Should I Buy a PC Now
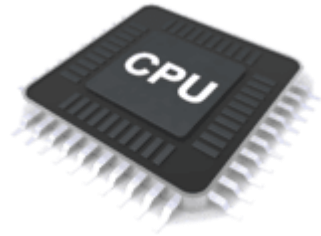
Some Guidelines to Help You Decide

August 2,2021

What We'll Cover

- What has changed since the Microsoft Promise?
  "Windows 10 is the last Windows"

- What will come in Windows 11
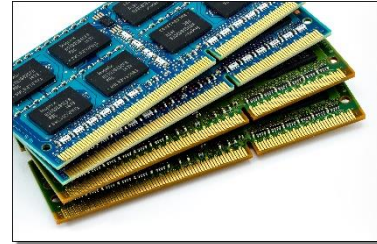
- Why to wait or buy now

- Some guidelines for buying now

The Three Components of a PC

Processor

==Does all the computing.==

Speed measured in gigahertz
2 GHtz = .5 nanoseconds

Memory

==Holds active programs and data for use by the Processor.==

Size is measured in gigabytes,
Takes about 10 nanoseconds to get something to the processor.

Storage

==The permanent home of all your programs and data.==

HD takes about 10,000 nanoseconds to get something to the memory.
SSD takes about 100 nanoseconds

PC components all use millions of Transistors

- Transistors are fabricated by incredibly complex processes
- A "Fab" or Fabrication Plant is very expensive to build
- Moore's Law has held since 1970
  - The number of transistors in an Integrated Circuit doubles every two years because of the advancement in manufacturing technology. We also call this Die Shrink.
- Smaller Die Size
  - Allows more transistors per area
  - Allows faster switching time
  - Consumes less power

Transistor Density

Rank	Process Name	Approximate Transistor Density (MTr/mm²)
#1	TSMC's 5nm EUV	171.3
#2	TSMC's 7nm+ EUV	115.8
#4	Intel's 10nm	100.8*
#5	TSMC's 7nm (Mobile)	96.5
#6	Samsung's 7nm EUV	95.3
#7	TSMC's 7nm (HPC)	66.7
#8	Samsung's 8nm	61.2
#9	TSMC's 10nm	60.3
#10	Samsung's 10nm	51.8

Why Is This Important?

- Intel is WAY behind in chip density
  - Intel chips are at a competitive disadvantage to chips fabricated by TSMC
  - TSMC's customers
    - Apple - ARM chips
    - All the crypto mining customers – specialized ARM
    - AMD   - Ryzen chips
    - Qualcomm - Selected Snapdragon chips
  - Very Expensive to expand chip building capacity

    Chips are getting much better, faster, use less power

    Chips are getting more expensive!

    ARM chips are more plentiful than chips that support x32 and x64 architectures

    Microsoft Needs Windows to run on ARM processors to stay competitive

Qualcomm Processors That Supports Windows 11

Qualcomm Snapdragon SoC or <mark>system on a chip</mark> will also support Windows 11. Here's a list:

- Qualcomm Snapdragon 850
- Qualcomm Snapdragon 7c
- Qualcomm Snapdragon 8c
- Qualcomm Snapdragon 8cx
- Qualcomm Snapdragon 8cx (Gen2)
- Qualcomm Snapdragon Microsoft SQ1
- Qualcomm Snapdragon Microsoft SQ2

[(6) The Qualcomm Snapdragon 8cx Gen 2 5G Compute Platform delivers the future of productivity - YouTube](#)

Windows 11 Differences?

- The interface will look more like an Android Tablet
  - The basics of Windows will still be easy to access
    - Program Window
    - Start Button
    - Task Bar
  - Advanced Features Greatly Improved
    - Split screen management
    - Desktop Management on Multiple Screens
  - Brand New
    - Certain ARM chips will be supported – many more device configurations possible
    - Thinner, lighter, built in Video, AI, Cellular, WIFI 6, big increase in battery life
    - Access to Android Apps initially through Amazon App store

Should I Buy a PC Now Or Wait?

"The best time to buy a new PC is when you need it."

If you buy a new Windows 10 PC it will "almost certainly" be upgradeable for free with very little fuss and it will be fully supported for at least 4 full years (no new learning curve).

If you wait for a Windows 11 PC, you may find some amazing new device configurations ("System on a Chip") and featurers.

Buy Now

- The PC's in stock now have chips that cost less than the ones that will be in Windows 11 machines.

- PC prices are dropping due to the build up for pandemic PC demand

- Windows 10 PC prices will drop again as dealers get ready for the release of Windows 11 PC's – October/November

- If you need a new PC, or think you will in the next year, and you don't care about having neat new technology – buy in the next couple of months!

Wait For Windows 11 PC's

- If you won't need a new PC for a couple of years, **wait**!
  - Windows 10 will be fully supported through 2025 and probably longer.
  - Office will run on Windows 10 and Windows 11.
  - Windows 10 updates will slow down to just security, which can be a very good thing!
- The longer Windows 11 is available, the more device features will be released – so two or three years from now, there will be some amazing Windows 11 PC's
  - The ARM advantage – integrating phones and laptops/tablets (5G and WIFI 6)
  - The chip SoC advantage – smaller, lighter devices using much less power

PC Spec Guidelines for buying now

Light User: email plus web plus some documents

Processor = Intel I3 or Ryzen 3 or 5, Memory = 8 GB, ~~Hard Drive 500 GB~~ SSD = 128 GB

Economy User: email plus web plus watching videos plus home office work plus video conference (Zoom)

Processor = Intel I5 or Ryzen 5 or 7, Memory = 8 or 12 GB, SSD 256 GB

Heavy User: multiple email accounts, heavy office work, photo or video processing

Processor = Intel I7 I9 or Ryzen 7 or 9, Memory = 16 GB, SSD 500 GB

Laptops

"Clam Shell"

2 in 1

Screens : size 10 to 17 inch , touch or non touch
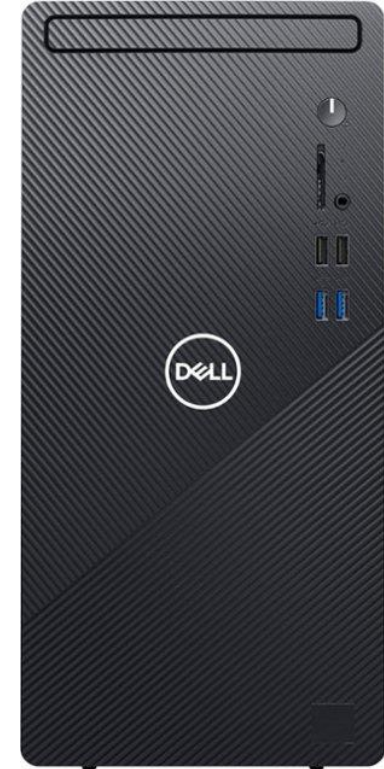**Weight : 2 to 5 ½ lbs.**
Battery Life : 2 to 10 hours
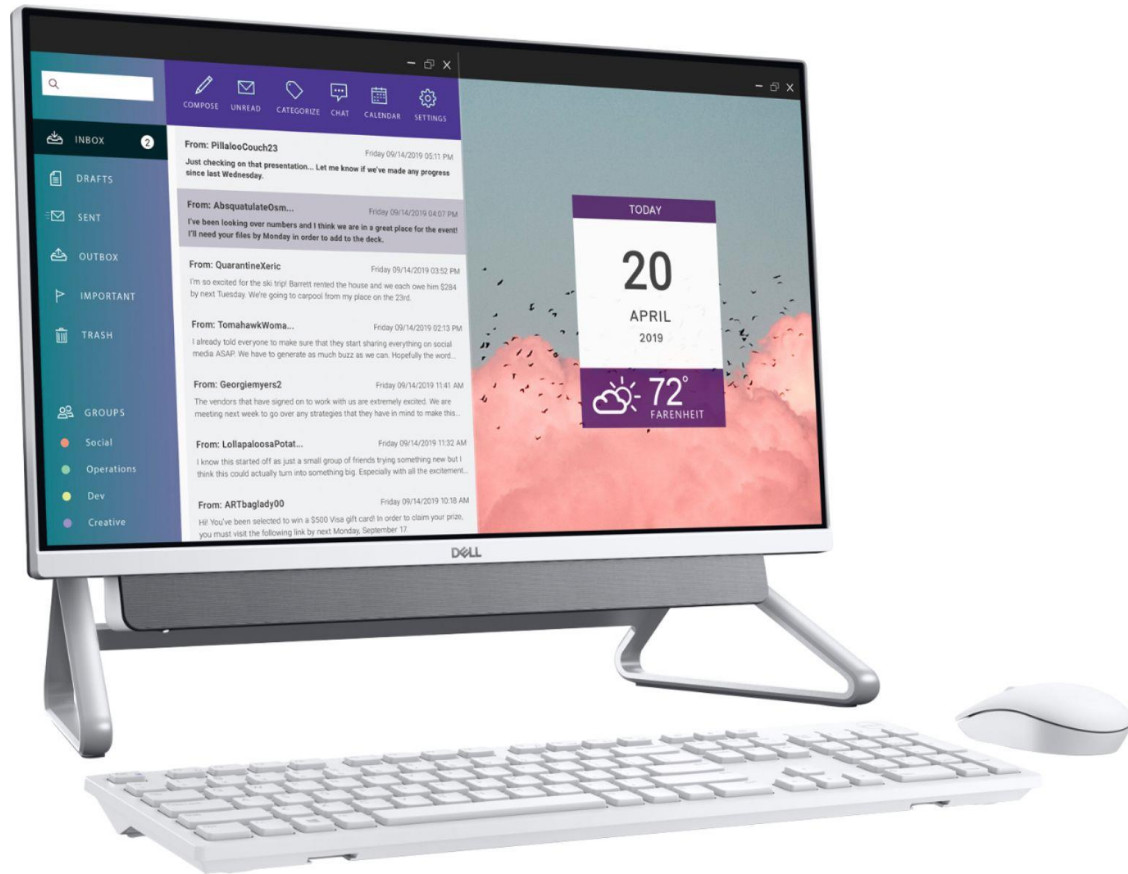
Desktops

Size and Connections
Separate purchase for
     Webcam
     Speakers
     Monitor
Best Specs for the price
Easiest to upgrade
Most desktops sell with mouse & keyboard

All In Ones

Includes:
   Webcam
   Speakers
   Monitor
Gets rid of a lot of cables.
Touch and non touch screens
Prices have dropped due to micro technology in laptops.

Light User: email plus web plus some documents

Lenovo - Ideapad 3 15 15.6" Laptop - AMD Ryzen 3 - 8GB Memory - 128GB SSD - Platinum Grey

★★★★½ (47)

$329.99

Save $70 Was $399.99

$329
"Clam Shell"
15 " Screen
No Touch Screen
Ryzen 3, 8 GB
Memory, 128 GB SSD

See More Options

HP - 24" Touch-Screen All-In-One - AMD Ryzen 3-Series - 8GB Memory - 256GB SSD - Jet Black

Model: 24-DF0014   SKU: 6402515

★★★★★ (1,405)

Open-Box Only

⊙ New conditions of this item are unavailable, but we do have open-box conditions in your area.

See all buying options

☐ Compare   🔖 Save

$629
23.9" Touch Screen
Ryzen 3, 8 GB
Memory
256 GB SSD
Includes camera
and mic

Economy User: email plus web plus watching videos plus home office work plus video conference (Zoom)

HP - ENVY x360 2-in-1 15.6" Touch-Screen Laptop - AMD Ryzen 5 - 8GB Memory - 256GB SSD -...

★★★★½ (286)

$669.99

Save $150 Was $819.99

Deal ends Jul 26, 2021

$669
2 in 1
15.6 " Touch Screen
Ryzen 5, 8 GB,
256 GB SSD

HP - 24" Touch-Screen All-In-One - AMD Ryzen 5 - 8GB Memory - 1TB SSD - Natural Silver

Model: 24-dp0124   SKU: 6454568

★★★★★ (131)

Get it today nearby

Pickup: Order now for pickup on Fri, Jul 30 at Bluffton
Available today at a location 22 miles away
See all pickup locations

FREE Shipping: Get it by Tue, Jul 27
See all shipping options for 29928

☐ Compare   🔖 Save

$879
24 " Touch Screen
Ryzen 5, 8 GB, 1 TB SSD

Heavy User: multiple email accounts, heavy office work, photo or video processing

Amazon Alexa built in

Lenovo Yoga 6 13 2-in-1 13.3" Touch Screen Laptop - AMD Ryzen 7 - 16GB Memory - 512GB SSD - Abyss Blue with Fabric Cover

Model: 82ND0002US   SKU: 6455180

★★★★★ (5)

Get it today nearby

Pickup: Order now for pickup on Wed, Aug 4 at Bluffton
Available today at a location 22 miles away
See all pickup locations

HP - 24" Touch Screen - All-in-One - Intel Core i7-1165G7 - 16GB Memory - 512GB SSD

Model: 24-DP1280   SKU: 6448470

★★★★★ (4)

$849
13.3" Touchscreen
2 in 1
16 GB Memory
512 GB SSD
AMD Ryzen 7

$1, 139
24" Touchscreen
16 GB Memory
512 GB SSD
Intel I7

Questions?