



# GENERAL COMPUTER HARDWARE

WHAT DO THESE LETTER AND NUMBER  
COMBOS MEAN?

WEDNESDAY OCTOBER 12, 2022 FOR OPCUG MEMBERS

**tte●ca**  
THE TRAILING EDGE



**Brookecliff**  
Technology Corporation

# AGENDA

- What's the difference between I5, I7, etc. processors?
- Ram – how much do I need?
- What's the difference between HDD and SSD?
- What do I need in a video card?
- What ports do I need?
- Comparison of two laptops
- Comparison of new and used



# WHAT'S THE DIFFERENCE BETWEEN I5, I7, ETC. PROCESSORS?

- Computer Processing Unit (CPU)
- The Number of Cores (Dual/Quad)
- Clock Speed (4.0 GHz)
- Thread Count (8T)
- Performance



# RAM - HOW MUCH DO I NEED?

- Why is Random Access Memory (RAM) Important?
- What Uses RAM?
- How much do I need?



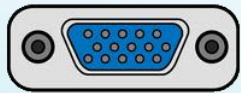
# WHAT'S THE DIFFERENCE BETWEEN HDD AND SSD?

- Hard Disk Drive (HDD) Description
- Solid State Drive (SSD) Description
- Solid State Drive vs. Hard Disk Drive



# WHAT DO I NEED IN A VIDEO CARD?

VGA Port

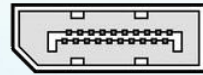


HDMI



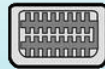
DisplayPort

Video and Audio Port for  
Home Theater Systems



MiniDP

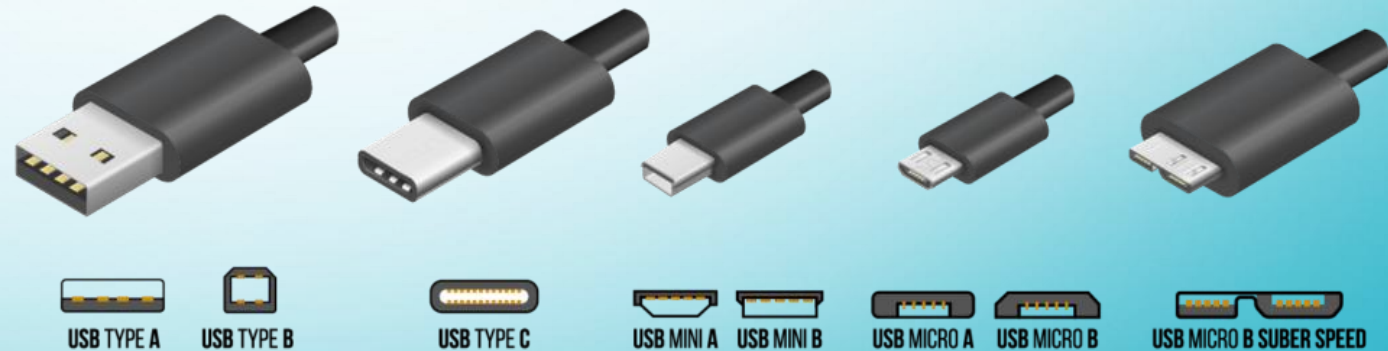
Digital Video Interface



- Most computers have an onboard video card.
- What is a GPU?
- How much graphics memory do you need?
- What kind of video ports you might need?
- How many fans should be in a video card?

# WHAT PORTS DO I NEED?

- Different Ports for display
- USB types
- Ethernet
- Audio and Microphone



# COMPARISON OF TWO LAPTOPS

1. Lenovo V14-III Notebook, Intel Core-i3 10<sup>th</sup> Gen, 8Gb Ram, 256Gb SSD NVMe, 14" Wide Screen – currently on sale for \$629.99
2. Lenovo ThinkPad X1 Extreme, Intel Core-i7 11<sup>th</sup> Gen, 16Gb Ram, 512Gb SSD NVMe, RTX 3060 6Gb Video Card, 16" Wide Screen - currently on sale for \$2,699



# COMPARISON OF NEW AND REFURBISHED – WHAT YOU CAN GET WHEN YOU BUY USED

1. NEW - Lenovo V15 2<sup>nd</sup> Gen ITL Notebook, Intel Core i5-1135G7 (4C, 8T, 2.4 to 4.2 GHz), 8Gb Ram, 256Gb SSD NVMe, 1 year warranty \$1,099.99
2. USED - Dell Latitude 5490 Notebook, Intel Core i5-8350U (4C, 8T, 1.7 to 3.6Ghz), 8Gb Ram, 256Gb SSD NVMe, 3 year warranty \$649.99

## SUMMARY

The type of computer you need depends on your use:

- Light Duty – email, word processing, spreadsheets, watching videos, online surfing  
= smaller processor (i3), 8Gb Ram, 128Gb SSD, onboard video card, some ports
- Heavy Duty – gaming, video editing, computer modeling  
= larger processor (i7 or i9), 16-32Gb or more Ram, 256Gb or more SSD, specialized video card, many ports
- Refurbished product can be just as good as new especially since most refurbished product is built for corporate use which is built better and uses better quality components than consumer products.



**QUESTIONS?  
JUST ASK, WE CAN HELP!**

