QUICK REFERENCE GUIDE

2020 MOBILE PROCESSORS FOR LAPTOPS

AMD RYZEN™ 4000 SERIES MOBILE PROCESSORS WITH RADEON™ GRAPHICS
AMD ATHLON™ 3000 SERIES MOBILE PROCESSORS WITH RADEON™ GRAPHICS

JANUARY 2020

Disruptive processor and graphics performance across the product lineup, addressing every computing need – productivity, entertainment, gaming, and content creation.

Responsive Performance Meets Modern Features

AMD ATHLON™ 3000 SERIES

"Zen" | 14nm | 15W

MODERN MAINSTREAM

For everyday users who want modern features and great battery life in a responsive laptop.

REAL PERFORMANCE

- AMD **"Zen" technology** delivers a powerful upgrade to mainstream laptops
- Up to **2.5X faster multithreaded performance** vs. previous gen processors[1]

GORGEOUS VISUALS

- **Edit photos and stream movies** in up to 4K

MODERN FEATURES

- **Enjoy Windows® 10 modern features** like Windows Hello[2], Digital Pen[3], Cortana, and Modern Standby along with **long-lasting battery life**

The World's Most Advanced Laptop Processors[4]

AMD RYZEN™ 4000 U-SERIES

"Zen 2" | 7nm | Up to 8 Cores | 15W

PREMIUM ULTRATHIN

For customers that want premium performance and long-lasting battery life in ultrathin laptops.

ULTRA-FAST RESPONSIVENESS

- Up to **8 ultra-fast "Zen 2" cores**, the **most available on an ultrathin PC**[5]
- Create, stream, and multitask faster than ever--**with the world's highest performing ultrathin laptop processor**[6]

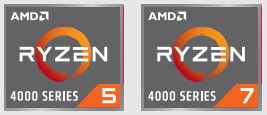
THE BEST ENTERTAINMENT BUILT-IN

- The **best-in-class graphics for ultrathin laptops**[6]
- Enjoy up to 4K streaming and full HD gaming

MAXIMUM MOBILITY

- **Up to 2X the power efficiency** of previous gen processors[7] to support long-lasting battery life
- Wi-Fi 6 and Bluetooth 5 compatibility[8]

AMD RYZEN™ 4000 H-SERIES



"Zen 2" | 7nm | Up to 8 Cores | 45W

GAMING & CONTENT CREATION

For gamers, creators, and tech enthusiasts who desire the ultimate level of performance in a laptop.

UNCOMPROMISING PERFORMANCE

- Up to **8 ultra-fast "Zen 2" cores** deliver enthusiast performance for innovative thin and light laptops
- Optimized for **discrete graphics** for enhanced visuals

BORN TO GAME

- Experience **smooth gaming in up to 1440p** and **blazing fast framerates** on top game titles
- Enjoy high resolutions and high game settings on-the-go

BUILT TO CREATE

- **Tackle demanding creative applications** for graphic design, editing photos and videos, encoding, rendering, and more

	Badge	Model	Architecture	CPU Cores / Threads	Total Cache	Max Boost[9] (up to)	TDP (watts)	GPU Model	GPU Cores	Graphics Frequency	Compare to	Connectivity[8] (up to)	Display Compatibility
GAMING & CONTENT CREATION		**AMD Ryzen™ 7 4800H Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	8C/16T	12 MB	4.2 GHz	45W	AMD Radeon™ Graphics	7	1600 MHz	Intel® Core™ i7-9850H	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
		**AMD Ryzen™ 5 4600H Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	6C/12T	11 MB	4.0 GHz	45W	AMD Radeon™ Graphics	6	1500 MHz	Intel® Core™ i5-9400H	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
PREMIUM ULTRATHIN		**AMD Ryzen™ 7 4800U Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	8C/16T	12 MB	4.2 GHz	15W	AMD Radeon™ Graphics	8	1750 MHz	Intel® Core™ i7-1065G7	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
		**AMD Ryzen™ 7 4700U Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	8C/8T	12 MB	4.1 GHz	15W	AMD Radeon™ Graphics	7	1600 MHz	Intel® Core™ i7-1060G7	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
		**AMD Ryzen™ 5 4600U Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	6C/12T	11MB	4.0 GHz	15W	AMD Radeon™ Graphics	6	1500 MHz	Intel® Core™ i5-1035G1	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
		**AMD Ryzen™ 5 4500U Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	6C/6T	11 MB	4.0 GHz	15W	AMD Radeon™ Graphics	6	1500 MHz	Intel® Core™ i5-1035G1	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
		**AMD Ryzen™ 3 4300U Mobile Processor with Radeon™ Graphics**	AMD 7nm "Zen 2"	4C/4T	6 MB	3.7 GHz	15W	AMD Radeon™ Graphics	5	1400 MHz	Intel® Core™ i3-1005G1	Wi-Fi 6 and Bluetooth 5	Up to 4K with HDR
MODERN MAINSTREAM LAPTOPS		**AMD Athlon™ Gold 3150U Mobile Processor with Radeon™ Graphics**	AMD 14 nm "Zen"	2C/4T	5 MB	3.3 GHz	15W	AMD Radeon™ Graphics	3	1000 MHz	Intel® Pentium® Gold 5405U	Wi-Fi 6 and Bluetooth 5	Up to 4K
		**AMD Athlon™ Silver 3050U Mobile Processor with Radeon™ Graphics**	AMD 14 nm "Zen"	2C/2T	5 MB	3.2 GHz	15W	AMD Radeon™ Graphics	2	1100 MHz	Intel® Pentium® Silver N5000	Wi-Fi 6 and Bluetooth 5	Up to 4K

1. Testing by AMD Performance Labs as of 11/22/2019 utilizing the Athlon Gold 3150U vs. the A9-9425 in Cinebench R20 1T and nT. Performance may vary. DAL-11
2. Requires specialized hardware, including fingerprint reader, illuminated IR sensor or other biometric sensors and capable devices.
3. Alta subscription required and sold separately. Pen capable tablet or PC required. Pen accessory may be sold separately.
4. As of December 2019, the Ryzen 4000 series mobile processor is the "Most advanced laptop processor " defined as superior 7nm process technology in a smaller node, 15W and 45W typical TDP. RM3-01
5. As of December 2019, the Ryzen 7 4800 mobile processor is expected to have the "Most cores in a laptop processor" demonstrated by Ryzen 7 4800 series mobile processor having 8 cores, while as of December 12th 2019, comparable competitive product (Intel 10th generation mobile processors) offer up to 6 cores. RM3-05
6. Ultrathin laptop processor" defined as 15W typical TDP. Testing by AMD Performance Labs as of 12/09/2019 utilizing an AMD Ryzen™ 4800U reference system, a Dell XPS 7390 system with 10th Gen Intel® Core i7-1065G7 processor, and a Dell XPS 7390 with a 10th Gen Intel® Core i7-10710U processor using Cinebench R20 1T, Cinebench R20 nT and 3DMark 11 Performance. Results may vary. 3DMark is a registered trademark of Futuremark Corporation. RM3-127
7. Testing by AMD Performance Labs as of 11/22/2019 utilizing the Ryzen 7 4800U vs. 2nd Gen Ryzen 7 3700U in Cinebench R20 Benchmark. Results may vary. RM3-123
8. Wi-Fi 6 and Bluetooth 5.0 availability varies by laptop manufacturer and are system configuration dependent. Check with your laptop manufacturer for compatibility information.
9. Max boost for AMD Ryzen processors is the maximum frequency achievable by a single core on the processor running a bursty single-threaded workload. Max boost will vary based on several factors, including, but not limited to: thermal paste; system cooling; motherboard design and BIOS; the latest AMD chipset driver; and the latest OS updates. GD-150