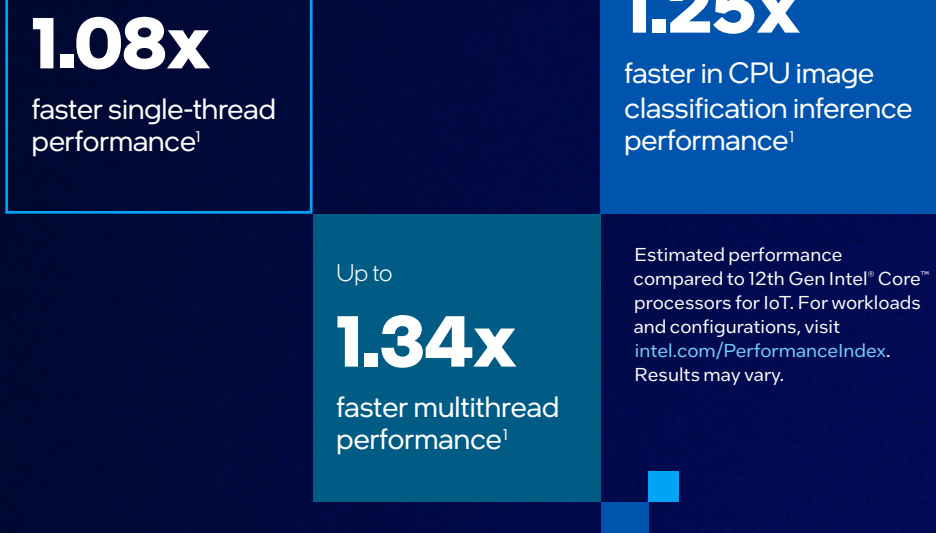# More-powerful processors for the edge

intel. CORE

With more options, including new mobile industrial capabilities

13th Gen Intel® Core™ processor family for IoT edge

Accelerate time to market for your most demanding IoT projects with higher processor performance.[1] More portfolio flexibility helps providers design and deploy the targeted solutions their customers need.

Up to
1.08x
faster single-thread performance[2]

Up to
1.25x
faster in CPU image classification inference performance[3]

Up to
1.34x
faster multithread performance[3]

Estimated performance compared to 12th Gen Intel® Core™ processors for IoT. For workloads and configurations, visit intel.com/Performanceindex. Results may vary.

Boost solution success with a feature-rich set of offerings

13th Gen Intel® Core™ mobile processors

Prioritize power savings, density, and graphics

Up to **14** cores and up to **20** threads

Up to **24 MB** Intel® Smart Cache

Soldered-down BGA package

13th Gen Intel® Core™ processors

Maximize performance, memory, and I/O

Up to **24** cores and up to **32** threads

Up to **36 MB** Intel Smart Cache

LGA-socket compatibility with 12th Gen Intel® Core™ processors

Industrial-grade capabilities[2]

Industrial use conditions, extended temp ranges, in-band error correction code memory, real-time capabilities on select SKUs

Portfolio flexibility

Mainstream and IoT (embedded use condition)[2] SKUs running the IoT software stack, real-time capabilities on select SKUs

intel iRIS Xe GRAPHICS

Intel® Iris® Xe graphics[4]

Up to 96 execution units (EUs), up to 4K displays or one 8K display with Pipelock, 2x2 combined mode, EDID management, and bezel correction

Intel® UHD Graphics 770

Up to 32 EUs, up to four 4K displays or one 8K display with Genlock and Pipelock, 2x2 combined mode, EDID management, and bezel correction

I/O, memory, and connectivity

Up to 28 PCIe lanes: 2x4 PCIe 4.0 on CPU (plus 1x8 PCIe 5.0 on H-series), up to 12x PCIe 3.0 on PCH

Up to four Thunderbolt™ 4/USB4 lanes

Up to DDR5-4800, LPDDR5x-6400,[3] DDR4-3200, LP4x-4266

Integrated 1GbE MAC, support for 2.5GbE TSN MAC/PHY

I/O, memory, and connectivity

Up to 48 PCIe lanes on CPU + PCH, including up to 16x PCIe 5.0 lanes

Two optional discrete Thunderbolt 4/USB4 lanes

Up to DDR5-5600, up to DDR4-3200

Integrated 1GbE MAC, integrated 2x 2.5GbE TSN MAC

Included in both offerings

Accelerated AI
Intel® Distribution of OpenVINO™ toolkit and Intel® Deep Learning Boost

OS support
Windows 10 IoT Enterprise 2021 Long-Term Servicing Channel (LTSC), EFLOW, and Linux

Software tools
Intel® oneAPI toolkit with write-once, deploy-anywhere flexibility

Long-life availability[5]
More value for lengthy certification cycles

Deliver competitive advantages in varied industries

Retail, banking, hospitality, education
Build video walls with up to four 4K60 HDR synchronized displays and AI analytics.
Point of sale (POS), kiosks, video walls, digital security, and digital signage

Healthcare
Accelerate AI and graphics in diagnostics while driving value from long product life cycles.
Ultrasound imaging, medical carts, endoscopy, and clinical devices

Military and aerospace
Powerful multitasking in space-constrained applications and ruggedized environments.
Embedded computing for vehicles, avionics, and intelligence, safety, and reconnaissance (ISR)

Industrial
Enable real-time-capable features and industrial use conditions on select SKUs.
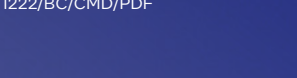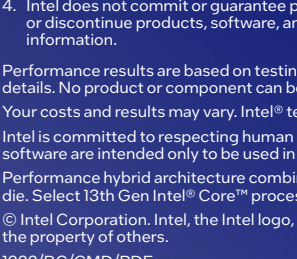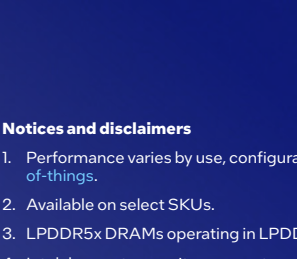AI-based industrial process control (AIPC), industrial PCs, vision systems, programmable logic controllers, and autonomous mobile robots
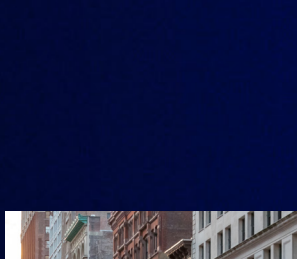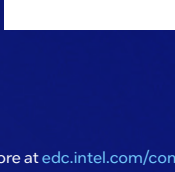
Smart cities
Support more video streams and flexible expansion with more display pipes and PCIe lanes.
AI video at the edge and network video recorders (NVRs)

Learn more about **13th Gen Intel® Core™ mobile processors.**
intel.com/13thgencoremobile-iot ›

Explore the capabilities of **13th Gen Intel® Core™ processors.**
intel.com/13thgencore-iot ›

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