

Decenta OPS25 PC Designed for Interactive Flat Panel Displays

New generation of flat panel displays facilitates interactive discovery in education and other industries; OPS25 benefits from high-performance Intel® Core™ Ultra Series 3 processor



Flat panel displays are taking on an expanded role in education, video conferencing, healthcare and other applications as they evolve from passive viewing to more interactivity and collaboration. And AI-based applications are on the horizon.

Higher resolution displays that feature microphones, speakers, cameras and touchscreen interactivity allow both local and remote users to participate more deeply in a class or meeting. They also allow subject matter experts – like teachers, doctors, or executives – new ways to share information or to brainstorm.

All of the new functionality necessitates that more compute power be available to run applications on the display. Intel Open Pluggable Specification (OPS) is an interface standard that allows a small form factor computer to be connected to the display to enable this new functionality.



Decenta, an Intel® Industry Solutions Builders partner, has built its latest solution to this challenge using OPS and Intel® Core™ Ultra Series 3 processors.

OPS25 Designed for Display Applications

The Decenta OPS25 (S25-PTLH-OPS25) is a multi-purpose, small form factor industrial PC that is optimized for collaborative education white board, interactive conference whiteboard, digital signage and other applications. With integrated AI acceleration provided by the Intel Core Ultra Series 3 processor, the OPS25 has specialized processing for applications that need high-resolution displays, generative AI inferencing or user interactivity.

The compact system measures 180 mm wide by 30mm high by 118 mm deep. The system supports up to 128 GB of DDR5 memory to ensure there is no lag in media processing for clear and reactive video conferencing.

The OPS25 can support one or two M.2 M-Key 2242/2280 SSDs with support for PCIe 5.0 X4. This configuration offers up to 256 GB of storage, providing the flexibility to run high-performance applications, like conferencing, locally with file storage on OPS25.

The system has two wireless antennas and has built-in Wi-Fi 7 for wireless LAN. In its product testing, Decenta has seen Wi-Fi 7 provide enough bandwidth for up to 30 students to share their screens simultaneously with a single flat panel display¹. The system also has Bluetooth 6.

Back-panel connectivity includes (see Figure 1) HDMI in and out ports, a USB 3.2 gen1 port, USB Type-C in and out ports, and Gigabit Ethernet.

¹Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

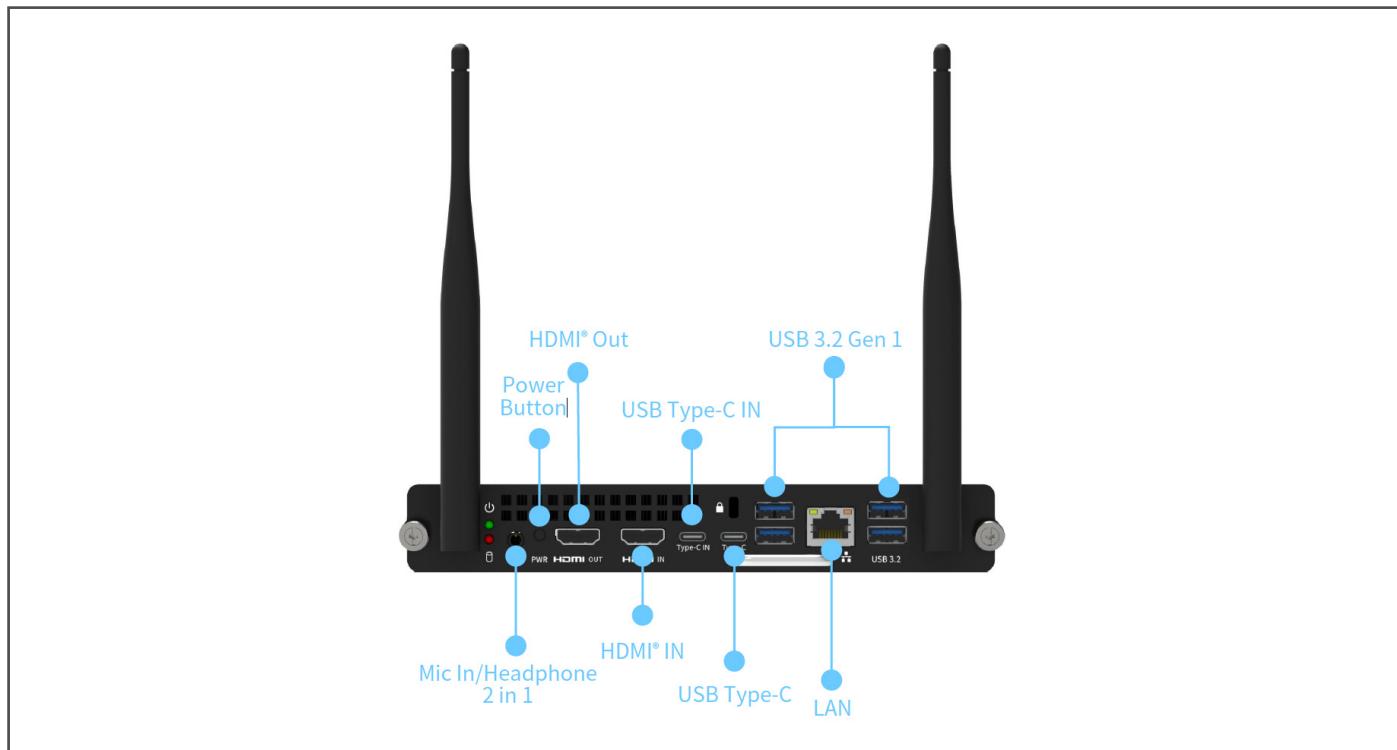


Figure 1. Back panel of Decenta OPS25 showing its connectivity options. Front panel has 80-pin Open Pluggable Specification connector.

The OPS25 uses Intel Open Pluggable Specification to integrate the system into interactive flat panel displays that range from 55 inches to 105 inches in diameter.

Intel Open Pluggable Specification Defined

Intel OPS specifies the physical interface (80-pin connector) and signaling between a modular PC and an interactive flat panel display. OPS modules can utilize powerful Intel® processors to deliver all the power of a desktop computer for interactive displays, enhancing interoperability within interactive displays that follow the OPS standard.

The specification is designed so the modules are easy to install – just slide the compute module into the slot on the back of the screen. The result is a cable-free option that replaces the need for teachers or meeting presenters to manually connect their own laptops or stretch cables from other computers to the display.

OPS-compatible modules support modern operating systems and can include remote management capabilities that simplify ongoing monitoring and maintenance. Depending on vendor implementation, OPS modules may offer very high usability, remote manageability, low TCO, dedicated cybersecurity and easy installation and upgrades.

In this application, the OPS25 is the main processor running the operating system and a variety of applications as well as processing AI inferencing. Applications could include Microsoft Teams or Zoom conference call rooms, real-time translation, speech-to-text conversion, and a wide variety of educational software applications.

AI Performance from Intel

The OPS25 is based on the Intel® Core™ Ultra Series 3 processor family, which is AI-enabled and offers specialized performance to meet the demands of AI inferencing and fine-tuning use cases.

Intel® Core™ Ultra Series 3 processors feature three independent computing capabilities: a CPU with up to 16 cores, built-in Intel® Arc™ graphics with up to 120 trillion operations per second (TOPS), and a neural processing unit (NPU) offering up to 50 TOPS. The processors feature a low thermal design power (TDP) of between 12W and 65W.

Decenta makes use of all of the processing capabilities built into the Intel® Core™ Ultra processor, using the CPU for low latency video, conferencing and other common applications, using the integrated GPU to support high-performance AI implementation such as large language models (LLMs) and smooth rendering of graphics, and using the NPU for power efficient background AI tasks and other similar workloads.

OpenVINO™ Toolkit

Decenta also uses OpenVINO™ toolkit, which enables accelerating AI inference on Intel® hardware to enable real-time content archiving or annotation in high-fidelity recording.

The OpenVINO toolkit is part of the Open Edge Platform developed and maintained by Intel and provides Intel® hardware-optimized software acceleration of AI models. OpenVINO toolkit was designed to ensure AI models seamlessly utilize the integrated AI acceleration features for Intel® processors for optimal performance and efficiency.

Conclusion

The Decenta OPS25 is packed with compute capabilities that are important to student, executives, employees and customers. The PC delivers on interactivity, communications and support of other educational applications thanks to the capabilities of the Intel Core Ultra Series 3 processor. And as AI becomes a bigger workload, the OPS has dedicated processor capacity to successfully adopt new applications that need advanced AI processing.

Learn More

[Decenta Webpage](#)

[Decenta OPS25 \(S25-PTLH-OPS25\)](#)

[Intel® Core™ Ultra Series 3 Processors](#)

[Improving Classroom Experience with Display Panels Based on Intel's Open Pluggable Specification \(OPS\)](#)

[OpenVINO™ Toolkit](#)

[Intel® Industry Solutions Builders](#)



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