

# Apple New Hardware, Oct 30, 2023



*Prescott Mac Users Group*



# New Hardware, Fall 2023 Release

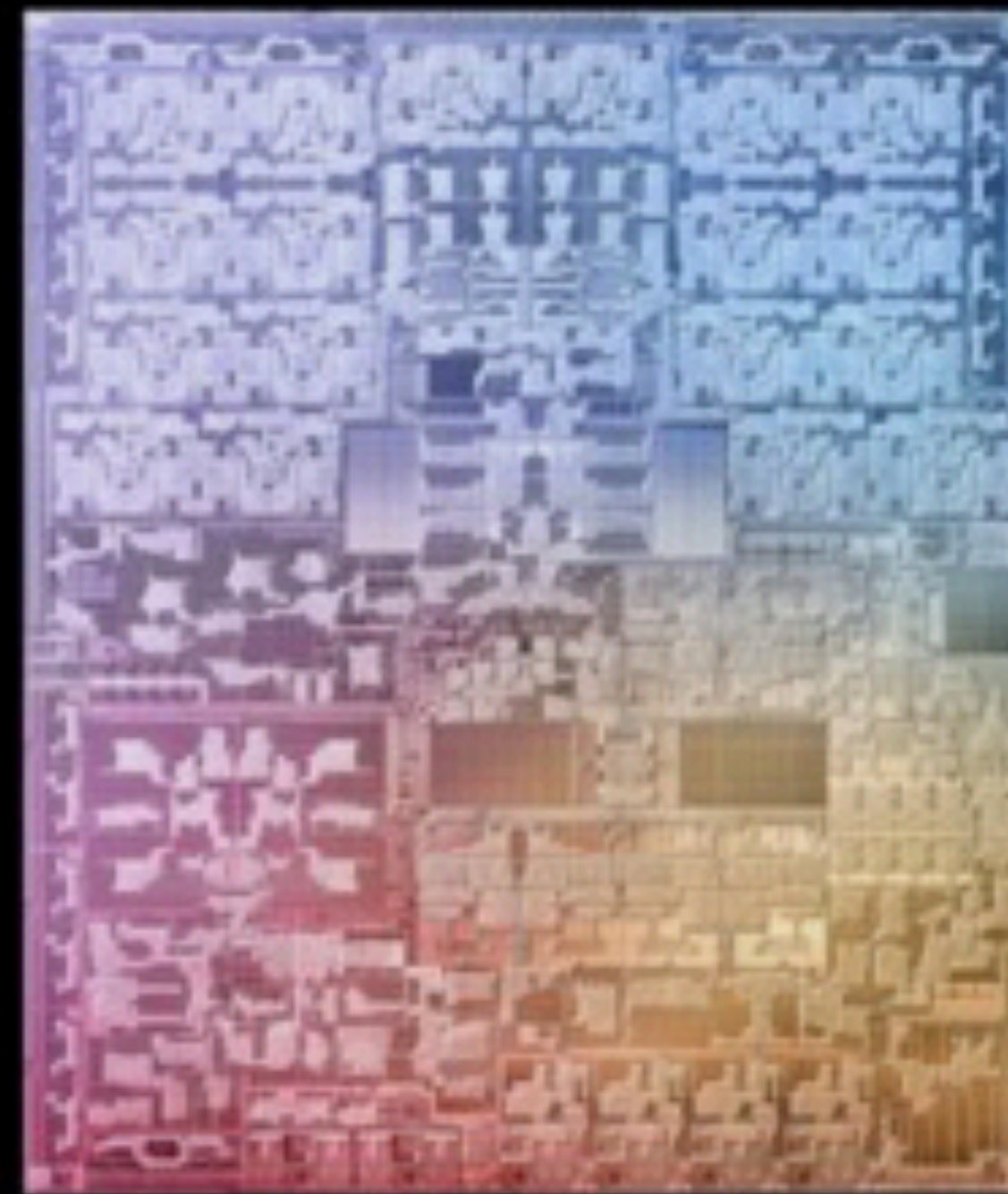
- ❖ M3 Processor Family: M3, M3 Pro, M3 Max
- ❖ New MacBook Pro 14 & 16 inch
- ❖ New 24" iMac



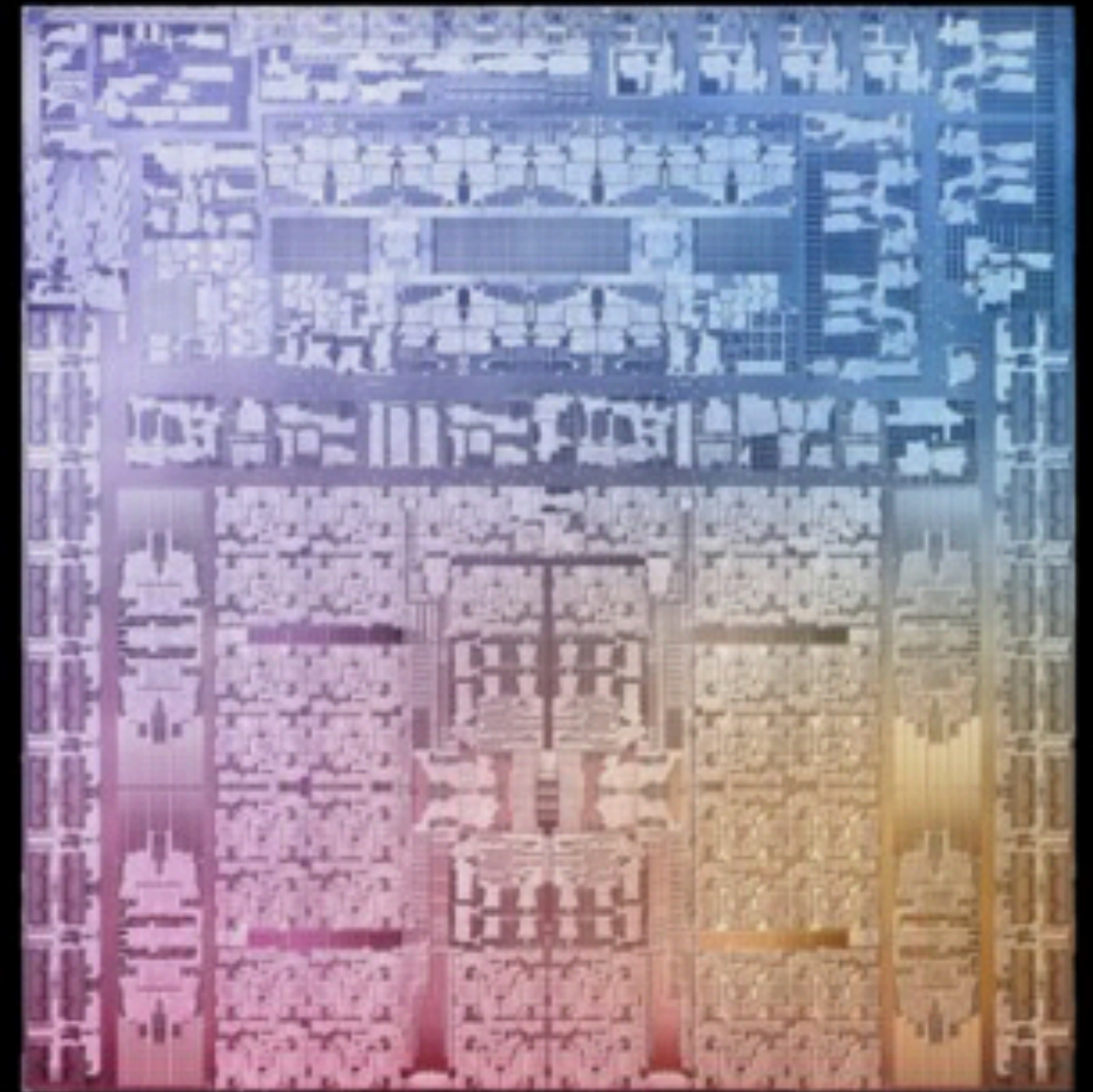
# New Hardware, Fall 2023 Release



Apple M3



Apple M3 Pro

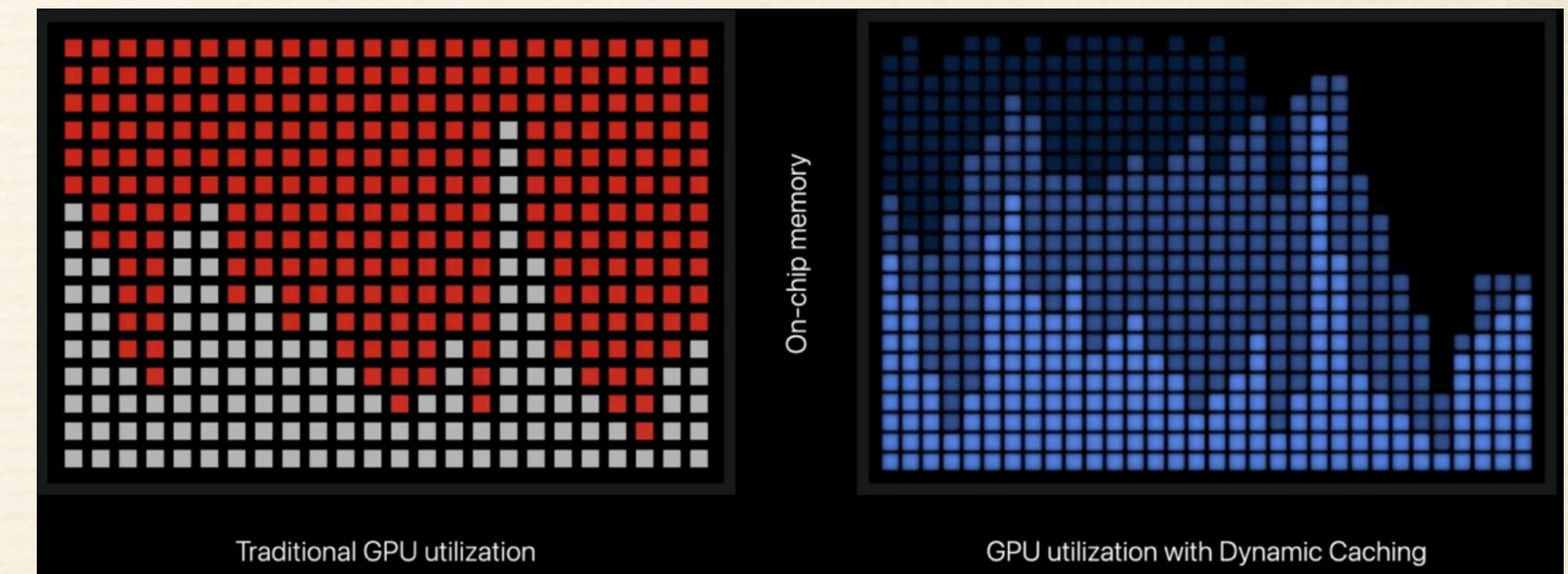


Apple M3 Max



# New M3 Family

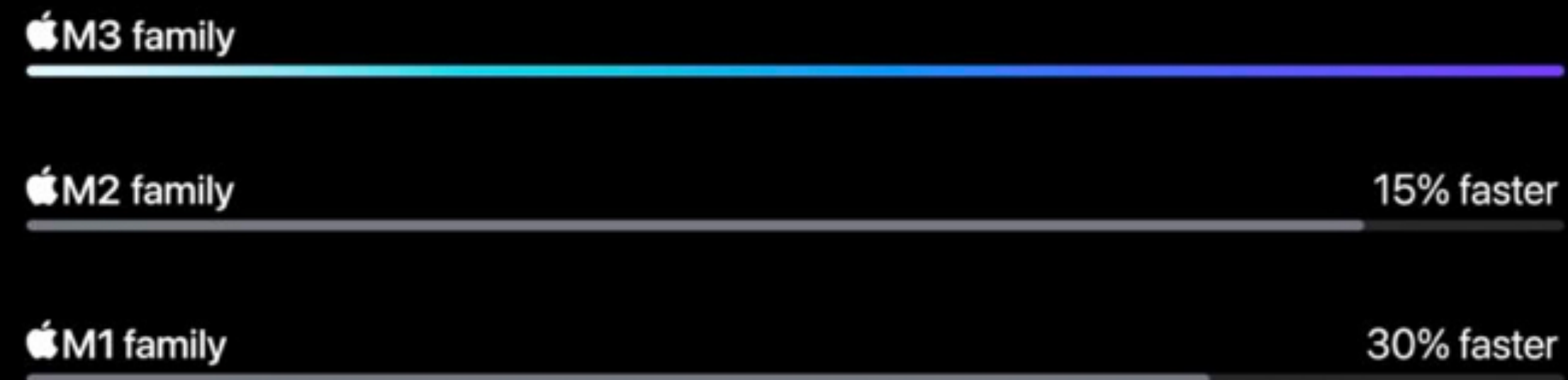
- ❖ Next generation of Apple M series chips
- ❖ Three family members released on same date
- ❖ All three share same underlying CPU & GPU architectures as iPhone 15 Pro A17 chip
- ❖ Uses 3nm manufacturing
- ❖ All M3 GPUs have Dynamic Caching with better memory allocation



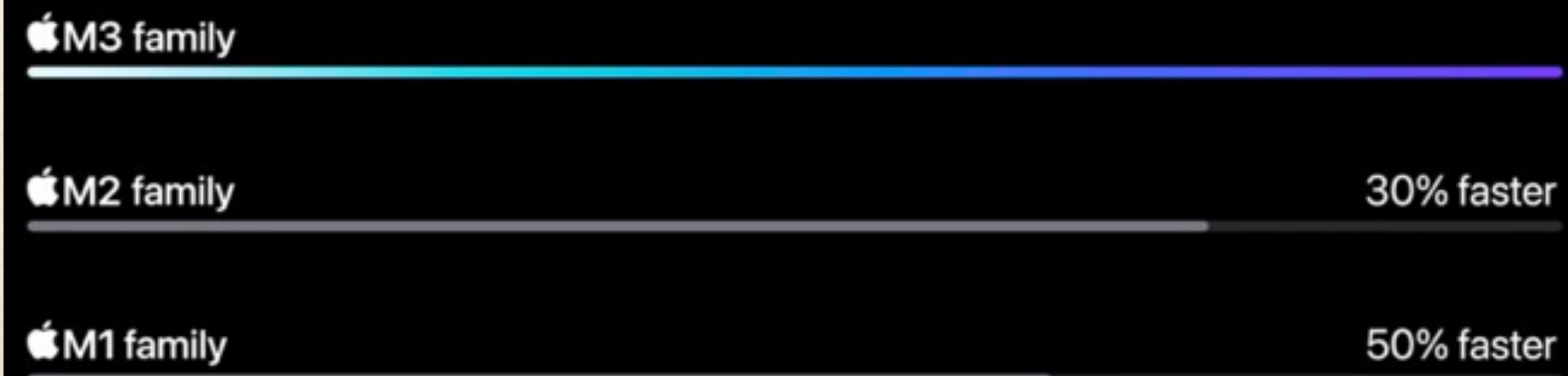


# New M3 Family

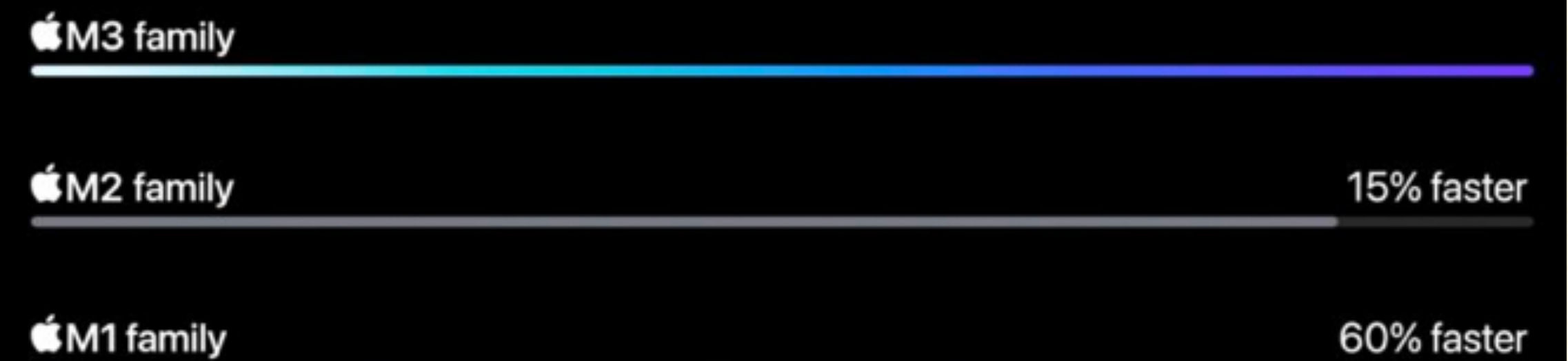
## M3 family performance cores



## M3 family efficiency cores



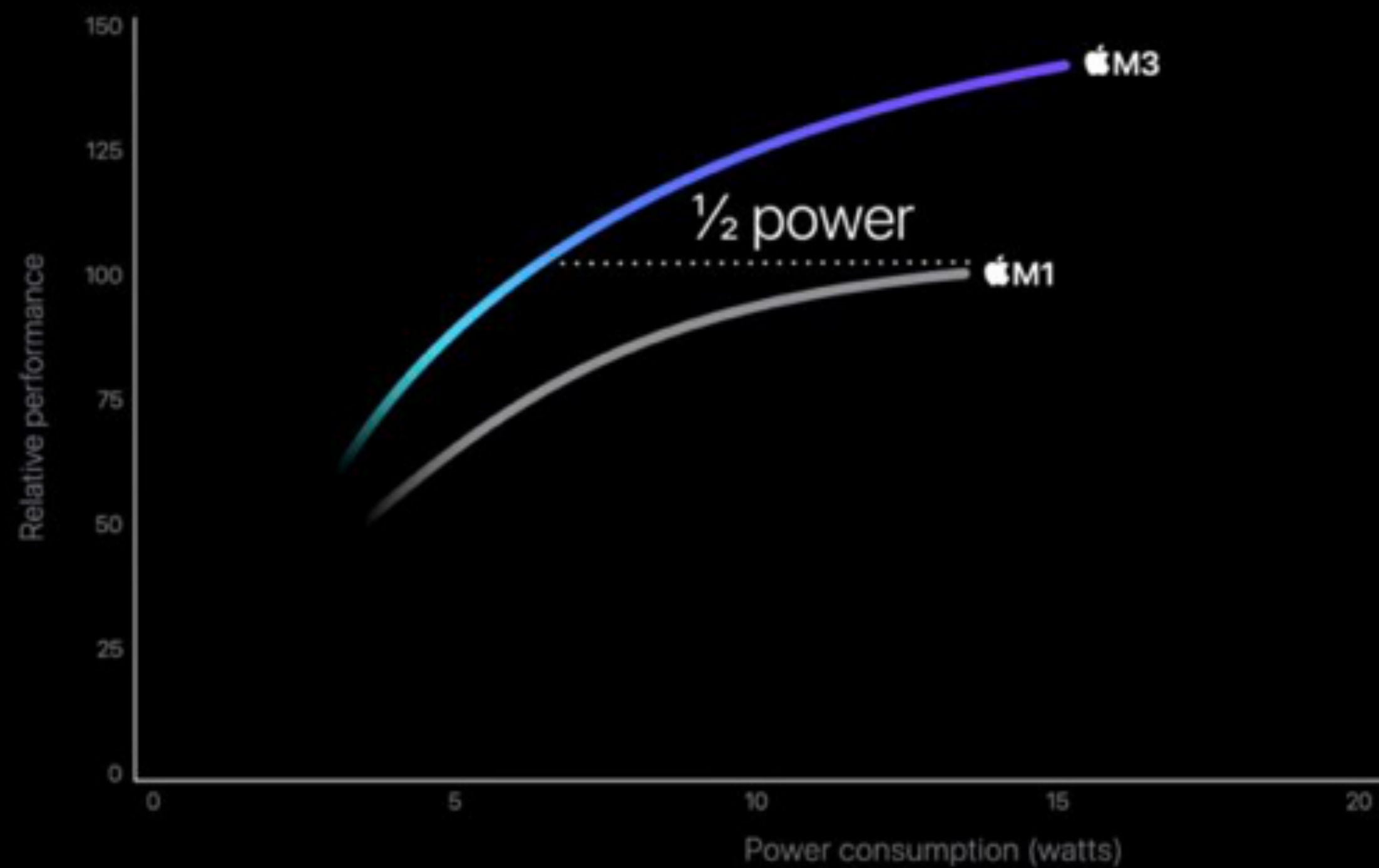
## M3 family Neural Engine performance



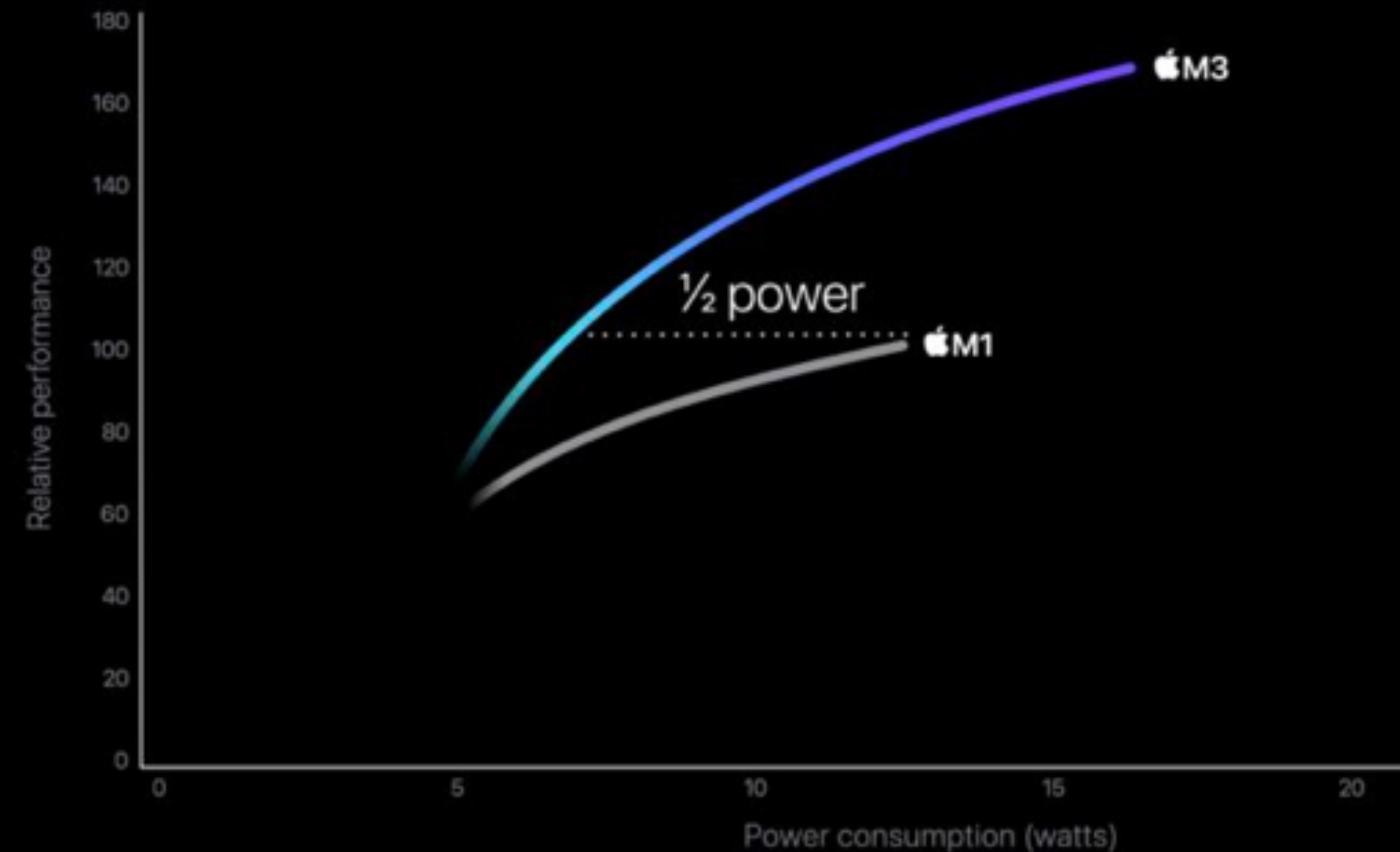


# New M3 Family

## M3 CPU performance



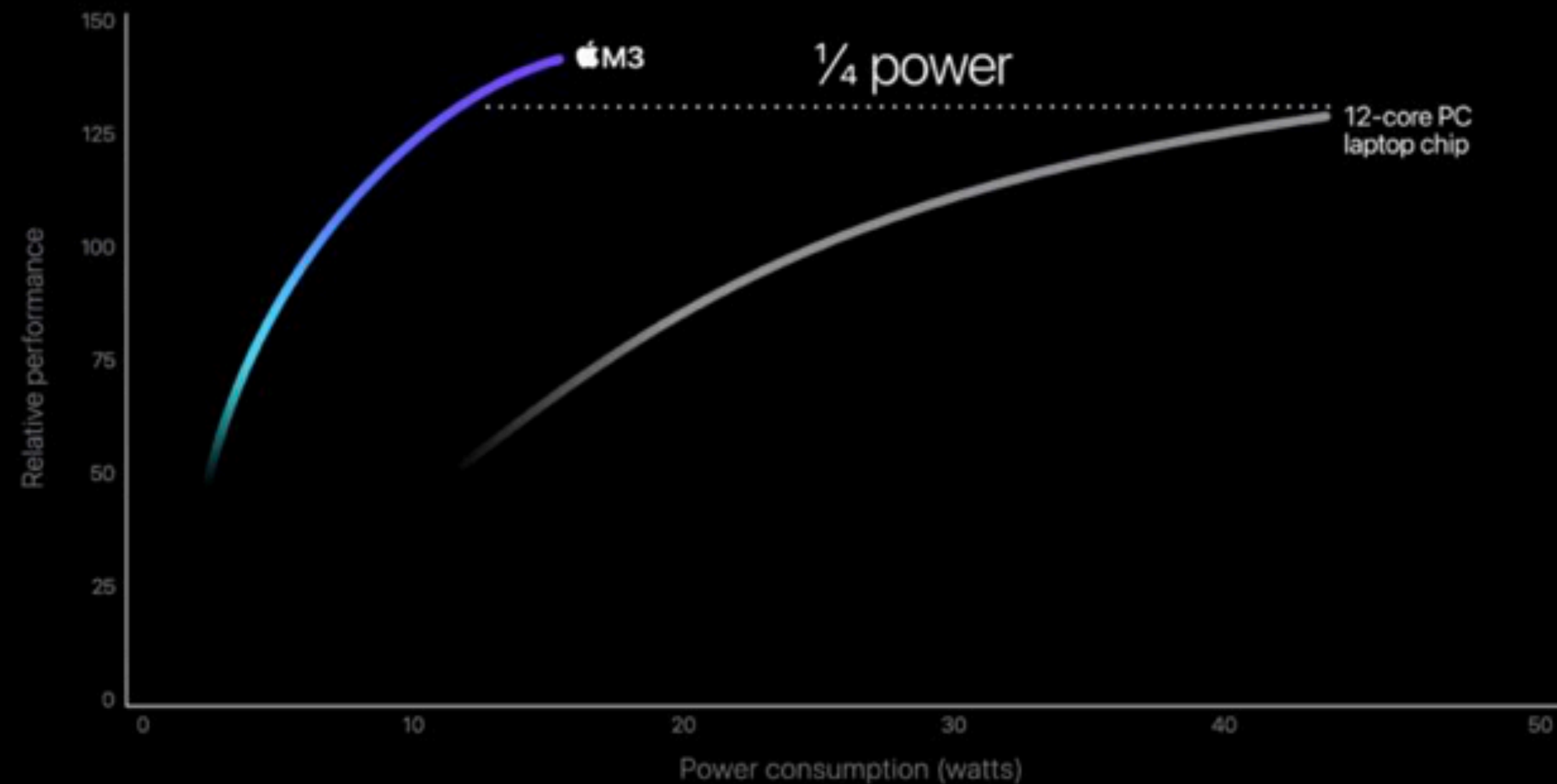
## M3 GPU performance



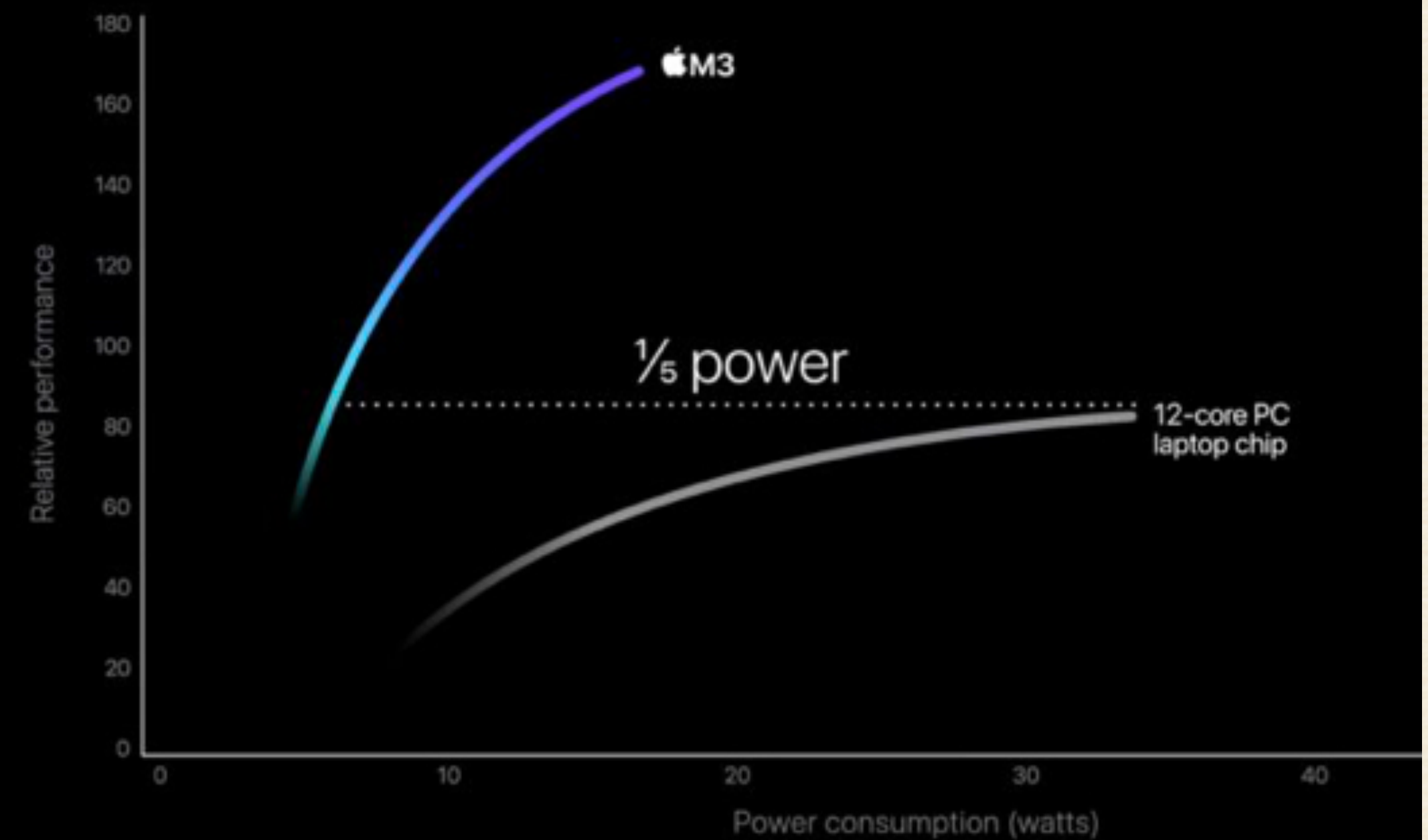


# New M3 Family

## M3 CPU performance



## M3 GPU performance





# New M3 Family

	CPU P/E-CORES	GPU CORES	RAM OPTIONS	MEMORY BANDWIDTH
M3 (entry-level)	4P/4E	8	8/16/24GB	100GB/s
M3	4P/4E	10	8/16/24GB	100GB/s
M3 Pro (entry-level)	5P/6E	14	18/36GB	150GB/s
M3 Pro	6P/6E	18	18/36GB	150GB/s
M3 Max (entry-level)	10P/4E	30	36/96GB	300GB/s
M3 Max	12P/4E	40	48/64/128GB	400GB/s



# New M3 Family

	CPU P/E-CORES (MAX)	GPU CORES (MAX)	MAXIMUM RAM	MAXIMUM MEMORY BANDWIDTH
M1	4P/4E	8	16GB	66.6GB/s
M2	4P/4E	10	24GB	100GB/s
<b>M3</b>	<b>4P/4E</b>	<b>10</b>	<b>24GB</b>	<b>100GB/s</b>
M1 Pro	8P/2E	8P/8E	32GB	200GB/s
M2 Pro	8P/4E	19	32GB	200GB/s
<b>M3 Pro</b>	<b>6P/6E</b>	<b>18</b>	<b>36GB</b>	<b>150GB/s</b>
M1 Max	8P/2E	32	64GB	400GB/s
M2 Max	8P/4E	38	96GB	400GB/s
<b>M3 Max</b>	<b>12P/4E</b>	<b>40</b>	<b>128GB</b>	<b>400GB/s</b>



# New M3 MacBook Pros

- ❖ Two new MacBook Pros: 14” and 16”
- ❖ 14” supports all three M3 chips (M3, M3 Pro & M3 Max)
- ❖ 16” only supports M3 Pro & M3 Max
- ❖ MacBook Air M2 based 13” & 15” available at entry price



# New M3 MacBook Pros

- ❖ Both new MBPs have liquid Retina XDR display
- ❖ 14" display is 3014 x 1964, 16" is 2456 x 2234
- ❖ XDR display is 1000 nits sustained & 1600 nits peak for HDR
- ❖ Both new MBPs have up to 22 hour battery life



# New M3 MacBook Pros

## MacBook Pro 14-in. (M3) ▾

### System on Chip (SoC)

#### M3 chip

8-core CPU with 4 performance cores  
and 4 efficiency cores

10-core GPU

Hardware-accelerated ray tracing

16-core Neural Engine

100GB/s memory bandwidth

#### Media Engine

Hardware-accelerated H.264, HEVC,  
ProRes, and ProRes RAW

Video decode engine

Video encode engine

ProRes encode and decode engine

AV1 decode

## MacBook Pro 16-in. (M3 Pro) ▾

### System on Chip (SoC)

#### M3 Pro chip

12-core CPU with 6 performance cores  
and 6 efficiency cores

18-core GPU

Hardware-accelerated ray tracing

16-core Neural Engine

150GB/s memory bandwidth

#### Media Engine

Hardware-accelerated H.264, HEVC,  
ProRes, and ProRes RAW

Video decode engine

Video encode engine

ProRes encode and decode engine

AV1 decode

## MacBook Pro 16-in. (M3 Pro Max) ▾

### M3 Max chip

Up to 16-core CPU with 12 performance  
cores and 4 efficiency cores

Up to 40-core GPU

Hardware-accelerated ray tracing

16-core Neural Engine

Up to 400GB/s memory bandwidth

#### Media Engine

Hardware-accelerated H.264, HEVC,  
ProRes, and ProRes RAW

Video decode engine

Two video encode engines

Two ProRes encode and decode  
engines

AV1 decode



# New M3 MacBook Pro 14" M3

**8-core CPU**  
**10-core GPU**  
**8GB Unified Memory**  
**512GB SSD Storage<sup>1</sup>**

14-inch Liquid Retina XDR display<sup>2</sup>

Two Thunderbolt / USB 4 ports, HDMI port,  
SDXC card slot, headphone jack, MagSafe  
3 port

Magic Keyboard with Touch ID

Force Touch trackpad

70W USB-C Power Adapter

**\$1,599.00**

**8-core CPU**  
**10-core GPU**  
**8GB Unified Memory**  
**1TB SSD Storage<sup>1</sup>**

14-inch Liquid Retina XDR display<sup>2</sup>

Two Thunderbolt / USB 4 ports, HDMI port,  
SDXC card slot, headphone jack, MagSafe  
3 port

Magic Keyboard with Touch ID

Force Touch trackpad

70W USB-C Power Adapter

**\$1,799.00**



# New M3 MacBook Pro 14" M3 Pro

**11-core CPU**  
**14-core GPU**  
**18GB Unified Memory**  
**512GB SSD Storage<sup>1</sup>**

14-inch Liquid Retina XDR display<sup>2</sup>

Three Thunderbolt 4 ports, HDMI port,  
SDXC card slot, headphone jack,  
MagSafe 3 port

Magic Keyboard with Touch ID

Force Touch trackpad

70W USB-C Power Adapter

**\$1,999.00**

**12-core CPU**  
**18-core GPU**  
**18GB Unified Memory**  
**1TB SSD Storage<sup>1</sup>**

14-inch Liquid Retina XDR display<sup>2</sup>

Three Thunderbolt 4 ports, HDMI port,  
SDXC card slot, headphone jack,  
MagSafe 3 port

Magic Keyboard with Touch ID

Force Touch trackpad

96W USB-C Power Adapter

**\$2,399.00**



# New M3 MacBook Pro 14" M3 Max

**14-core CPU**

**30-core GPU**

**36GB Unified Memory**

**1TB SSD Storage<sup>1</sup>**

14-inch Liquid Retina XDR display<sup>2</sup>

Three Thunderbolt 4 ports, HDMI port,  
SDXC card slot, headphone jack,  
MagSafe 3 port

Magic Keyboard with Touch ID

Force Touch trackpad

96W USB-C Power Adapter

**\$3,199.00**



# New M3 MacBook Pro 16''

 **M3  
PRO**

**12-core CPU  
18-core GPU  
18GB Unified Memory  
512GB SSD Storage<sup>1</sup>**

16-inch Liquid Retina XDR display<sup>2</sup>

Three Thunderbolt 4 ports, HDMI port,  
SDXC card slot, headphone jack,  
MagSafe 3 port

Magic Keyboard with Touch ID

Force Touch trackpad

140W USB-C Power Adapter

**\$2,499.00**

 **M3  
PRO**

**12-core CPU  
18-core GPU  
36GB Unified Memory  
512GB SSD Storage<sup>1</sup>**

16-inch Liquid Retina XDR display<sup>2</sup>

Three Thunderbolt 4 ports, HDMI port,  
SDXC card slot, headphone jack,  
MagSafe 3 port

Magic Keyboard with Touch ID

Force Touch trackpad

140W USB-C Power Adapter

**\$2,899.00**

 **M3  
MAX**

**14-core CPU  
30-core GPU  
36GB Unified Memory  
1TB SSD Storage<sup>1</sup>**

16-inch Liquid Retina XDR display<sup>2</sup>

Three Thunderbolt 4 ports, HDMI port,  
SDXC card slot, headphone jack,  
MagSafe 3 port

Magic Keyboard with Touch ID

Force Touch trackpad

140W USB-C Power Adapter

**\$3,499.00**



# New M3 24'' iMac

- ❖ 4.5K Retina Display
- ❖ 10 lbs, and 11.5mm thick
- ❖ Magnetic power cord
- ❖ Six speaker sound system
- ❖ 2.5x faster than intel based 27'' iMac models



# New M3 24" iMac



**8-Core CPU**  
**8-Core GPU**  
**256GB storage<sup>1</sup>**  
**8GB unified memory**

24-inch 4.5K Retina display<sup>2</sup>  
Two Thunderbolt / USB 4 ports  
—  
—  
Magic Keyboard

**\$1,299.00**



**8-Core CPU**  
**10-Core GPU**  
**256GB storage<sup>1</sup>**  
**8GB unified memory**

24-inch 4.5K Retina display<sup>2</sup>  
Two Thunderbolt / USB 4 ports  
Two USB 3 ports  
Gigabit Ethernet  
Magic Keyboard with Touch ID

**\$1,499.00**



**8-Core CPU**  
**10-Core GPU**  
**512GB storage<sup>1</sup>**  
**8GB unified memory**

24-inch 4.5K Retina display<sup>2</sup>  
Two Thunderbolt / USB 4 ports  
Two USB 3 ports  
Gigabit Ethernet  
Magic Keyboard with Touch ID

**\$1,699.00**



# New M3 MacBook Pros

- ❖ Two new MacBook Pros: 14” and 16”
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- ❖ 16” only supports M3 Pro & M3 Max
- ❖ MacBook Air M2 based 13” & 15” available at entry price



# One Last Thing

- ❖ Ordering from Apple Store you can get a discount for a Apple Mac computer trade in!!
- ❖ A 6 year old 13” MacBook Pro discounted the price by almost \$300
- ❖ A 4 year old 16” MacBook Pro discounted the price by almost \$800
- ❖ Can you say “good deal”??