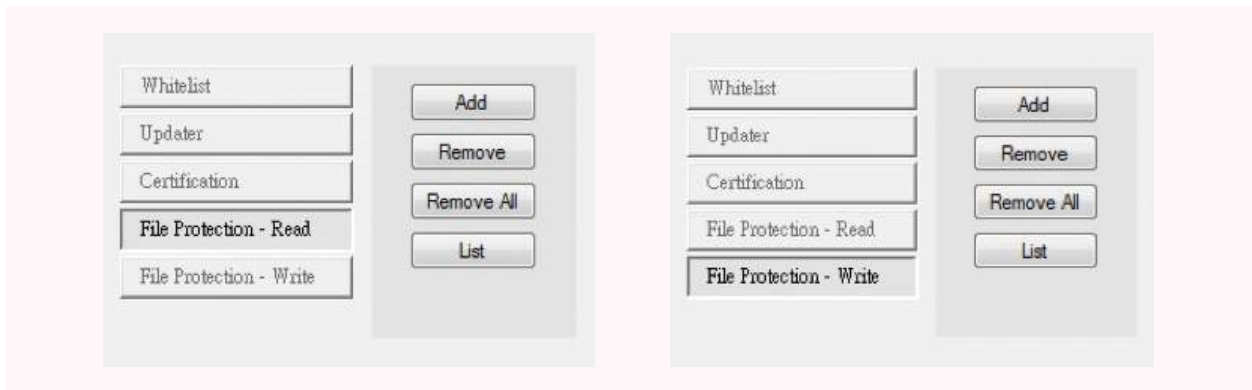
### Function Group 4 : Certifications

“Certification” allows trusted certificates that are associated with software packages to run on a protected system. After users add a certificate as a trusted or authorized certificate, they can run all software signed by the certificate on a protected system without entering Update mode.



### Function Group 5 : File protection

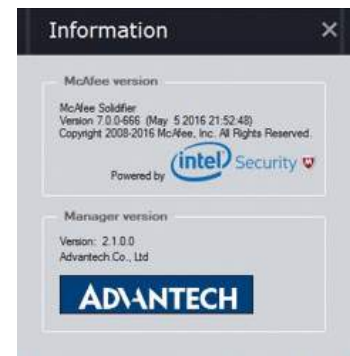
“File Protection – Read & Write” allows the user to set up the document and configure visibilities and change authority.



### Function Group 6 : System Information

User can set/modify password in Password section and check McAfee and McAfee Manager versions

All the settings are managed password, reserved by user’s McAfee Administrator.





# Acronis Personal Version

Digital data is one of the most valuable assets of any consumer or business organization. Providing your clients with protection for their data is crucial. Acronis True Image Personal is an integrated software suite that ensures the security of all of the information on your device. Backups allow you to recover your system should a disaster occur, such as losing data, accidentally deleting critical files or folders, or suffering a complete hard disk crash.

## Acronis True Image Personal Edition

- Based on Acronis True Image
- Improved hardware support
- End-User Activation/Registration (for marketing purposes)
- Upgrade prompts to retail product (Acronis True Image 2016)
- Dedicated functionality : Full disk backup, full file/folder backup, weekly
- Support storage media: networked storage devices and external storage devices (USB/Firewire)
- Support GPT/UEFI system
- Advanced format disks (4 KB drive) identification

## Acronis True Image Personal Edition function

<b>Backup and recovery</b>	Backups are useful primarily for two purposes, one is to restore a state following a disaster and another one is to recover small numbers of files after they have been accidentally deleted or corrupted. Acronis True Image Personal does both by creating disk (or partition) images and file-level backups respectively.
<b>Backup versions</b>	Backup versions represent full backups. Additionally, You can recover different saved versions of the found files.
<b>Disaster recovery</b>	Acronis True Image Personal provides for recovery from a disaster caused by system data corruption, viruses, malware, or other causes. If the operating system fails to boot, Acronis True Image Personal will recover the system partition.
<b>Scheduling</b>	You can schedule automatic backups ahead of time and the data will be backed up as long as there is sufficient storage space.
<b>Factory image</b>	A factory image is a special disk backup that contains the computer's factory configuration. You can use the factory image to restore the computer to factory settings directly from Windows or using factory bootable media.
<b>Supported Operating Systems</b>	<ul style="list-style-type: none"> <li>▪ Windows XP SP3 (Acronis True Image 2016 only)</li> <li>▪ Windows 7 SP1 (all editions)</li> <li>▪ Windows 8 (all editions)</li> <li>▪ Windows 8.1 (all editions)</li> <li>▪ Windows 10</li> <li>▪ Windows Home Server 2011</li> </ul>



# Acronis Full Version

## Introduction

Acronis True Image is an integrated software suite that ensures the security of all of the information on your PC. It can back up your documents, photos, email, and selected partitions, and even the entire disk drive, including operating system, applications, settings, and all of your data.

Backups allow you to recover your computer system should a disaster occur, such as losing data, accidentally deleting critical files or folders, or suffering a complete hard disk crash.

Online Backup allows you to store your files and disks on Acronis Cloud. Your data will be protected even if your computer is lost, stolen, or destroyed, and your data can be entirely recovered onto a new device, if needed.

## Features

- Includes all personal version functions, plus the advanced functions listed below :
- Support incremental and differential backup and non-stop backup
- Support storage in Acronis Secure Zone and FTP
- Universal Restore to new hardware
- Scheduling
- Backup consolidation
- Disk/partitions cloning
- Time explore
- Personal Image Encryption with Advanced Encryption Standard (AES)
- NAS support
- Virtual hard disk support
- Disk image
- Acronis extended capacity manager
- Multi-device protection: PC and Mac
- Cloud Backup

## Acronis True Image Home/Full Edition function

<p><b>Backup and recovery</b></p>	<p>Backup refers to the making of copies of data so that these additional copies may be used to recover the original after a data loss event. Acronis True Image does recover an operating system when it is corrupted or cannot start (called disaster recovery) and recovers specific files and folders after they have been accidentally deleted or corrupted.</p>
<p><b>Backup versions</b></p>	<p>Backup versions are the file or files created during each backup operation. The number of versions created is equal to the number of times the backup is executed. Backup versions include full, incremental, and differential backups</p>
<p><b>Disk cloning</b></p>	<p>This operation copies the entire contents of one disk drive to another disk drive. This may be necessary, for example, when you want to clone your operating system, applications, and data to a new larger capacity disk. You can do it two ways:</p> <ul style="list-style-type: none"> <li>■ Use the Clone disk utility.</li> <li>■ Back up your old disk drive, and then recover it to the new one.</li> </ul>
<p><b>Backup validation</b></p>	<p>The backup validation feature allows you to confirm that your data can be recovered. The program adds checksum values to the data blocks being backed up. During backup validation, Acronis True Image opens the backup file, recalculates the checksum values and compares those values with the stored ones. If all compared values match, the backup file is not corrupted.</p>
<p><b>Scheduling</b></p>	<p>For your backups to be really helpful, they must be as "up-to-date" as possible. Schedule your backups to run automatically and on a regular basis. Acronis True Image stores information on the backups in a metadata information database. Therefore, deleting unneeded backup files in Windows Explorer will not delete information about these backups from the database. This will result in errors when the program tries to perform operations on the backups that no longer exist.</p>
<p><b>Supported Operating Systems</b></p>	<ul style="list-style-type: none"> <li>■ Windows XP SP3 (Acronis True Image 2016 only)</li> <li>■ Windows 7 SP1 (all editions)</li> <li>■ Windows 8 (all editions)</li> <li>■ Windows 8.1 (all editions)</li> <li>■ Windows 10</li> <li>■ Windows Home Server 2011</li> </ul>
<p><b>Dual protection</b></p>	<p>Back up your computers and mobile devices to both local and external drives and Acronis Cloud Storage to get the maximum level of protection. Local drives are useful for fast recovery. Cloud is always available and accessible from anywhere.</p>
<p><b>Cloud Synchronization</b></p>	<p>Background synchronization of files to the cloud and to/from other computers.</p>
<p><b>Cloud Archiving</b></p>	<p>Save space by securely archiving older files to local drives or the cloud. Yet retain easy access to them via icons in Windows Explorer or Mac Finder or via web browser.</p>
<p><b>Unlimited mobile devices backup</b></p>	<p>Unlimited mobile devices backup to local computer (Backup and recover all your pictures, videos, contacts, events from Android devices, iPhones, iPads).</p>



## Regional Service & Customization Centers

### China

Kunshan  
86-512-5777-5666

### Taiwan

Taipei  
886-2-2792-7818

### Netherlands

Eindhoven  
31-40-267-7000

### Poland

Warsaw  
48-22-33-23-740 / 741

### USA

Milpitas, CA  
1-408-519-3898

## Worldwide Offices

### Greater China

#### China

<b>Toll Free</b>	<b>800-810-0345</b>
Beijing	86-10-6298-4346
Shanghai	86-21-3632-1616
Shenzhen	86-755-8212-4222
Chengdu	86-28-8545-0198
Hong Kong	852-2720-5118

#### Taiwan

<b>Toll Free</b>	<b>0800-777-111</b>
Neihu	886-2-2792-7818
Xindian	886-2-2218-4567
Taichung	886-4-2329-0371
Kaohsiung	886-7-229-3600

### Asia Pacific

#### Japan

<b>Toll Free</b>	<b>0800-500-1055</b>
Tokyo	81-3-6802-1021
Osaka	81-6-6267-1887

#### Korea

<b>Toll Free</b>	<b>080-363-9494</b>
Seoul	82-80-363-9494

#### Singapore

Singapore	65-6442-1000
-----------	--------------

#### Malaysia

<b>Toll Free</b>	<b>1800-88-1809</b>
Kuala Lumpur	60-3-7725-4188
Penang	60-4-537-9188

#### Indonesia

Jakarta	62-21-751-1939
---------	----------------

#### Thailand

Bangkok	66-2-248-3140
---------	---------------

#### India

<b>Toll Free</b>	<b>1800-425-5070</b>
Bangalore	91-80-2545-0206

#### Australia

<b>Toll Free</b>	<b>1300-308-531</b>
Melbourne	61-3-9797-0100
Sydney	61-2-9476-9300

### Europe

<b>Toll Free</b>	<b>00800-2426-8080</b>
------------------	------------------------

#### Germany

Münich	49-89-12599-0
Hilden / D'dorf	49-2103-97-885-0

#### France

Paris	33-1-4119-4666
-------	----------------

#### Italy

Milano	39-02-9544-961
--------	----------------

#### Benelux & Nordics

Breda	31-76-5233-100
-------	----------------

#### UK

Reading	44-0118-929-4540
---------	------------------

#### Poland

Warsaw	48-22-33-23-740/41
--------	--------------------

#### Russia

<b>Toll Free</b>	<b>8-800-555-01-50</b>
Moscow	7-495-644-0364
St. Petersburg	7-813-332-5727

### Americas

#### North America

<b>Toll Free</b>	<b>1-888-576-9668</b>
Cincinnati	1-513-742-8895
Milpitas	1-408-519-3898
Irvine	1-949-420-2500

#### Mexico

<b>Toll Free</b>	<b>1-800-467-2415</b>
Mexico City	52-55-6275-2777

#### Brazil

<b>Toll Free</b>	<b>0800-770-5355</b>
Saude-São Paulo	55-11-5592-5355

# ADVANTECH

Enabling an Intelligent Planet

[www.advantech.com](http://www.advantech.com)

Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.

No part of this publication may be reproduced in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission of the publisher.

All brand and product names are trademarks or registered trademarks of their respective companies.

© Advantech Co., Ltd. 2014

860000290