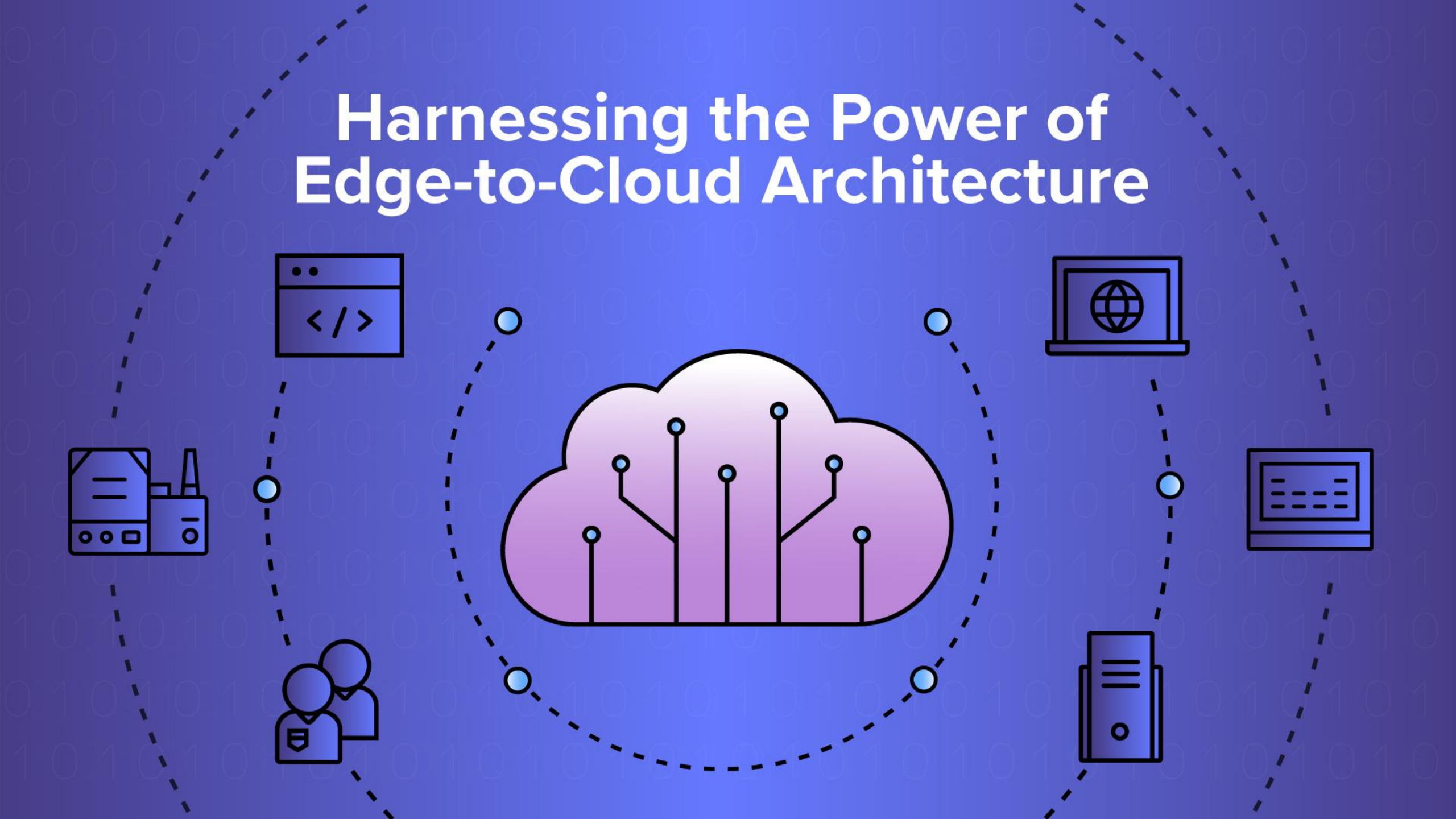
Harnessing the Power of Edge-to-Cloud Architecture



Presenter

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Inductive Automation

Guest Presenters

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Senior Product Manager

OnLogic

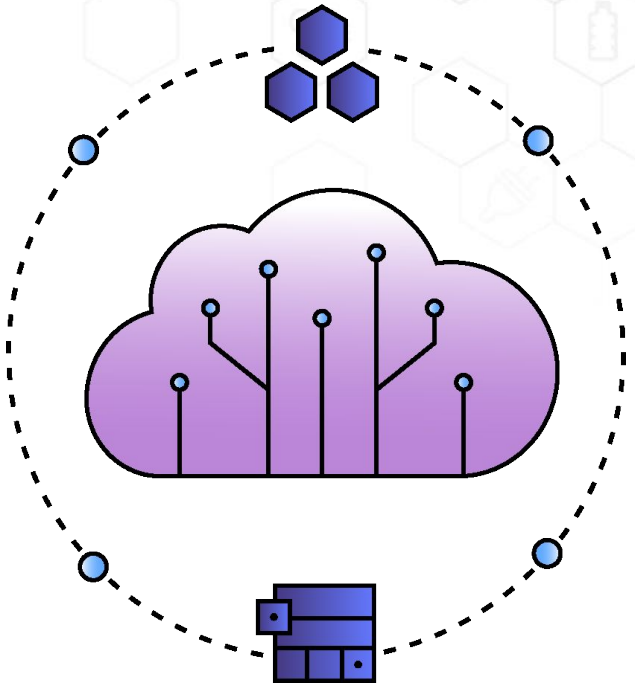
Cole Wangsness

Partnerships Leader

OnLogic

Agenda

- Introduction to Ignition and OnLogic
- What is the Edge?
- Edge Benefits
- Hardware & Software Considerations
- Cloud
- Going Forward
- Audience Q&A




Ignition!®
by inductive automation
The Unlimited Platform for SCADA and So Much More
• Connect, Design, Deploy Without Limits:
- One central hub for everything on the plant floor
- Create any kind of industrial application
- Web-deploy clients to desktops, industrial displays & mobile devices
• Unlimited licensing
• Industrial-strength security and stability
• Trusted by thousands of companies worldwide

Industrial Computers

- Fanless or Active Cooling
- Intel, AMD, and ARM Options
- 0 to 50°C Operating Temp.

Rugged Computers

- Resistant to Shock & Vibration
- Wide Power Input Range
- -40 to 70°C Operating Temp.

Panel PCs

- 8.4” to 24” Screen Sizes
- Resistive or Capacitive Screens
- Available with IP65 Front Bezels

Edge Servers

- 1U to 4U Sizes
- Intel and AMD Options
- Highly Configurable

The What and Why of Edge

- Edge refers to edge-of-network nodes.
  - Nodes collect and transfer data to a central location.
- Edge architectures need as much consideration as other parts of a growing system.
- Edge data is getting more valuable and cheaper to collect.

The What and Why of Edge

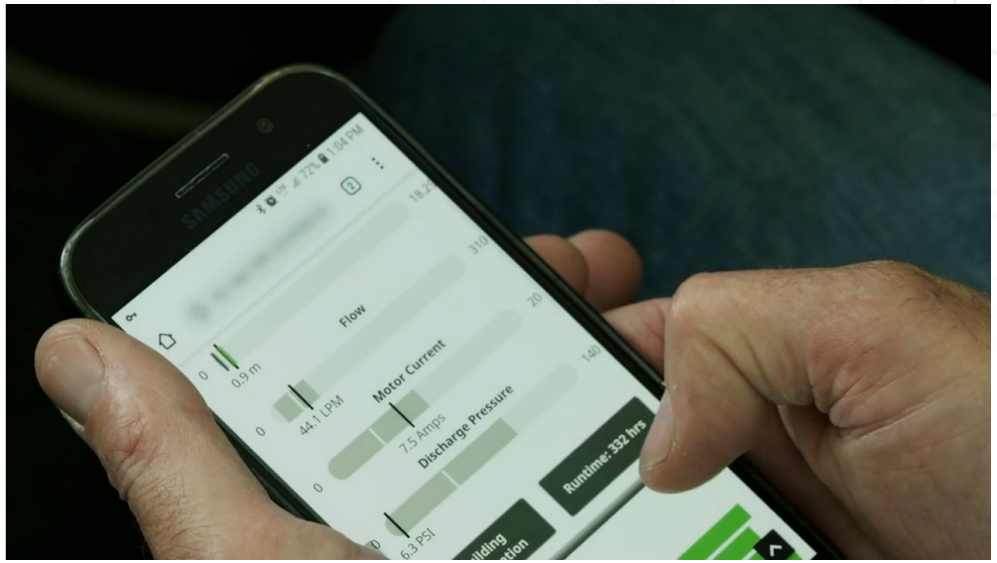
Edge is all around us

- Remote sites
- Plant floor
- Pipelines
- Vehicles connected with 5G

The What and Why of Edge

Deploy Ignition for:

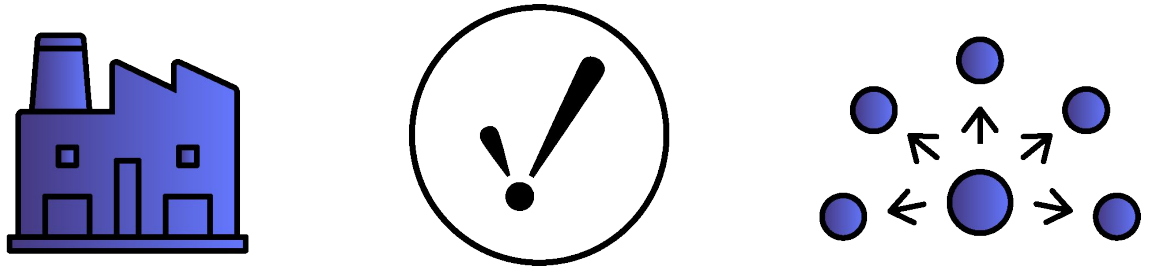
- HMIs
- Data collector
- Control room
- On-site server at remote locations



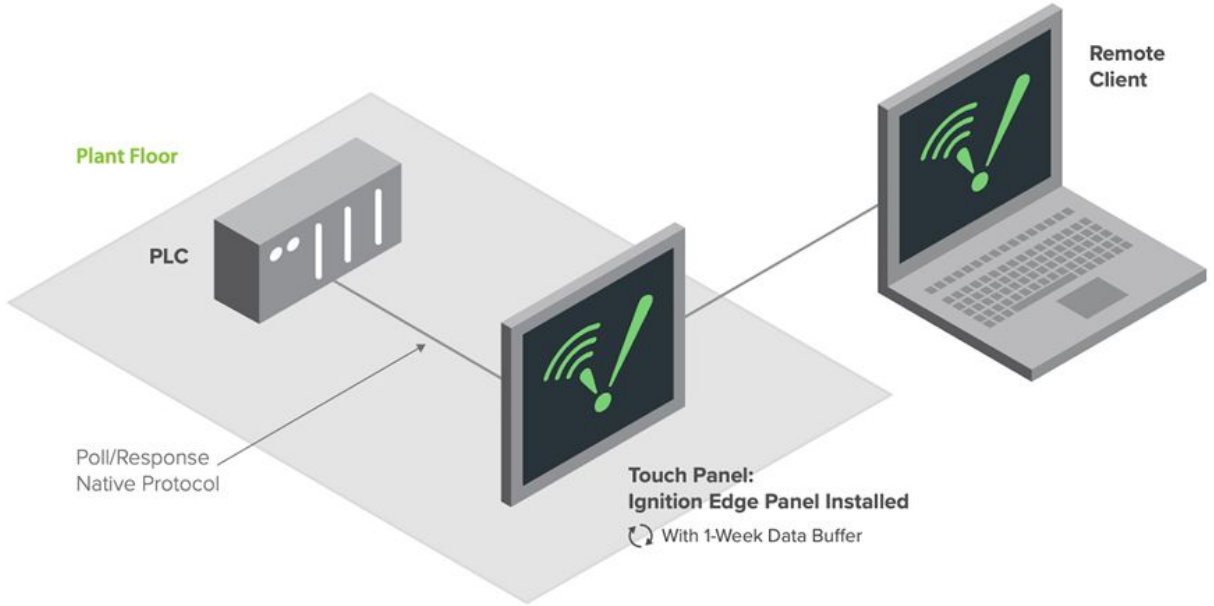
Benefits of Edge

Key benefits stem from direct interface with on-site equipment

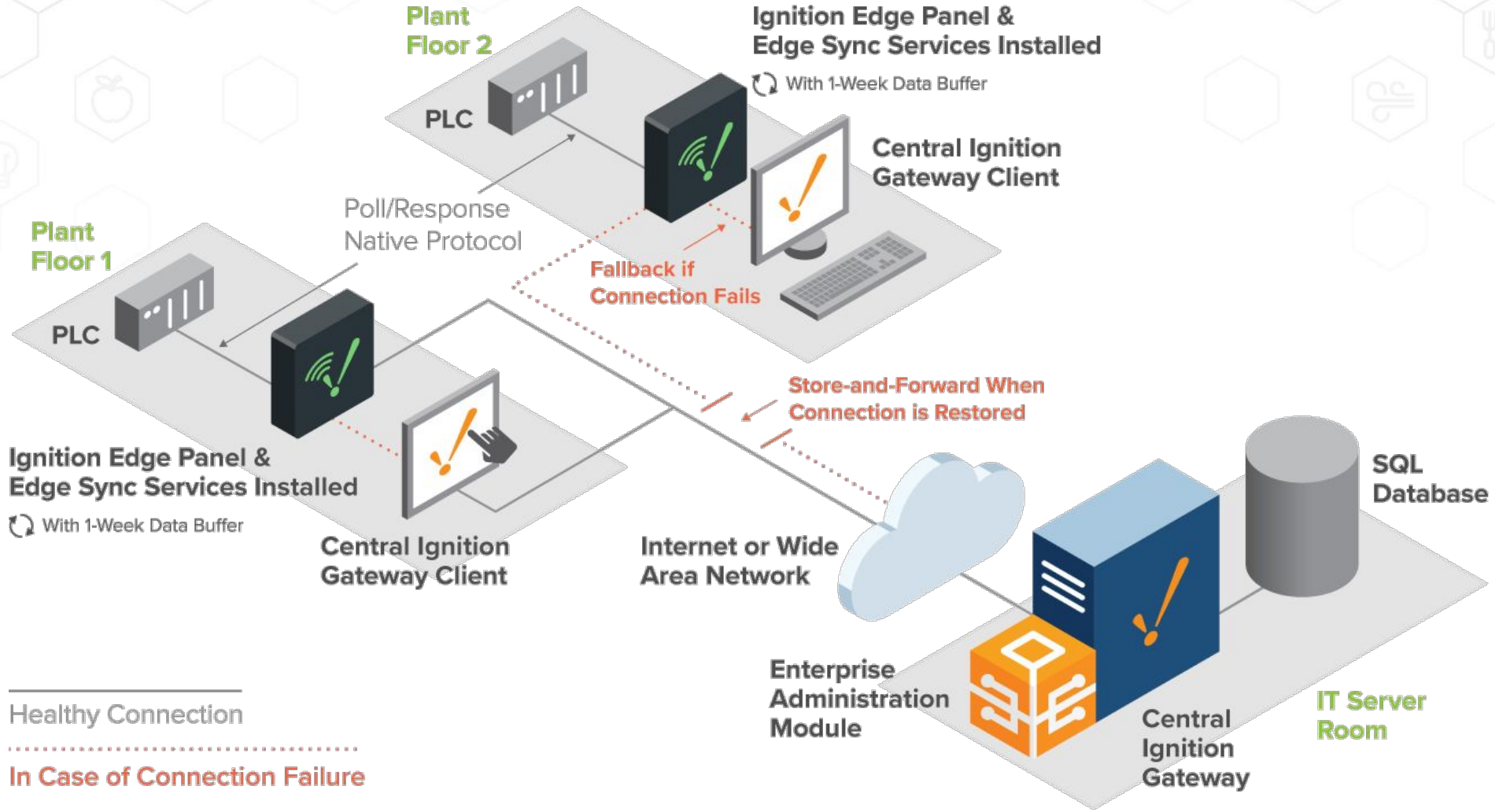
- Reduced latency
- Distributed systems / scalability
- Redundancy / failover
- Reduced transmission costs
- Prevents data loss
- Local functionality



Benefits of Edge: Standalone HMI

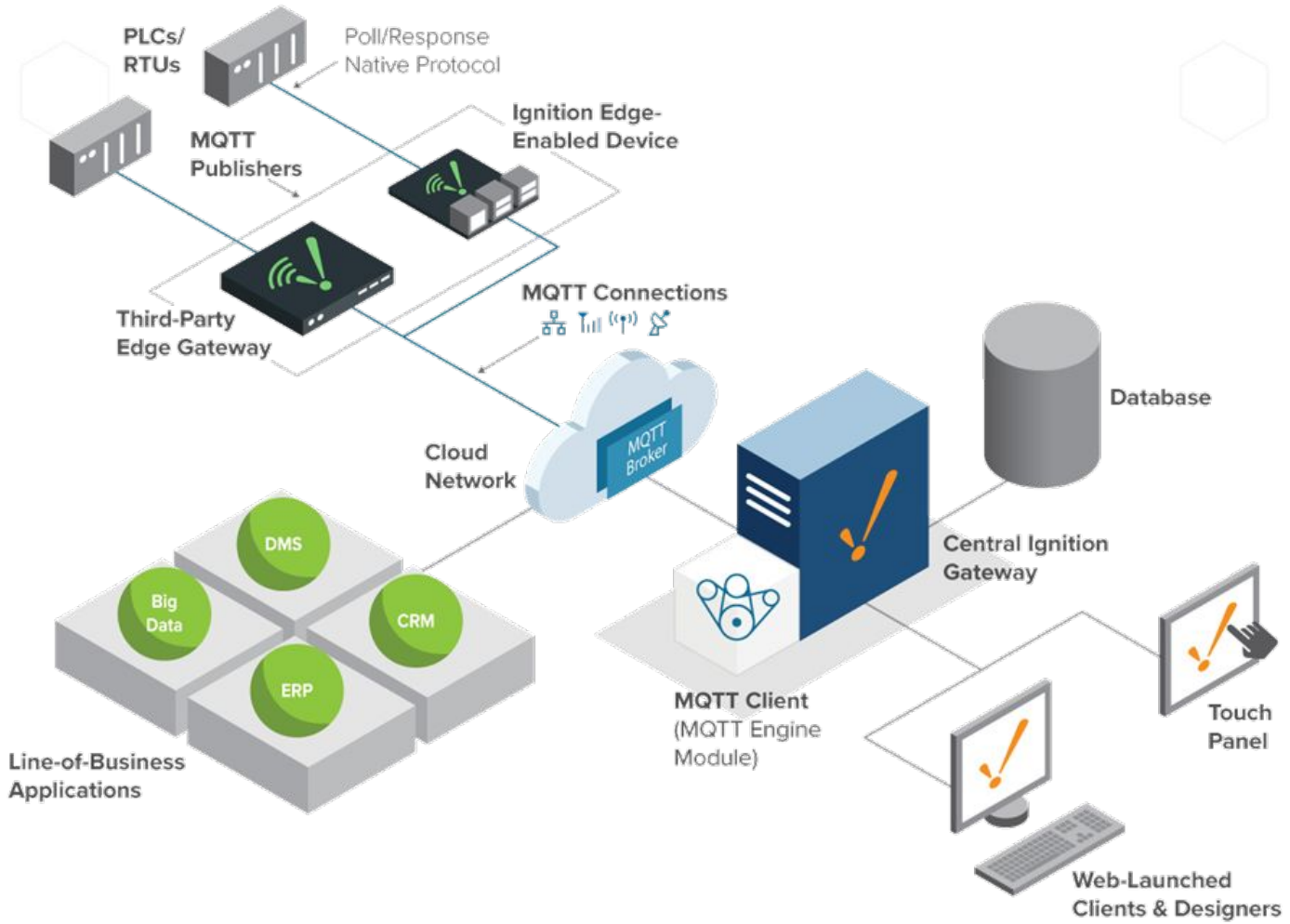


Benefits of Edge: Local Fallback

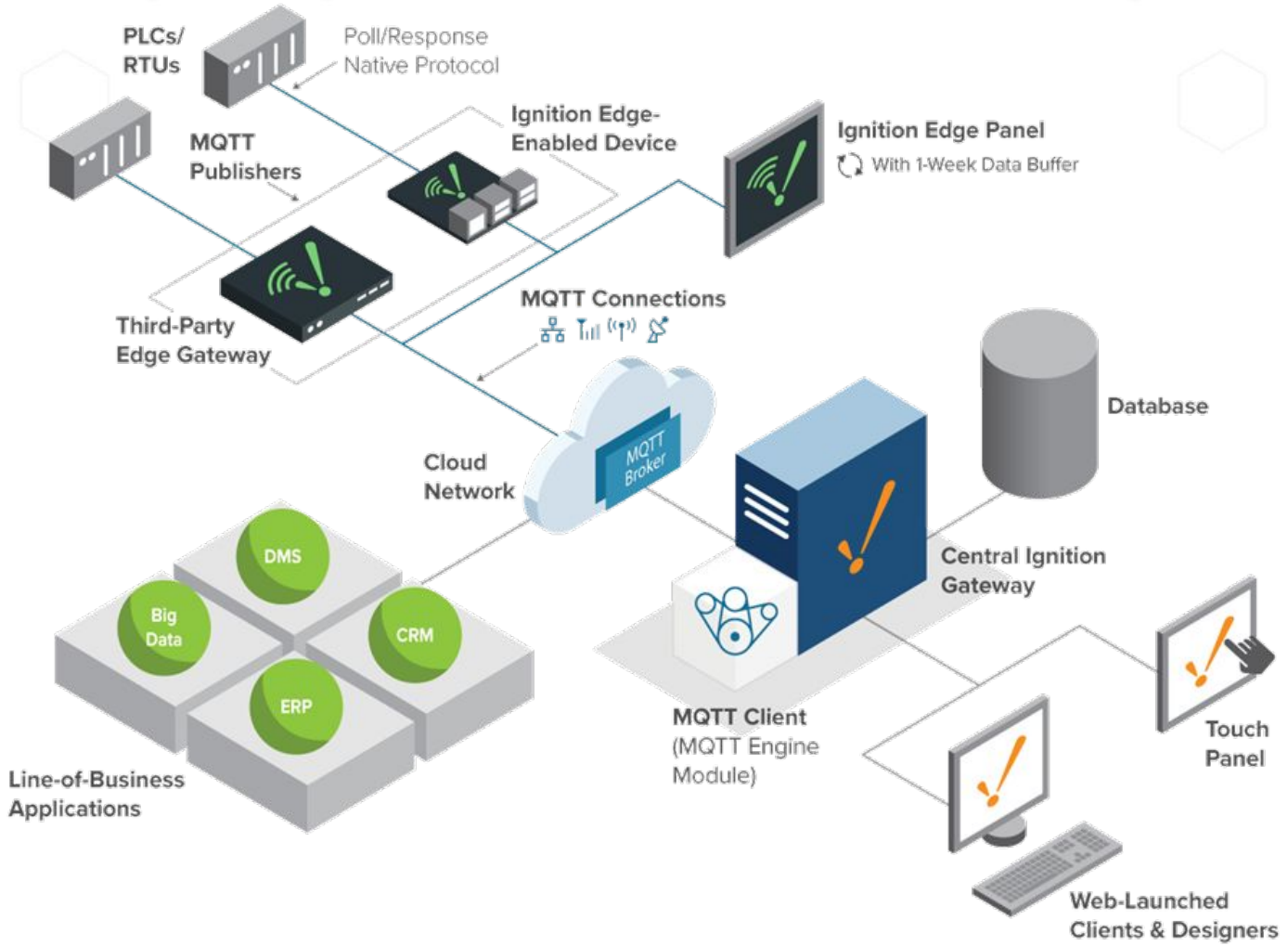


inductive automation | Ignition

Benefits of Edge: Data Collection



Benefits of Edge: Data Collection + Fallback



Brownfield Deployment Use Cases

Connecting Legacy Devices

- Legacy I/O
- Local operations efficiency
- Opportunity for compute at the edge

Wastewater Use Case

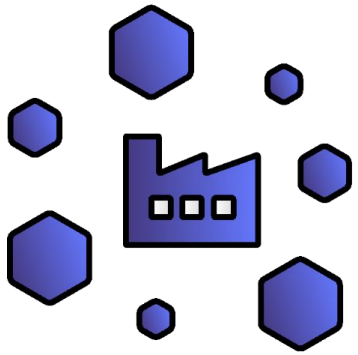
OnLogic

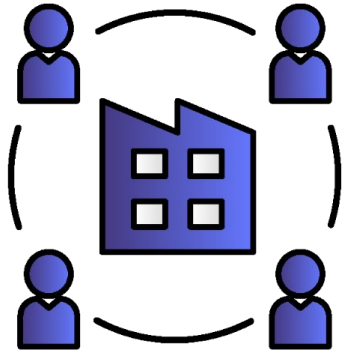
- Exposure to elements
- Connectivity challenges
- Independent local operations

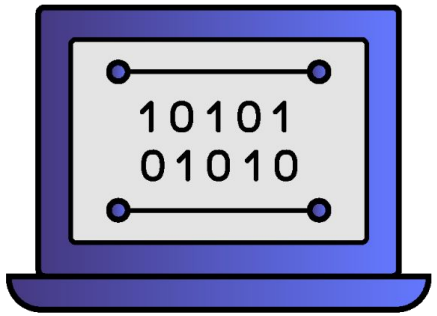
Hardware & Software Considerations

Robustness

- What does reliability mean when edge is a critical part of your infrastructure?
- What is the cost to the customer in both hardware, labor, lost productivity?



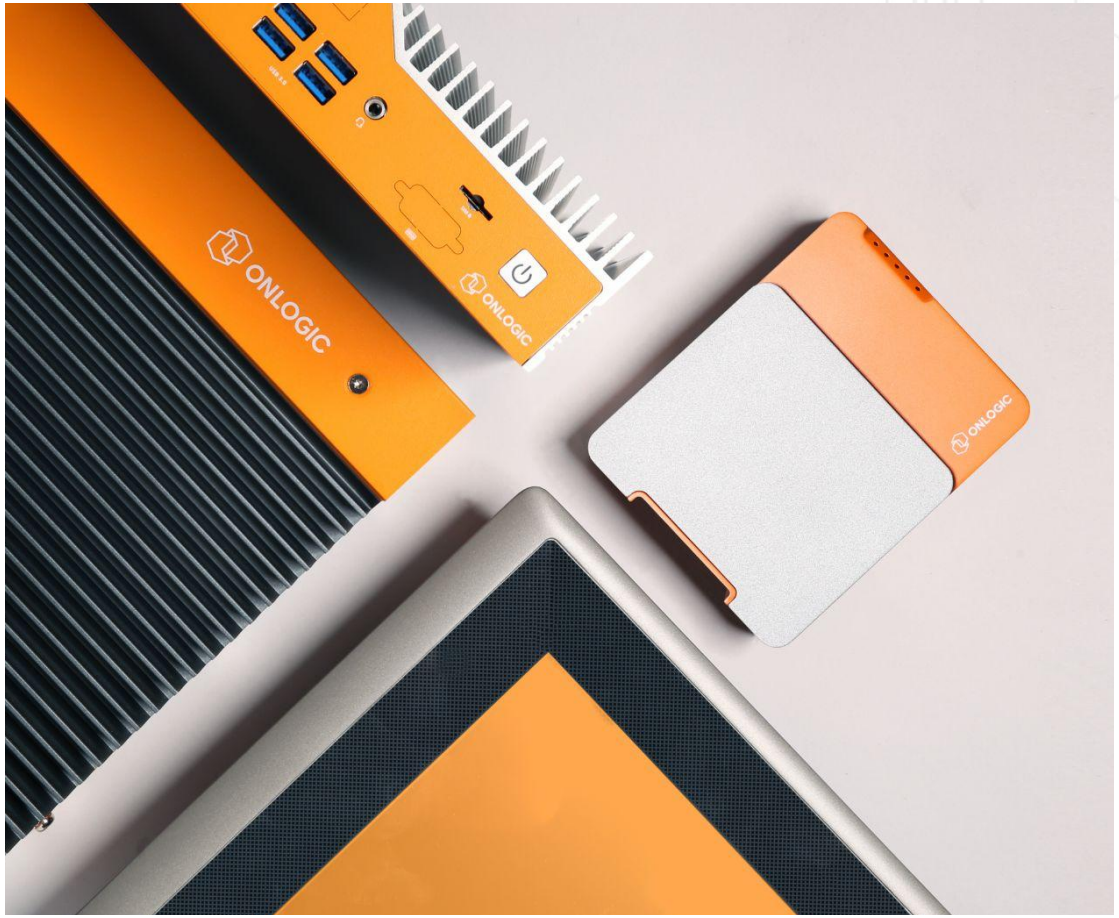




Hardware Considerations

5 Hardware Considerations

1. Environment
2. Industrial I/O
3. Regulatory compliance
4. Mounting options
5. Connectivity



Hardware Considerations

Environment

- Dirt and dust
- Temperature variability
- Power input & protection
- Impact forces and vibration
- Chemical
- Embedded lifecycle

Hardware Considerations

Industrial I/O

- Customizable
- Legacy connectivity

Hardware Considerations

Regulatory compliance

- Industrial standards
- Countries

Hardware Considerations

Mounting options

- VESA
- DIN Rail
- Enclosure
- HMI
- Rackmount

Hardware Considerations

Connectivity

- Ethernet
- Wi-Fi
- Cellular network

Factor 201

Industrial Raspberry Pi IoT Gateway

- Raspberry Pi CM4 with up to 8GB of memory
- Dual LAN, optional Wi-Fi, 4G LTE, and PoE-PD
- Version with Ignition Edge preloaded available: IGN800

Factor 202

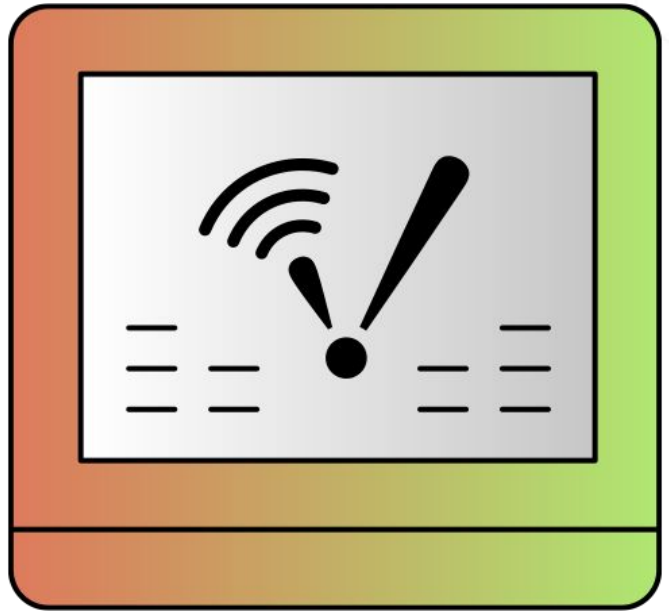
Raspberry Pi Industrial Controller

- Raspberry Pi CM4 with up to 8 GB of memory
- Dual LAN, optional Wi-Fi, 4G LTE and PoE-PD
- DIO, Analog in, RTD sensor inputs
- Coming soon as the IGN802, with Ignition Edge preloaded

Software Considerations

Ignition

- Software needs to be able to scale
  - Built-in scalability
- Connectivity Options
  - Legacy PLCs (protocols)
  - OPC-UA
  - MQTT
  - Cloud connectors
- Redundancy / Failover



Going Forward

Set yourself up for future success

- What can the edge be going forward?
- What investment am I making now to lay a foundation for the next five years?
- Start thinking about more types of functions and data in the future
- Use the tools provided in the cloud to supplement deployments
  - Cloud-native tools
  - Dashboards
  - Analytical functions

Ready to Try Ignition for Yourself?

Download the full version for free at:
inductiveautomation.com

inductiveuniversity.com

Ignition User Manual also available at:

docs.inductiveautomation.com

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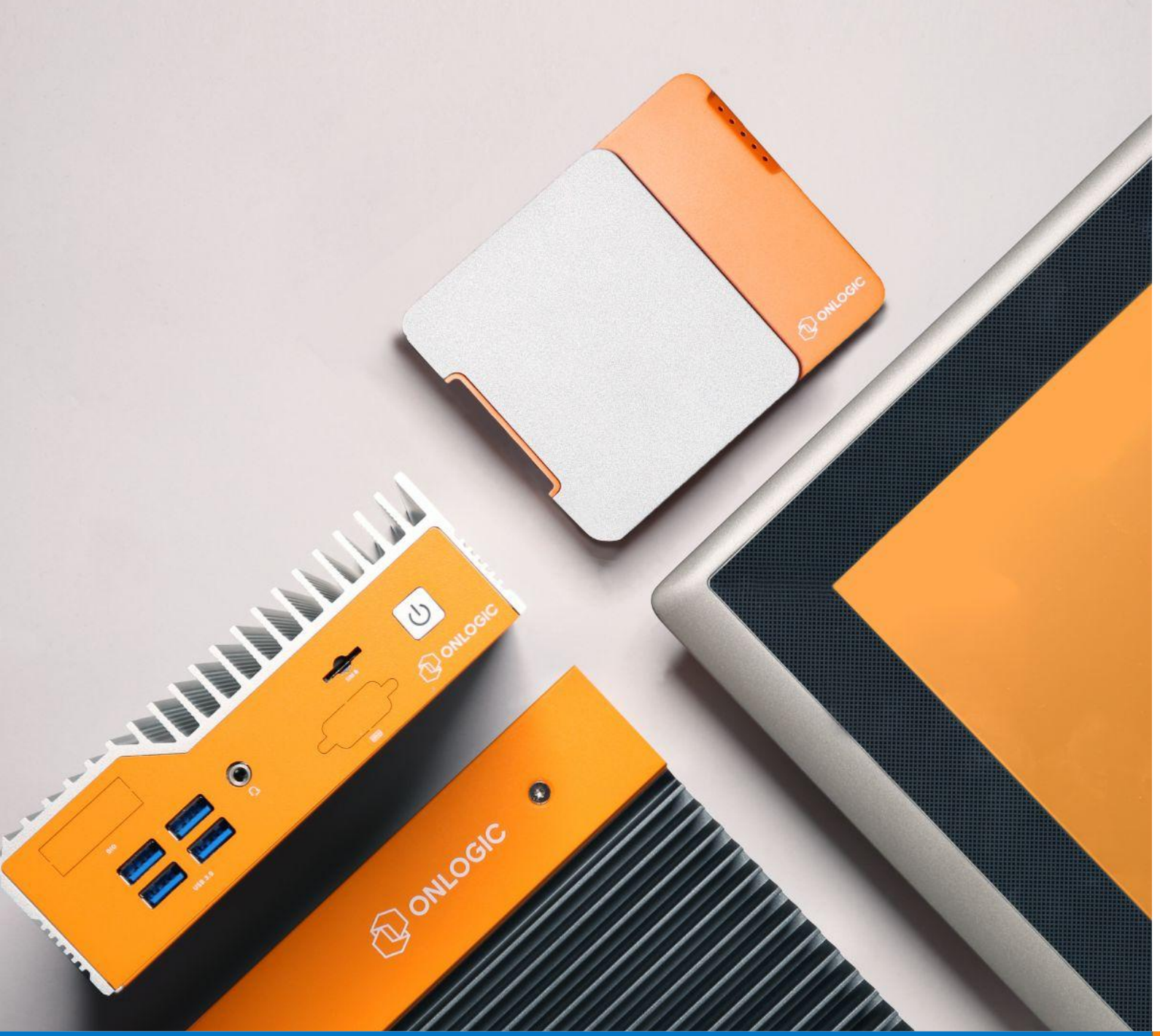
Choose your hardware

Test your prototype For 30 days

Not quite right? Return it.



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