NI Industrial IoT Lab

INDUSTRIAL IoT LAB

The Industrial IoT Lab at National Instruments global headquarters in Austin, Texas, was specially designed and created to focus on the intelligent systems that bridge operational technology (OT) with information technology (IT) and the companies working on them.

A Space to Collaborate

Industrial Internet of Things (IIoT) solutions incorporate technologies from multiple companies and areas of expertise. One intent of the Industrial IoT Lab is to foster collaboration between different companies to prove out interoperability. In this space, communication protocols, controller hardware, I/O components, processing elements, and software platforms are combined to validate end-to-end solutions that will dramatically change the way businesses operate.
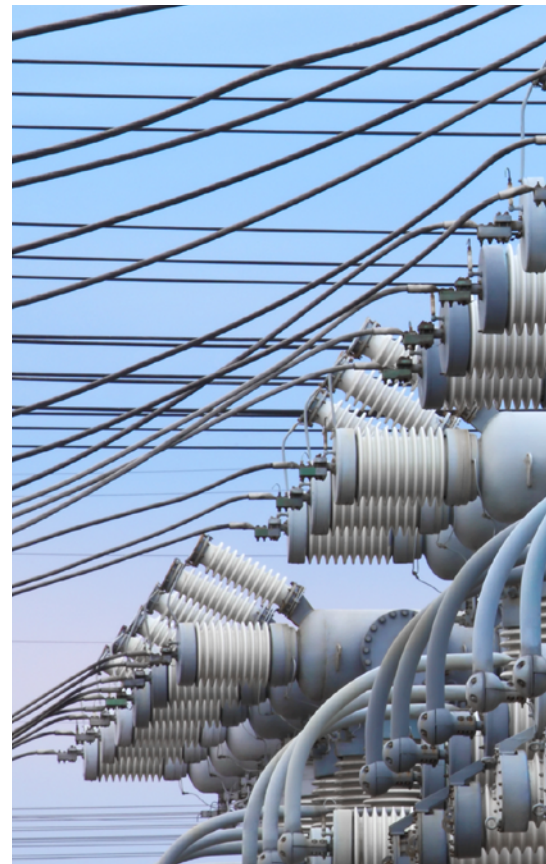
A Space to Innovate

Because IIoT technologies cut across a variety of industries and applications, the lab is outfitted with a wide range of features to help researchers, engineers, and data scientists innovate in an environment containing real-world elements without fear of impacting their own business operations. These features represent operational technologies in the field that need to be connected to enterprise IT systems to yield business gains. Features such as three-phase power access, a GPS drop, a fractional horsepower closed circuit pump skid, constant and variable speed water pumps, approximately 20 monitored building electrical circuits, and a dual network topology help researchers simulate some of the brownfield environments in which IIoT intelligent systems will be deployed.

A Space to Showcase

The lab is a working showcase for IIoT technologies, solutions, and systems architectures. Through demonstrations and testbeds, participating companies can promote innovative solutions and drive discussions with domain experts who are experiencing real-world challenges.

Use Cases

Built to scale, the lab focuses on critical IIoT technologies across industry and will remain a flexible space as future technologies emerge. Visit ni.com/iiot-lab for the latest demonstrations being featured in the Industrial IoT Lab.
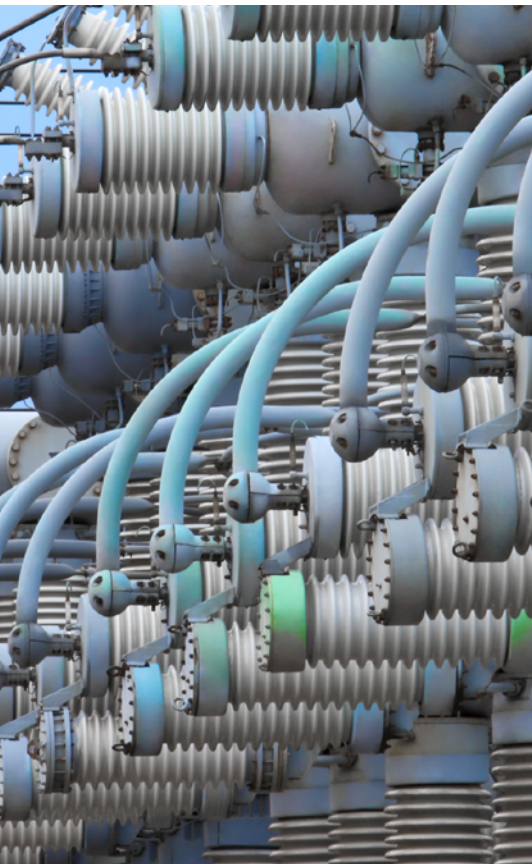
Industrial IoT Lab Features

- Approximately 1000 sq ft of physical space dedicated to IIoT technology innovation and demonstration

- Easy access to meeting rooms, cafeteria, and built-in mechanisms for IT, security, shipping, parking, etc.

- Internal machine shop and demo-building shop in the same building

- Flexible room design that allows for adjustable power and communication drops as testbed designs evolve; room includes eight 20 A single-phase circuits and one three-phase circuit, a GPS drop, and dual network pulls

- Three workstations each with a computer featuring dual displays to show marketing material and demo execution (software)

- Centrally located dual 70 in. monitors to display feeds from the workstations; monitor area serves as a presentation/demo center for tours or, with a rollout conference table, as a meeting space

- Noise-isolated server closet with flexible wiring pulls to the main room and dedicated AC cooling; this allows hot and noisy equipment to be hosted outside the physical space but still be easily accessible, with short wiring pulls for modifying connectivity

- Secure remote access so collaborative companies can access the equipment in the lab from anywhere in the world for their test and development needs

- Additional tables, chairs, and power strips for hosting larger plug-fests

About NI

For more than 40 years, NI has developed high-performance technology for automated test and automated measurement systems to help you solve your engineering challenges now and into the future. Our open, software-defined platform uses modular hardware and an expansive ecosystem to help you turn powerful possibilities into real solutions.

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Learn more about NI and the IoT at ni.com/iiot-lab.