



Windows 10 IoT

Technology is transforming the way we work, play, and live in a positive way: services in the Cloud provide almost limitless compute power and networks provide nearly ubiquitous and instant access to these services. Devices are getting smarter, more connected, and central to all this transformation. The Internet of Things (IoT) provides a major opportunity for device manufacturers to transform their businesses as well by creating new device types and formats, new revenue streams through services, and by differentiating their offerings through innovation.

With this opportunity comes challenges as well: device developers must innovate in functionality and servicing models in order to stay competitive; new device form-factors, multiple development platforms, and disparate tools increase complexity; and with exponential growth in the number of things connected to the internet, security challenges are paramount.

With Windows 10 IoT, Microsoft gives you the technology to make IoT real. Microsoft is a proven leader in the Enterprise space with a complete stack of enabling productivity, analytics, infrastructure, and Cloud technologies. Microsoft has a rich ecosystem and has been bringing real IoT solutions to market for many years.

Faster Time-to-Market

Building on Windows' decades of experience with embedded devices, Windows 10 IoT provides a complete platform to create secure and connected IoT solutions. Beginning with our best-in-class dev experience, Visual Studio allows efficient coding and testing. Hundreds of samples and professionally maintained documentation help developers solve complex problems. Rather than having to integrate disparate security and cloud technologies from multiple vendors, Windows 10 IoT has built-in security features and Azure IoT integration. Microsoft also provides manufacturing guidance and tools that are coordinated with our partner ecosystem.

Intelligent Security

Windows 10 IoT is part of the Windows 10 family, the most secure Windows ever. With Windows 10 IoT we continue to evolve the security architecture, so you do not have to fear malware and can focus on your product. Windows 10 IoT implements intelligent security capabilities that work together, to ensure that malware and cyber-attacks have little chance, protecting your IoT solutions from device to cloud. <http://aka.ms/windowssecurity>

Intelligent Edge

The intelligent edge optimizes IoT solutions by putting cloud intelligence where it makes the most sense, allowing analytics and insights on edge devices. Cost and performance can be tuned for business value. Windows 10 IoT enables powerful edge devices with a modern app platform and world-sensing support. The Windows ecosystem provides a wide variety of hardware capabilities. Container support allows simple support for application or services. Azure IoT Edge provides intelligent edge features to generate valuable insights and take action.

Windows 10 IoT Core

An optimized version of Windows that enables building smaller footprint, connected devices that still deliver the same security and management capabilities customers expect from Windows.

Single UWP Application experience

Lower power silicon

256MB RAM, 2GB storage | X86 or ARM

Windows 10 IoT Enterprise

Full version of Windows 10 with advanced lockdown capabilities powering a range of industry devices across retail, manufacturing, health, government or any other industries.

Rich user experience

Win32 & UWP Applications

2GB RAM, 16 GB Storage | X86 or X64

Windows 10 IoT Version Comparison*

	IoT Core		IoT Enterprise**	
User Experience	Single UWP app running at startup with supporting background apps & services		Traditional Windows Shell with Advanced Lockdown Features	
Headless supported	Yes		Yes	
App Architecture supported	UWP only		UWP & Win32	
Cortana	Yes (display required)		Yes	
Domain Join	Azure Active Directory (AAD) only		AAD & Traditional Domain Join	
Management	Mobile Device Management (MDM)		MDM & Traditional Agent Based (e.g. SCCM)	
Device Security Technologies	Secure Boot, TPM, BitLocker, Device Guard, Windows as a Service, Windows Firewall & Device Health Attestation		Same as IoT Core and Defender Advanced Threat Protection (ATP)	
CPU Architecture support	X86, x64 & ARM		x86 & x64	
Licensing	Online licensing terms agreement and Embedded OEM Agreements, Royalty Free		Direct and Indirect Embedded OEM Agreements	
Usage Scenarios	Digital signage Smart building IoT Gateway	HMI Smart home Wearables	Industry tablets Point of Sale Kiosk Digital signage	ATM Medical devices Manufacturing devices Thin client

Which Version to Choose?

For devices that only run a single application, manufacturers should investigate using IoT Core.

For devices that require desktop functionality, multiple apps or access to desktop apps (e.g. Win32, WPF)

*This feature list is not exhaustive but intended to highlight edition differences

** Windows 10 IoT Enterprise is Windows 10 Enterprise with different licensing and distribution