

Windows Embedded/IoT Licensing Channel for Dedicated-Purpose Devices

Microsoft

ARROW

Licensing for Dedicated-Purpose (Embedded and IoT) Devices

Dedicated-purpose (or fixed-function) devices are built to perform a pre-defined set of tasks. They are preloaded and delivered with the operating system and the application. Such devices are used in retail, factory automation, healthcare, signage, security/surveillance, and transportation applications. They typically have special requirements like **longer lifecycles**, **controlled Windows updates**, **global deployment capabilities**, etc. To support these requirements, Microsoft created the "IoT" family of products and offers several products to support OEM requirements.

Comparison between Dedicated-Purpose and General-Purpose Devices

Dedicated-purpose device



- **Dedicated-application** installed by OEM
- Device boots into application
- Long life cycles
- Controlled updates

General-purpose device



- **General-purpose** applications installed by user/customer
- Computer boots into Windows shell
- Short life cycles

Examples of Dedicated-Purpose Devices



ATMs



POS system



Digital signage



Medical device



Kiosk



Industrial PLC

Windows “IoT” Version for Dedicated-Purpose Devices

The Windows 10 “IoT” editions are available in several versions to fit specific types of embedded and IoT devices. The Enterprise editions are based on Windows 10 Enterprise but provide many additional features focused on OEMs building IoT devices. The differences between the versions are centered on usage and licensing terms. The table below compares the licensing channels and can guide OEMs on the correct channel to use when building dedicated appliances vs. general-purpose devices.

Comparison of the Licensing Channels Available for Windows 10 IoT Enterprise

	OEM Embedded/ IoT License	OEM System Builder License	Volume License
Dedicated purpose	✓	X	X
Usage	Okay to resell as part of a system	Okay to resell as part of a system	Cannot resell. For internal purpose only
Minimum order quantity (MoQ)	None	None	Minimum 5
License tied to end system	✓	✓	Tied to end-company
License tied to end-users	X	X	✓
End-user known at time of purchase	X	X	Required
Embedded application pre-installed on device (option)	✓	Optional	✓
Lifecycle	10-15 Years	2 Years	2 Years
Full client OS	✓	✓	Upgrade Only
Recovery media	Allowed	X	X
Cost	$	$$	$$$

Advantage of the Windows OEM Embedded/IoT License include

- Bit for bit identical operating system with licensing terms targeted towards OEM Embedded/IoT appliances
- Simplest, most cost-effective license for dedicated-purpose/embedded devices
- OS and drivers pre-tested and optimized for the hardware – and supported by the OEM
- Global licenses and multi-language support
- Longest life cycle of all Microsoft products — up to 15 years

Additional Resources

- Microsoft Windows 10 IoT Enterprise Licensing Guide
- Microsoft Client, Server, and SQL Server Operating System Parts list

Comparing Windows 10 IoT Enterprise LTSC, SAC and Windows 10 Professional Versions

For OEMs building a dedicated appliance, Microsoft created the OEM IoT embedded channel-specific for dedicated appliances. Windows 10 IoT Enterprise LTSC comes with many features and advantages over the traditional Windows 10 Professional. It also locks devices into a single build of Windows 10 and allows full control of Windows updates. Also, 10 years of support and a great pricing model are compelling advantages for most OEMs. The semi-annual channel (SAC) edition allows devices to stay current on the latest build but offers less control of Windows updates and has a much shorter support timeframe with only 18 to 30 months maximum of support.

	Windows 10 Professional (SAC)	Windows 10 IoT Enterprise (LTSC)	Windows 10 IoT Enterprise (SAC)
Channel	Direct OEM + OEM system builder	OEM IoT embedded	OEM IoT embedded
Target device	General use computer	Dedicated IoT appliance	Dedicated IoT appliance
Licensed by	Physical computer	Processor w/3 price tiers	Processor w/3 price tiers
Pricing	Single high-end	High-end, value, entry	High-end, value, entry
Life cycle	Short	Long	Short
Support cycle	18 to 30 months	10 years	18 to 30 months
Windows update	Required (optional 365 day delay)	Optional w/full control	Optional w/full control
Update type	Features & quality	Quality only	Quality only
Re-imaging rights	Not included	Included	Included
External recovery	Not allowed	Allowed	Allowed
Global shipments	Limited	Unlimited	Unlimited
Customization	Limited	Unlimited	Unlimited
Product key	Unique	Single	Single

What is LTSC?

Based on the full version of Windows 10 Enterprise, the IoT Long Term Service Channel (LTSC) edition changes the license terms to focus on OEMs that build dedicated appliances and 10 years of support while locking into a single build version of Windows 10. OEMs no longer need to worry about new features or new builds of Windows 10 being pushed to the device which could in some cases cause a problem with their appliance. This gives OEMs full control over Windows updates and simplifies the support for systems. Further, the cost can be lowered based on the processor model, allowing lower-performing devices to have a lower cost.

Qualifications for Using the Windows IoT Enterprise LTSC License Option

To qualify for this licensing model for specialized applications, these requirements must be met:

- The application is for a specific purpose only and cannot be used with general-purpose PCs
- The applications cannot be used with other commercial applications such as accounting, email, word processing, and CRM
- The embedded application must be preinstalled with the operating system on the server and shipped with the hardware



Ready to Get Started?

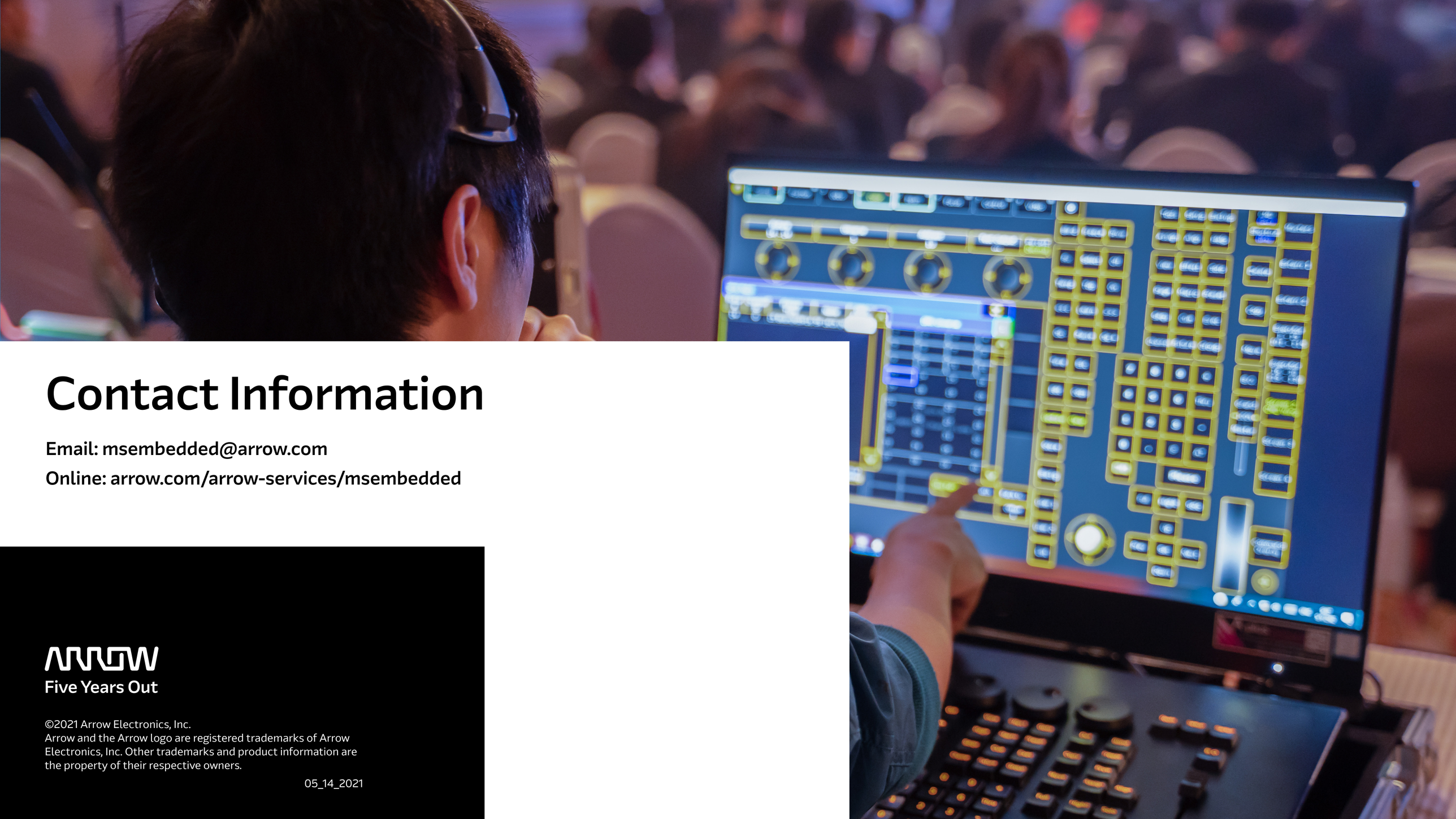
The OEM CLA is your first step to Windows Embedded/IoT Licensing for your next design. It is a standard set of general terms and conditions agreement that each OEM must sign to acquire Windows Embedded/IoT licensed products and distribute your product with a Windows Embedded/IoT license. For more information on the Microsoft Embedded/IoT Program and the CLA process go to the Arrow Get Started page.

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As an authorized Microsoft distributor, Arrow can help you with:

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- Selection of the right operating system version, part numbers, upgrades, downgrades, and more
- Initiation of the Microsoft customer license agreement (CLA) that covers terms and agreements for IoT and embedded versions. This is required by Microsoft before you make a purchase
- Detailed product information. Our technical experts will respond to you in less than 24 hours



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Five Years Out

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05_14_2021