

Surface Laptop 4 processors tech overview

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Surface Laptop 4 is designed to provide commercial customers with a rich set of device options to help decision-makers better align device procurement goals with increasingly specific role requirements. Compared with Surface Laptop 3:

- Surface Laptop 4 equipped with AMD Ryzen™ Microsoft Surface Edition processors provides superior multi-threading performance making it a great choice for information workers needing better multitasking capabilities.
- Surface Laptop 4 equipped with 11th gen Intel® Core™ processors provide a stronger GPU and faster single-threaded performance, making it a great choice for developers, researchers, data scientists and the like - especially when paired with the greater memory and storage offered in the top end Intel SKU.

Choice of SKU depends on customer priorities:

- If multi-threaded app performance and longer battery life is a top priority, Surface Laptop 4 with AMD Ryzen Surface Edition processors is a good choice.
- If faster single-threaded performance is more important, along with options for greater memory and storage, Surface Laptop 4 with Intel 11th gen core processors is a good choice.

To learn more, see [Surface Laptop 4 for Business](#) .

Processor tech specs

Surface Laptop 4 13.5"

- Quad Core 11th Gen Intel Core i5-1145G7 processor
- Quad Core 11th Gen Intel Core i7-1185G7 processor
- AMD Ryzen 5 4680U Mobile Processor with Radeon™ Graphics Microsoft Surface Edition (6 cores)
- AMD Ryzen 7 4980U Mobile Processor with Radeon Graphics Microsoft Surface Edition (8 cores)

Surface Laptop 4 15"

- Quad Core 11th Gen Intel Core™ i7-1185G7 processor
- AMD Ryzen 7 4980U Mobile Processor with Radeon™ Graphics Microsoft Surface Edition (8 cores)

11th Gen Intel Core i5/i7 in Surface Laptop 4

Feature	i5-1145G7	i7-1185G7
Cores	4	4
Threads	8	8
Max turbo frequency	4.40 GHz	4.80 GHz
Cache	8 MB Intel Smart Cache	12 MB Intel Smart Cache
Bus speed	4 GT/s	4 GT/s
Max memory size	16 GB	32 GB
Memory types	DDR4-3200, LPDDR4x-4267	DDR4-3200, LPDDR4x-4267
Max memory channels	2	2

For general information about the Intel processors in Surface Laptop 4, see:

- [Intel Core i5-1145G7 Processor](#)
- [Intel Core i7-1185G7 Processor](#)

AMD Ryzen Microsoft Surface Edition processors

Feature	AMD Ryzen 5 4680U	AMD Ryzen 7 4980U
CPU cores	6	8
Threads	12	16
GPU cores	7	8
Base clock	2.1 GHz	2.0 GHz
Max boost clock	4.0 GHz	4.4 GHz

Feature	AMD Ryzen 5 4680U	AMD Ryzen 7 4980U
Total L2 cache	3 MB	4 MB
Total L3 cache	8 MB	8 MB
CMOS	TSMC 7nm FinFET	TSMC 7nm FinFET
Package	FP6	FP6
PCI Express® Version	3.0	3.0
Default TDP / TDP	15W	15W
Max Temps	105C	105 C

For general information about AMD processors in Surface Laptop 4, see [Microsoft Surface Laptop 4 Powered by AMD Ryzen Mobile Processors](#) .

Surface Laptop 4 SKUs

Configuration	Processor	GPU
R5/8/256GB	AMD Ryzen 5 4680U Mobile Processor with Microsoft Surface Edition	Radeon™ Graphics
i5/8/256GB	11th Gen Intel Core i5 1145G7 processor	Intel Iris® Xe Graphics
R5/16/256GB	AMD Ryzen 5 4680U Mobile Processor with Microsoft Surface Edition	Radeon Graphics
i5/8/512GB	11th Gen Intel Core i5 1145G7 processor	Intel Iris Xe Graphics
i5/16/512GB	11th Gen Intel Core i5 1145G7 processor	Intel Iris Xe Graphics
i7/16/256GB	11th Gen Intel Core i7 1185G7 processor	Intel Iris Xe Graphics
R7/16/512GB	AMD Ryzen 7 4980U Mobile Processor with Microsoft Surface Edition	Radeon Graphics
i7/16/512GB	11th Gen Intel Core i7 1185G7 processor	Intel Iris Xe Graphics
i7/32/1TB	11th Gen Intel Core i7 1185G7 processor	Intel Iris Xe Graphics

Learn more

- [Surface Laptop 4 for Business](#)