

# Customizing Windows 10

To run on equipment with minimum resources  
To run more efficiently  
To remove bloat and frill features  
To repurpose PCs aka door stops

## Before We Start

- Full System Backup  
Macrium Free

<https://www.techspot.com/downloads/5442-macrium-reflect-free.html>

- Windows Serial ID  
How to find Windows 10 product key?  
Run CMD with administrative rights

`wmic path SoftwareLicensingService get OA3xOriginalProductKey`

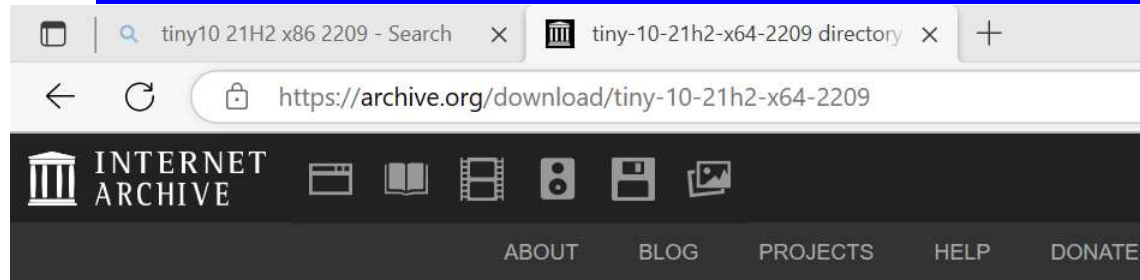
## Create Windows 10 installation media

<https://www.microsoft.com/en-us/software-download/windows10>

- Using the tool to create installation media (USB flash drive, or ISO file) to install Windows 10 on a different PC.
- A blank USB flash drive with at least 8GB

## Tiny 10 DOWNLOAD

<https://archive.org/download/tiny-10-21h2-x64-2209>



### Files for tiny-10-21h2-x64-2209

Name	Last modified	Size
<a href="#">↑ Go to parent directory</a>		
<a href="#">tiny-10-21h2-x64-2209_archive.torrent</a>	17-Sep-2022 17:50	47.0K
<a href="#">tiny-10-21h2-x64-2209_files.xml</a>	08-Feb-2023 11:35	2.1K
<a href="#">tiny-10-21h2-x64-2209_meta.sqlite</a>	17-Sep-2022 17:49	28.0K
<a href="#">tiny-10-21h2-x64-2209_meta.xml</a>	17-Sep-2022 17:42	1.1K
<a href="#">tiny-10-21h2-x64-2209_reviews.xml</a>	08-Feb-2023 11:35	830.0B
<a href="#">tiny10 21H2 x64 2209.iso (View Contents)</a>	17-Sep-2022 17:39	2.5G
<a href="#">tiny10 21H2 x86 2209.iso (View Contents)</a>	17-Sep-2022 17:49	2.0G

[tiny10 21H2 x64 2209.iso \(View Contents\)](#) 17-Sep-2022 17:39 2.5G  
[tiny10 21H2 x86 2209.iso \(View Contents\)](#) 17-Sep-2022 17:49 2.0G

Microsoft PC Manager **DOWNLOAD**

<https://microsoft-pc-manager.en.lo4d.com/windows>

- Microsoft PC Manager can be used on a computer running Windows 11 or Windows 10.
- **It's only available as a 64-bit download.**

**Rufus DOWNLOAD**

<https://rufus.ie/downloads/>

```
rufus-3.21.exe                2022-11-28 16:54 1.3M Rufus 3.21
rufus-3.21p.exe ```````` 2022-11-28 16:54 1.3M Rufus 3.21
(Portable Version)
```

**Customizing Methods**

- Customizing Windows with Microsoft PC Manager
- Customizing Windows with Tiny10/Tiny11
- Customizing Windows with DISM

## Customizing Windows with Microsoft PC Manager

- PC manager provide PC cleanup, antivirus, windows update makes your computer safe and secure! Antivirus, Cleanup PC,
- Boost your PC Cleanup your system and free up spaces. Boost your PC's performance. Manage your storage Give your PC a spring cleaning and manage large files. Use storage sense to let Windows free up storage for you.

**PC Manager Demo**  
(Demonstration)

## Customizing Windows with Tiny10/Tiny11

- Tiny10 is a stripped-down version of Windows 10, and it has been developed by a developer named NTDEV.
- We know how bloated Windows has become at this point, so this project aims to remove all the unnecessary components. That means you can run Windows 10 smoothly, even on low-end hardware.
- Note that Tiny10 has not just removed bloatware, but it has been optimized from the ground up to reduce Windows 10's footprint.
- For example, if you install Tiny10 on a 32-bit system, it only takes 5.2GB of disk space, which is a breakthrough. A vanilla Windows 10 system takes up to 22GB of space. To reduce the installation size by 17GB is just great. On 64-bit systems, Tiny10 takes up to 10GB of disk space. And in terms of RAM, you can run Tiny10 on a 32-bit system with just 1GB of RAM, and on a 64-bit system, you can make do with 2GB of RAM, which is nothing short of amazing. We already know Windows 10 comes to a grinding halt, even on a system with 4GB of RAM.
- As for the apps, Tiny10 has removed all the default apps like the image viewer, internet explorer, media player, etc. Only Notepad and Wordpad are available on this stripped-down build of Windows 10. Moreover, it's important to know that Tiny10 does not come with Microsoft Store or Windows Security. You will need to sideload the apps you want.
- There is no support for Windows Subsystem for Linux
- All the bloatware, unnecessary apps, services, and system components have been removed

## How to Install Tiny10 (Stripped Down Windows 10)

1. Go ahead and download the ISO image of Tiny10 based on your system architecture: 32-bit (1.7GB) | 64-bit (2.4GB). We did a preliminary check of the files on VirusTotal and didn't notice any red flags, so that's a good sign.
2. After that, head to this link and download Rufus to create a bootable USB drive.
3. Now, open Rufus, plug the USB drive, select the ISO image, and click on "Start". Make sure the File system is NTFS.
4. There is no browser included in Tiny10
5. Next, plug the USB drive into the target PC and restart it. When the PC restarts, press the boot key (should be one of the function keys - F9, F8, F7, etc.). If you don't know the boot key for your PC or laptop, look it up on the internet. Once you are on the boot selection screen, select your USB drive and hit Enter.

## Fresh Windows Installation with Microsoft ISO

### Fresh Windows Installation

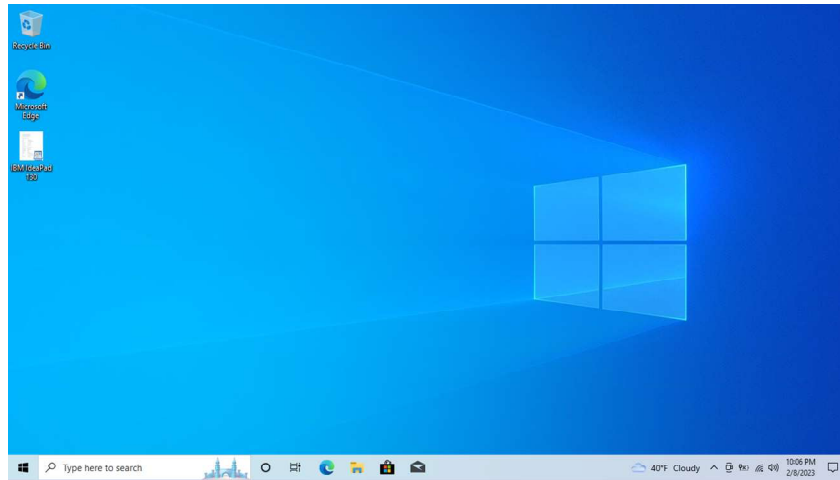


- Factory installation or fresh installation of Windows 10 can be accomplished in 4GB RAM
- Select option to install with all files removed requiring reinstallation of all apps
- Cannot do Windows 10 Upgrade in 4 GB, needs 8 GB

```
System Manufacturer:    LENOVO
System Model:           81H5
System Type:            x64-based PC
Processor(s):           1 Processor(s) Installed.
                        [01]: AMD64 Family 21 Model 112 Steppin
BIOS Version:           LENOVO 8ZCN22WW(V2.01), 11/16/2018
Windows Directory:     C:\Windows
System Directory:       C:\Windows\system32
Boot Device:            \Device\HarddiskVolume1
System Locale:           en-us;English (United States)
Input Locale:           en-us;English (United States)
Time Zone:              (UTC-08:00) Pacific Time (US & Canada)
Total Physical Memory:  3,983 MB
Available Physical Memory: 1,883 MB
Virtual Memory: Max Size: 5,391 MB
Virtual Memory: Available: 3,472 MB
Virtual Memory: In Use: 1,919 MB
```

Using SYSTEMINFO - NOTE **Available Physical Memory 1,883 MB**





**Full Windows 10 Installation - Note CLEAN Desktop Screen**

**TINY10 New Installation**

About Windows



# Windows 10

Microsoft Windows  
Version 21H2 (OS Build 19044.1889)  
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The Windows 10 Enterprise LTSC operating system and its user interface are protected by trademark and other pending or existing intellectual property rights in the United States and other countries/regions.

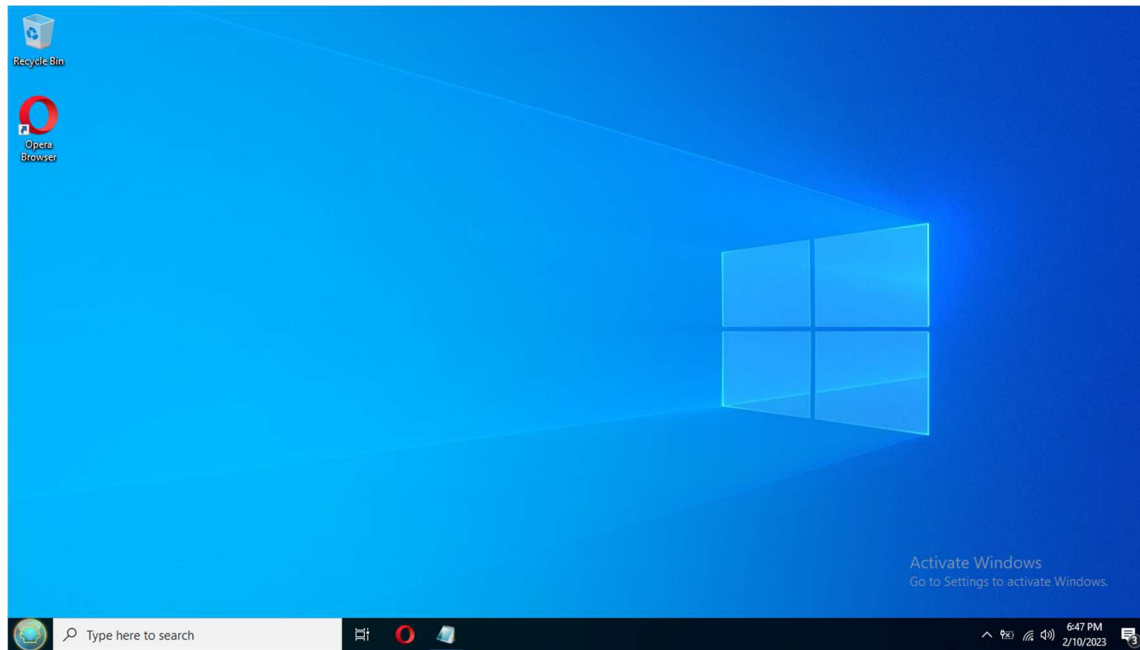
This product is licensed under the [Microsoft Software License Terms](#) to:

Windows User

OK

```
Select Administrator: Command Prompt
[01]: AMD64 Family 21 Model 112 Stepping 0 AuthenticAMD ~2600 Mhz
BIOS Version: LENOVO 8ZCN22MM(V2.01), 11/16/2018
Windows Directory: C:\Windows
System Directory: C:\Windows\system32
Boot Device: \Device\HarddiskVolume1
System Locale: en-us;English (United States)
Input Locale: en-us;English (United States)
Time Zone: (UTC-08:00) Pacific Time (US & Canada)
Total Physical Memory: 3,983 MB
Available Physical Memory: 2,729 MB
Virtual Memory: Max Size: 5,391 MB
Virtual Memory: Available: 4,316 MB
Virtual Memory: In Use: 1,075 MB
Page File Location(s): C:\pagefile.sys
Domain: WORKGROUP
Logon Server: \\WIN-D4SMNKVH84P
Hotfix(s): 6 Hotfix(s) Installed.
[01]: KB5004331
[02]: KB5003791
[03]: KB5016616
[04]: KB5014032
[05]: KB5015895
[06]: KB5005699
Network Card(s): 3 NIC(s) Installed.
[01]: Qualcomm Atheros QCA9377 Wireless Network Adapter
Connection Name: Wi-Fi
DHCP Enabled: Yes
DHCP Server: 192.168.86.1
IP address(es)
[01]: 192.168.86.33
```

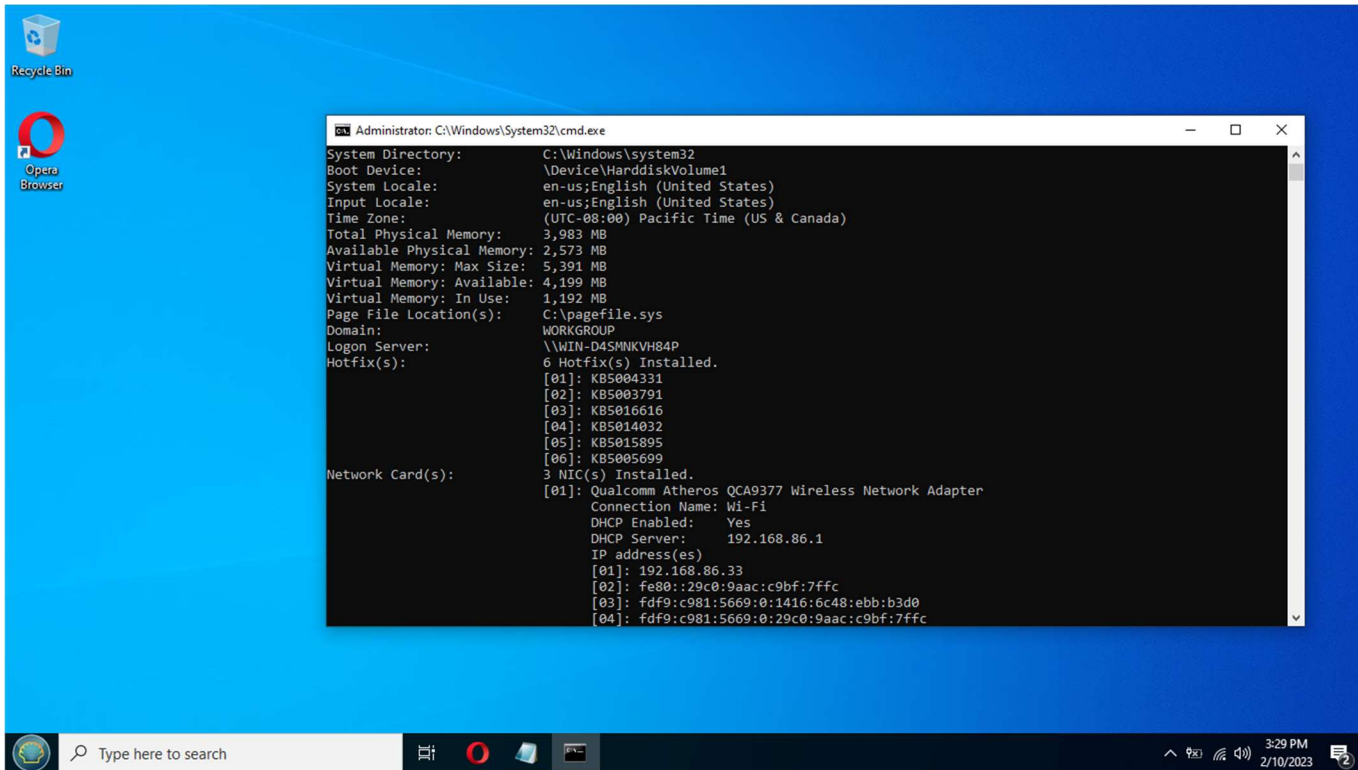
**Available Physical Memory 2,729**



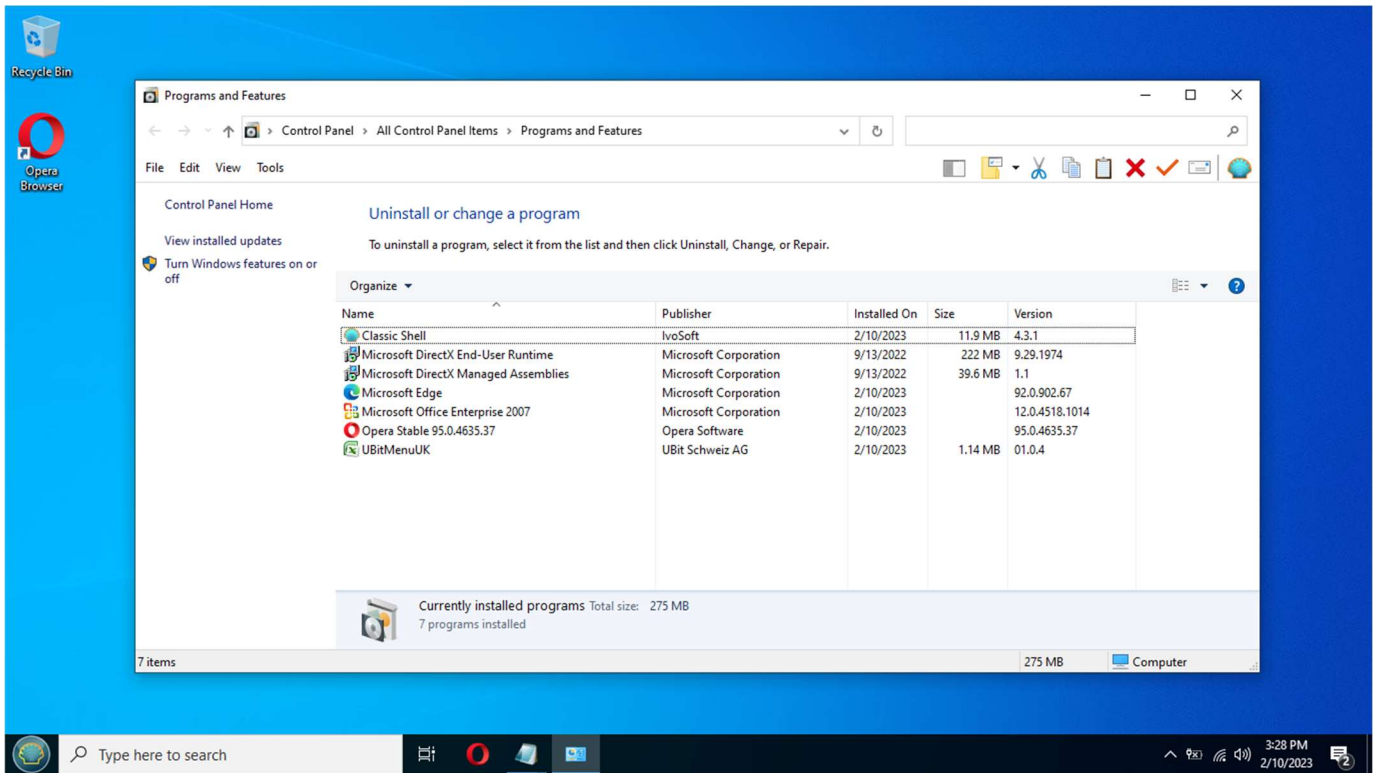
## **NOTE Activate Windows Notification**

<https://softwarekeep.com/help-center/updated-how-to-get-rid-of-the-activate-windows-watermark>

## TINY10 Post Installation TINY10 with Microsoft Office



Using SYSTEMINFO - NOTE Available Physical Memory 2,573 MB



**NOTE: TINY10 Installed with OPERA Browser, MS Office 2007, Ubitmenu for Drop Down Menu for MS Office, Classic WINDOWS 7 START**

### Resource Requirements

- Tiny10 on a **32-bit system**, it only **takes 5.2GB of disk space**, which is a breakthrough. A vanilla Windows 10 system takes up to **22GB of space**. To reduce the installation size by 17GB is just great. And in terms of RAM, you can run Tiny10 on a 32-bit system with just **1GB of RAM**.
- On **64-bit systems**, Tiny10 takes up to **10GB of disk space**. on a 64-bit system, you can make do **with 2GB of RAM**, which is nothing short of amazing. We already know **Windows 10** comes to a **grinding halt**, even on a system **with 4GB of RAM**.

### Windows 10 Lightweight Profile

- All the core Windows system tools are available, including PowerShell, CMD, Disk Management, etc.
- Microsoft Office and other apps ran without any issues

### What's Missing

- Tiny10 has **removed all the default apps like the image viewer, internet explorer, media player, etc.** Only Notepad and Wordpad are available on this stripped-down build of Windows 10.
- Moreover, it's important to know that Tiny10 does not come with **Microsoft Store or Windows Security**. You will need to sideload the apps you want.

## Windows Imaging Format (WIM)

- Windows Imaging Format (WIM) is used for the creation and distribution of disk image files. It serves to deploy versions of Microsoft operating systems.
- With a WIM disk image, a Windows developer can essentially package the contents of a complete hard disk drive -- complete with all of its files and folders -- as a single file. When installed, Windows Setup unpacks that complete disk image to the local computer's hard drive. Large and complex applications can then readily be installed from a single distributable source file.

## Windows Package Manager



```
Administrator: C:\Windows\System32\cmd.exe
C:\WINDOWS\system32>winget
Windows Package Manager v1.4.10173
Copyright (c) Microsoft Corporation. All rights reserved.

The winget command line utility enables installing applications and other packages from the command line.

usage: winget [<command>] [<options>]

The following commands are available:
install  Installs the given package
show     Shows information about a package
source  Manage sources of packages
search  Find and show basic info of packages
list     Display installed packages
upgrade Shows and performs available upgrades
uninstall Uninstalls the given package
hash    Helper to hash installer files
validate Validates a manifest file
settings Open settings or set administrator settings
features Shows the status of experimental features
export  Exports a list of the installed packages
import  Installs all the packages in a file

For more details on a specific command, pass it the help argument. [-?]

The following options are available:
-v,--version      Display the version of the tool
--info            Display general info of the tool
-?,--help        Shows help about the selected command
--wait           Prompts the user to press any key before exiting
--verbose,--verbose-logs Enables verbose logging for WinGet
--disable-interactivity Disable interactive prompts

More help can be found at: https://aka.ms/winget-command-help

C:\WINDOWS\system32>
```

## WINGET: MENU

```

Administrator: C:\Windows\System32\cmd.exe
C:\WINDOWS\system32>winget list
Name                               Id                               Version                          Available                        Source
-----
5KPlayer                           5KPlayer                         6.9                              8.17.13                         winget
AMD Radeon Software                 AdvancedMicroDevicesInc-2.AMDRadeonSoftware_0a9344xs7nr4m 10.21.30024.0
Audacity 3.2.4                      Audacity.Audacity                3.2.4
CrystalDiskInfo 8.12.4              CrystalDewWorld.CrystalDiskInfo  8.12.4
Dolby Audio Speaker System          DolbyLaboratories.DolbyAudioSpeakerSystem_rz1tebttby220 3.30201.210.0
Microsoft Office Enterprise 2007    ENTERPRISE                        12.0.6612.1000
Eusing Free Registry Cleaner       Eusing Free Registry Cleaner     Unknown
FileZilla 3.61.0                    FileZilla Client                  3.61.0
Google Chrome                       Google.Chrome                     110.0.5481.77                   110.0.5481.78 winget
IObit Uninstaller 12                IObitUninstall                    12.0.0.10
IrfanView 4.60 (64-bit)             IrfanSkiljan.IrfanView           4.60                             winget
LAME v3.99.3 (for Windows)         LAME_is1                          Unknown
Levelator                           Levelator_is1                      Unknown
PC Manager(Beta)                   Microsoft.PCManager               1.2.7.1                          winget
Macrium Reflect Free               MacriumReflect                    v8.0.7279
Microsoft Edge                     Microsoft.Edge                    109.0.1518.78                   winget
Microsoft Edge Update              Microsoft Edge Update             1.3.173.45
Microsoft Edge WebView2 Runtime    Microsoft.EdgeWebView2Runtime    109.0.1518.78                   winget
Cortana                            Microsoft.549981C3F5F10_8wekyb3d8bbwe 4.2204.13303.0
MSN Weather                        Microsoft.BingWeather_8wekyb3d8bbwe 4.53.43112.0
App Installer                       Microsoft.DesktopAppInstaller_8wekyb3d8bbwe 1.19.10173.0
Get Help                           Microsoft.GetHelp_8wekyb3d8bbwe    10.2212.10101.0
Microsoft Tips                     Microsoft.Getstarted_8wekyb3d8bbwe 10.2210.3.0
HEIF Image Extensions              Microsoft.HEIFImageExtension_8wekyb3d8bbwe 1.0.43012.0
Paint 3D                           Microsoft.MSPaint_8wekyb3d8bbwe    6.2203.1037.0
3D Viewer                          Microsoft.Microsoft3DViewer_8wekyb3d8bbwe 7.2211.24012.0
Microsoft Edge                     Microsoft.MicrosoftEdge.Stable_8wekyb3d8bbwe 109.0.1518.61
Microsoft 365 (Office)             Microsoft.MicrosoftOfficeHub_8wekyb3d8bbwe 18.2301.1131.0
Solitaire & Casual Games           Microsoft.MicrosoftSolitaireCollection_8wekyb3d8bbwe 4.15.12020.0
Microsoft Sticky Notes              Microsoft.MicrosoftStickyNotes_8wekyb3d8bbwe 4.5.9.0
Mixed Reality Portal                Microsoft.MixedReality.Portal_8wekyb3d8bbwe 2000.21051.1282.0
OneNote for Windows 10             Microsoft.Office.OneNote_8wekyb3d8bbwe 16001.14326.21146.0
Microsoft People                   Microsoft.People_8wekyb3d8bbwe     10.2105.4.0
Snip & Sketch                      Microsoft.ScreenSketch_8wekyb3d8bbwe 10.2008.2277.0
Skype                               Microsoft.SkypeApp_kzf8qxf38zg5c 15.93.3404.0
Store Experience Host               Microsoft.StorePurchaseApp_8wekyb3d8bbwe 12207.44.6.0
VP9 Video Extensions               Microsoft.VP9VideoExtensions_8wekyb3d8bbwe 1.0.52781.0

```

## WINGET: SAMPLE OF INSTALLED APPS

## TINY10 NOTES

- It does **not support Windows updates**.
- **No support for Windows Subsystem for Linux**
- There is **no bloatware** to be found on Tiny10. All the bloatware, **unnecessary apps, services, and system components** have been removed by the developer. For example, you can check out the difference in the Start menu.
- TINY10 32 Bit will BOOT with INTEL x86 and x64 BIOS
- TINY10 64 Bit will BOOT with INTEL x86 and x64 BIOS.
- TINY10 64 Bit will BOOT with AMD x64 BIOS

## Customizing Windows with DISM

- Deployment Image Servicing and Management (DISM.exe) is a command-line tool that can be used to service and prepare Windows images.
- DISM can be used to service a Windows image (.wim) or a virtual hard disk (.vhd or .vhdx).
- DISM comes built into Windows and is available through the command line or from Windows PowerShell.
-

## DISM DEMONSTRATION

FFU COMMANDS:

- /Capture-Ffu - Captures a physical disk image into a new FFU file.
- /Apply-Ffu - Applies an .ffu image.
- /Split-Ffu - Splits an existing .ffu file into multiple read-only split FFU files.
- /Optimize-Ffu - Optimizes a FFU file so that it can be applied to storage of a different size.

IMAGE SPECIFICATIONS:

- /Online - Targets the running operating system.
- /Image - Specifies the path to the root directory of an offline Windows image.

DISM OPTIONS:

- /English - Displays command line output in English.
- /Format - Specifies the report output format.
- /WinDir - Specifies the path to the Windows directory.
- /SysDriveDir - Specifies the path to the system-loader file named BootMgr.
- /LogPath - Specifies the logfile path.
- /LogLevel - Specifies the output level shown in the log (1-4).
- /NoRestart - Suppresses automatic reboots and reboot prompts.
- /Quiet - Suppresses all output except for error messages.
- /ScratchDir - Specifies the path to a scratch directory.

For more information about these DISM options and their arguments, specify an option immediately before /?.

Examples:

- DISM.exe /Mount-Wim /?
- DISM.exe /ScratchDir /?
- DISM.exe /Image:C:\test\offline /?
- DISM.exe /Online /?

C:\WINDOWS\system32>



Type here to search

