

# Odin Digital Classroom System Enhances Schools and Learning

**Company's comprehensive digital classroom technology drives e-learning, collaboration and environmental and health controls; solution is powered by Intel® Core™ processors**



School administrators worldwide are rethinking how education is delivered in light of new computer hardware, video conferencing capabilities, hybrid classrooms, learning management systems, and other software and content sources.

These new learning methodologies combine technology with evolved teaching practices and intelligently managed learning spaces. Technology plays an important role in this new educational system by enhancing the learning environment so that teachers can provide personalized, collaborative, and self-paced instruction.

Teachers can use digital tools to provide interactive lessons, let students make presentations, and integrate multimedia content into lesson plans. Students can more easily collaborate in person and virtually, and they have access to a wider selection of educational content. Teachers can monitor student work and develop quizzes, reviews, tests, and assignments to closely match the student's learning level.

Odin Technology's mission is to empower education through innovation. The company, an Intel® Industry Solutions Builders partner, has launched a new digital classroom solution that provides a holistic and integrated learning ecosystem for this new era of teaching.

## Digital Learning Ecosystem

The Odin Digital Classroom Solution is an ecosystem of hardware and software whose holistic approach stands apart from the competition. It brings purpose-built learning environments together under a single, centrally-managed platform that simplifies deployment, operation, and scalability for IT and administrative teams.

The three main components of this solution (see Figure 1) deliver content streaming and interactive learning, AI-driven instruction, and smart IoT control into one platform.

These benefits are delivered using three components of Odin's integrated digital classroom system. These include:

## Interactive Recording Digital Classroom

This interactive live streaming system provides remote interactivity and records lessons in 4K video. The components of this system include an Odin X digital smart board screen that displays a lecture and other schoolwork to connected students no matter their location. To do this, the system also features a 4K cloud mirror imaging camera for capturing the lecture, and an omnidirectional microphone array for clear audio of the teacher or student. Odin also provides its interactivity software for co-teaching across connected classrooms. This technology delivers improved engagement, more equitable access, and more successful remote instruction.





**Figure 1.** MAXHUB XBoardV7 intelligent digital display.

The system utilizes a lightweight real-time communications (RTC) video architecture for efficient and low-latency streaming. The system is ideal for teaching specialized topics across multiple physical classrooms or remotely. The lecture capture capability can generate a multi-view playback so that students can view experiments or lectures from various angles and perspectives.

With the synchronized writing feature, teachers or students in multiple locations can collaborate on a presentation or have students develop answers on the digital screen while all of the connected students watch. The system is easy to operate and offers a solution to democratizing access to specialized subjects by allowing students from distant or rural areas to take classes with teachers who have specialized expertise and are in limited supply.

The Interactive Recording Digital Classroom can scale to multiple schools. And students can use any popular brand of computers, tablets or mobile devices to participate and access content. The system provides analytics that give insight into classroom activities and student engagement.

### **Group Study Digital Classroom**

This software video conferencing and collaboration solution provides a digital assist to teachers who are using task-based learning (TBL) and / or project-based learning (PBL). These collaborative learning models benefit from the ability of the teacher to digitally distribute the required materials through the app thus streamlining the preparation process.

Once class is in session, the students can use the system for group brainstorming sessions, for presentations and digital whiteboards that enable seamless collaboration. The system

supports flexible participation, allowing for synchronous or asynchronous learning styles, as well as online or in-class learning. This connectivity offers some creative options for cross culture learning.

When class is over, the teacher can access the after-class analytics to review online assignment grades and use the learning analytics to get insight into student performance and engagement.

### **IoT Smart Control Digital Classroom**

To improve teacher and student comfort and support a healthy classroom environment, the Odin IoT Smart Control Digital Classroom software is connected to a Wi-Fi network to provide centralized, remote control over all classroom control devices (lighting, AC, curtains) and sensors that monitor air quality (CO<sub>2</sub>, VOC) and automate energy efficiency. This is integrated into the overall learning experience to ensure a healthy school room and help manage rising energy and operational costs.

This IoT control ecosystem adds intelligence to building systems allowing them to be smarter for better monitoring and management of building and classroom systems, but also to adjust these systems when the school day is done or the classroom is temporarily empty so as to not waste energy, water or other resources. This software also can manage the Odin X digital smart board and other digital classroom systems.

### **Creating High-Performance Digital Classrooms**

To meet the evolving demands of higher education and K-12 environments, Odin's digital classroom solutions leverage industry-leading Intel® technologies to deliver a high-performance, manageable, and future-ready educational infrastructure.

## Performance Compute for Modern Pedagogy

Odin has selected 12th Gen Intel® Core™ processors to power its classroom terminals, ensuring that faculty and students have the compute solution necessary for intensive digital applications. These processors handle complex simulations and multitasking with ease, while integrated Intel® Iris® X<sup>e</sup> graphics ensure smooth, high-resolution video for immersive learning. To protect institutional investments, Odin utilizes Intel IoT SKUs, which offer extended lifecycle availability and full compatibility with Windows 11 IoT Enterprise LTSC 2024, providing a stable long-term deployment path for campus IT.

## Next-Gen Connectivity and Intelligence

Odin's hardware architecture supports PCIe 5.0 and DDR5-5600 memory, ensuring that campus operations managers are deploying a solution that meets modern data standards while maintaining essential backwards compatibility with DDR4. To enhance the classroom experience, Odin integrates the Intel® OpenVINO™ toolkit, which optimizes AI workloads. This allows curriculum designers to incorporate real-time AI speech analysis and high-fidelity 4K recording into their programs. By utilizing Intel® hardware-optimized software acceleration, the OpenVINO toolkit ensures that AI models run with maximum efficiency on integrated Intel acceleration features, delivering premium performance without increasing power overhead.

## Streamlined Hybrid Edge Computing

For campus IT administrators and operations managers, the solution incorporates Intel® Hybrid Edge Computing (HEC) to simplify the complexities of large-scale deployment. Intel® HEC enables centralized device management, multi-OS

switching, and rapid image deployment across the entire campus network. By shifting to a Hybrid Edge Computing model, institutions can significantly reduce IT maintenance costs and operational downtime. Furthermore, HEC supports secure provisioning, making the management of diverse classroom environments more secure, scalable, and manageable.

## Conclusion

Digital learning is evolving as new technologies are integrated into digital classroom systems opening new opportunities for teachers to better instruct their students. The Odin Digital Classroom ecosystem is unique in that it offers a comprehensive approach with classroom lecture, small group collaboration and environmental control systems. These systems can be used independently or as an integrated system. Odin worked with Intel to provide cost-effective compute, voice processing and client capabilities that ensure the system brings smooth video and interactivity as well as manageability.

## Learn More

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[12th Gen Intel® Core™ Processors](#)

[OpenVINO™ Toolkit](#)

[Intel® Industry Solutions Builders](#)



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