

Turn Any Panel PC Into an Ignition HMI



Presenters



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Guest Presenter

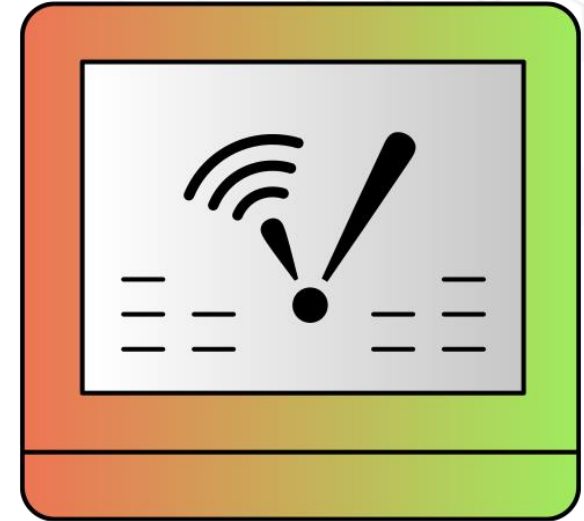


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Agenda

- **HMIs**
- **Ignition HMIs**
- **Ignition Edge Panel & Ignition Onboard**
- **Integrator Case Studies**
- **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**

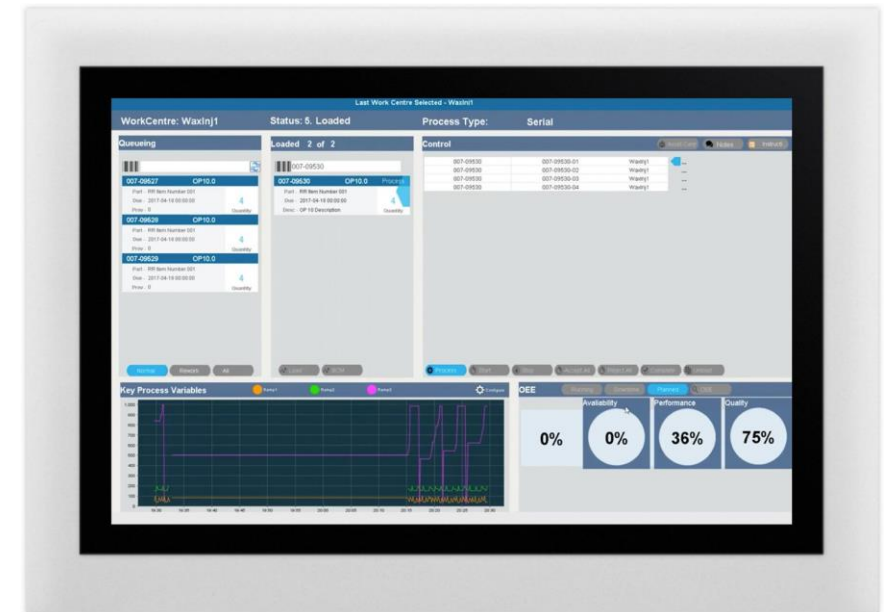
A Different Kind of HMI Webinar

- We've done many webinars about designing HMIs with Ignition software.
- Today, we're going to talk about creating HMI machine solutions with Ignition software and your choice of hardware.



What is an HMI?

- Human-Machine Interface: A user interface that connects a person to a machine, system, or device.
- In industrial settings, HMIs are used to:
 - Visually display data (including graphs, charts, buttons, dashboards, etc.)
 - Track production time, trends & tags
 - Oversee KPIs
 - Monitor machine I/O
 - View & manage alarms
 - And more
- Unlike SCADA, HMIs don't collect and record information or connect to databases.



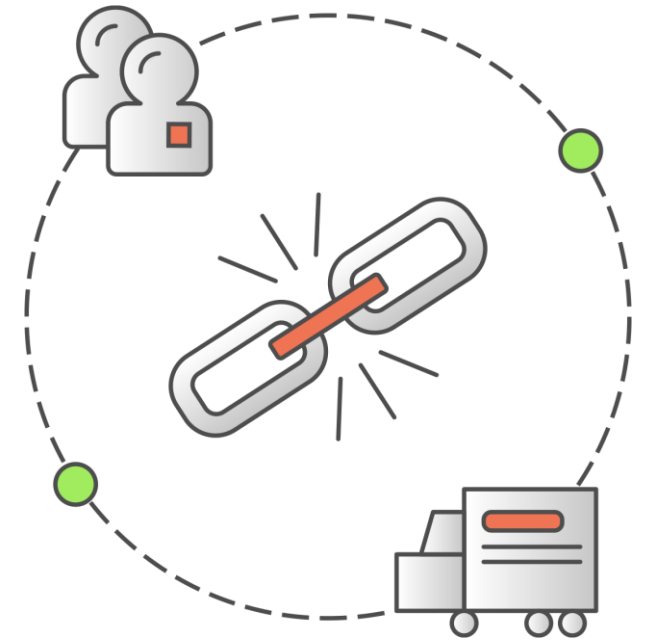
What is an HMI?

- Mainly used by operators, engineers, system integrators
- Can be on the plant floor, on mobile or remote devices, in the cloud, or the edge of the network
- Made up of hardware and software (HMI software often comes with the hardware)
- HMI software can be installed on any of the following hardware:
 - Built-in or embedded screens on machines
 - Graphic terminals
 - Panel-mount displays
 - Regular PCs
 - Mobile devices and wearables



HMI Hardware in the Supply Chain

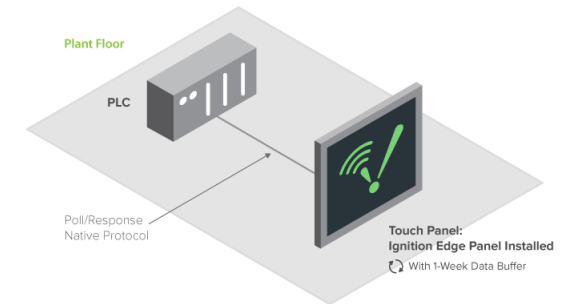
- Many industrial companies rely on proprietary hardware such as Allen-Bradley Panel Views for HMIs.
- This locks many companies into expensive products from one vendor.
- Recent supply-chain problems are causing long lead times, making it hard to get traditional HMI hardware in a timely manner.
- With microchip shortages, limited warehouse space, and backed-up shipping containers, these supply-chain issues are unlikely to change in the near future.



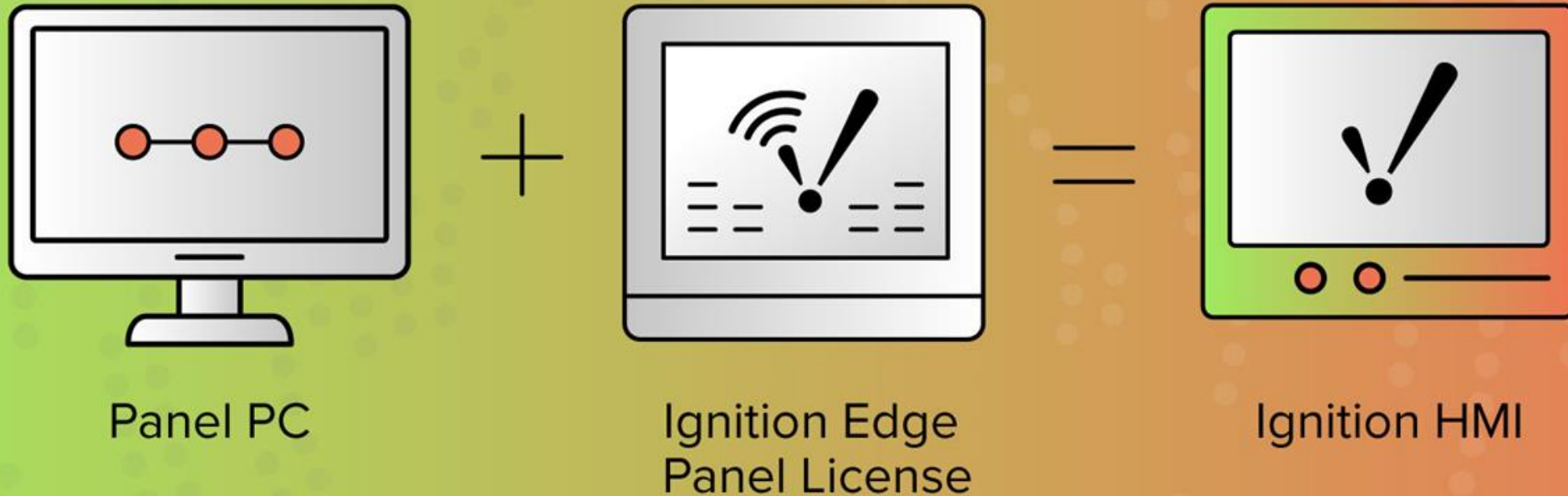
Ignition Edge Panel

Ignition Edge Panel is a standalone HMI software product.

- Rapidly build local HMIs for field devices and industrial HMIs
 - Vision or Perspective visualization modules
 - Ignition Designer included
- See real-time machine status
- Control your processes (stop and start)
- One-way alarm notification
- Basic trending
- Local-client fallback
- OPC UA connectivity
- Cross-platform



What is an Ignition HMI?

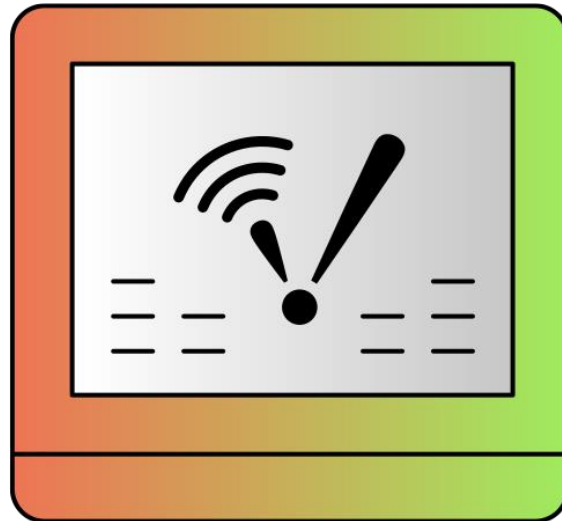


Solution: Use Ignition as a replacement for a traditional HMI

What is an Ignition HMI?

Options:

- Install Ignition Edge Panel onto an existing panel PC.
- Buy a Panel PC or an industrial PC and install Ignition Edge Panel onto it.
- Buy an Ignition Onboard panel PC with Ignition Edge Panel pre-loaded and pre-licensed.



Ignition Onboard



Ignition Onboard

Find Panel PCs with Ignition Edge Panel pre-loaded and pre-licensed

Browse Onboard listings at:
<https://inductiveautomation.com/onboard#panel-pc-section-anchor>


Cellular Gateway

Embedded PC


PLC, RTU, I/O

Panel PC


Panel PC




IGN300 Rugged Panel PC
By: OnLogic
All-in-one panel PC that offers reliability and wide operational temperature
[View Device](#)




IGNE-TPC-1881WPH Class 1 Division 2 Industrial Panel PC
By: Advantech
Multi-touch, Intel 4th gen Core i5-4300U 1.9GHz processor with 4GB/8GB DDR3L SDRAM
[View Device](#)




I-Edge Panel PC
By: UTECOR Automation
Rugged and reliable Panel PC that can withstand the toughest industrial environments
[View Device](#)




IGN310 Rugged Panel PC with Intel Pentium CPU
By: OnLogic
The IGN310 Rugged Panel PC offers a range of capacitive and resistive touchscreen displays, powerful Intel® Apollo Lake processing, versatile I/O and a wide operating temperatur..
[View Device](#)




IGN320 Rugged Panel PC with Intel Core i3/i5 CPU
By: OnLogic
The IGN320 Rugged Panel PC offers a range of capacitive and resistive touchscreen displays (12" to 24"), powerful Intel® Whiskey Lake processing, versatile I/O and a wide op..
[View Device](#)



IGNE-TPC-1251/1551T(B) Industrial Thin-Client Terminal
By: Advantech
12"/15" XGA TFT LED LCD Thin-client Terminal with Intel® Atom™ Quad-core Processor
[View Device](#)



IGNE-TPC-B200 Industrial Modular Panel PC
By: Advantech
Modular Touch Panel PC with Intel® Celeron™ J3455 processor and configurable panel size selections (12"-23.8")
[View Device](#)



IGNE-IPPC-5211WS Industrial Stainless Steel Panel PC with IP69K Rated
By: Advantech
IP69K rated 21.5" multi-touch panel pc with stainless steel chassis and Intel® Celeron™ J1900 processor.
[View Device](#)

Ignition Edge Panel HMI Advantages

- Doesn't require a specific piece of hardware; choose whatever hardware you need
- Replace failed HMIs more quickly and affordably
- Development environment is included, not licensed separately
- Offers parallel functionality as data collection software
- Mix and match Ignition Edge Panel with other Ignition Edge products



**Ignition Edge
Panel**

Mix & Match With Other Ignition Edge Products



**Ignition Edge
IIoT**



**Ignition Edge
Panel**



**Ignition Edge
Compute**

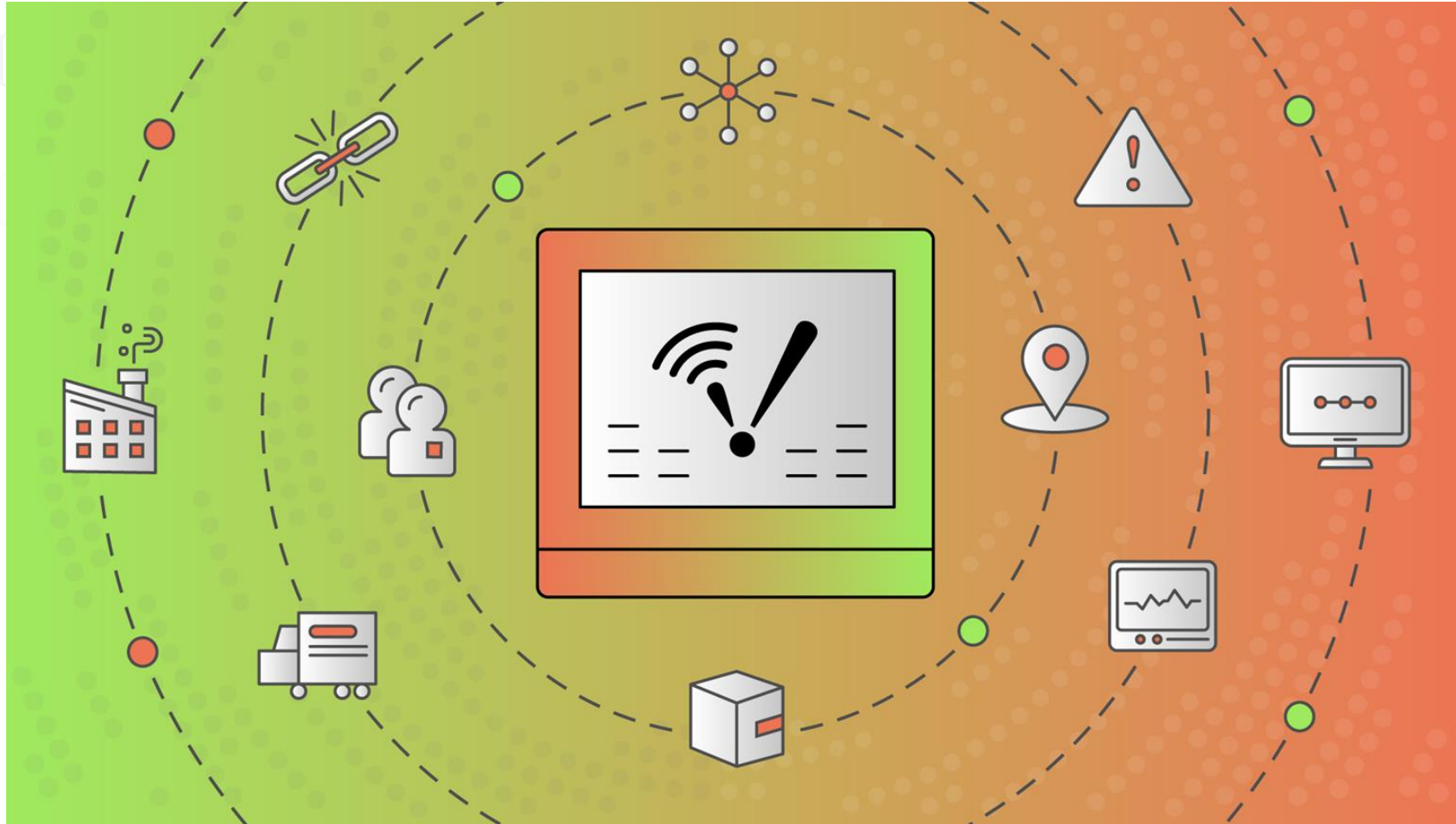


**Ignition Edge
Sync Services**



**Ignition Edge
EAM**

Integrator Case Studies



Case Study: Landfill Applications

- Two projects: Landfill applications
- Both projects collecting data from multiple assets and displaying them from a single touchscreen so operators can control devices to a single point.
- Uses Edge Panel for local site control.



Case Study: Landfill Applications

- Also collects and pushes data to an Enterprise Ignition system that collects and displays data for the entire organization.
- Having local command and control of a site is required even when communication outages occur with the Enterprise system.
- Edge Panel enabled reuse of many of the same views developed for the Enterprise system.



Case Study: Landfill Applications



Case Study: Landfill Applications



Lift Station

Pump Station: Lift Station

4/19/22 4:56AM

Pump 1

Pump 2

Stopped

Stopped

Level: 3.21 ft

Effluent Flow

0 gpm

Discharge

Pump 1: 14.85 psi

Pump 2: -1.23 psi

Suction

Pump 1: 14.85 psi

Pump 2: 14.83 psi

Leachate Flow

24.97 gpm

Leachate Collection System Lockout

Enabled

Disabled

Alarm Reset



Level

feet

5

4

3

2

1

0

Level

Flow

gal/min

120

100

80

60

40

20

0

Effluent Flow

Influent Flow

Pump Pressure

psi

40

30

20

10

0

Pump 1 Discharge

Pump 1 Suction

Pump 2 Discharge

Pump 2 Suction

Pump Indication

off/on

Pump 1

Pump 2

4-18-2022 4:56:55 to 4-19-2022 4:42:31

10 Minutes

1 Hour

12 Hours

24 Hours

7 Days

14 Days

30 Days

Last

12 Hours

Trace

Realtime

Historical

Case Study: Landfill Applications



Overview

Pump Stations

Flare

Gas Condensate

Dashboards

Flare

4/19/22 4:55AM

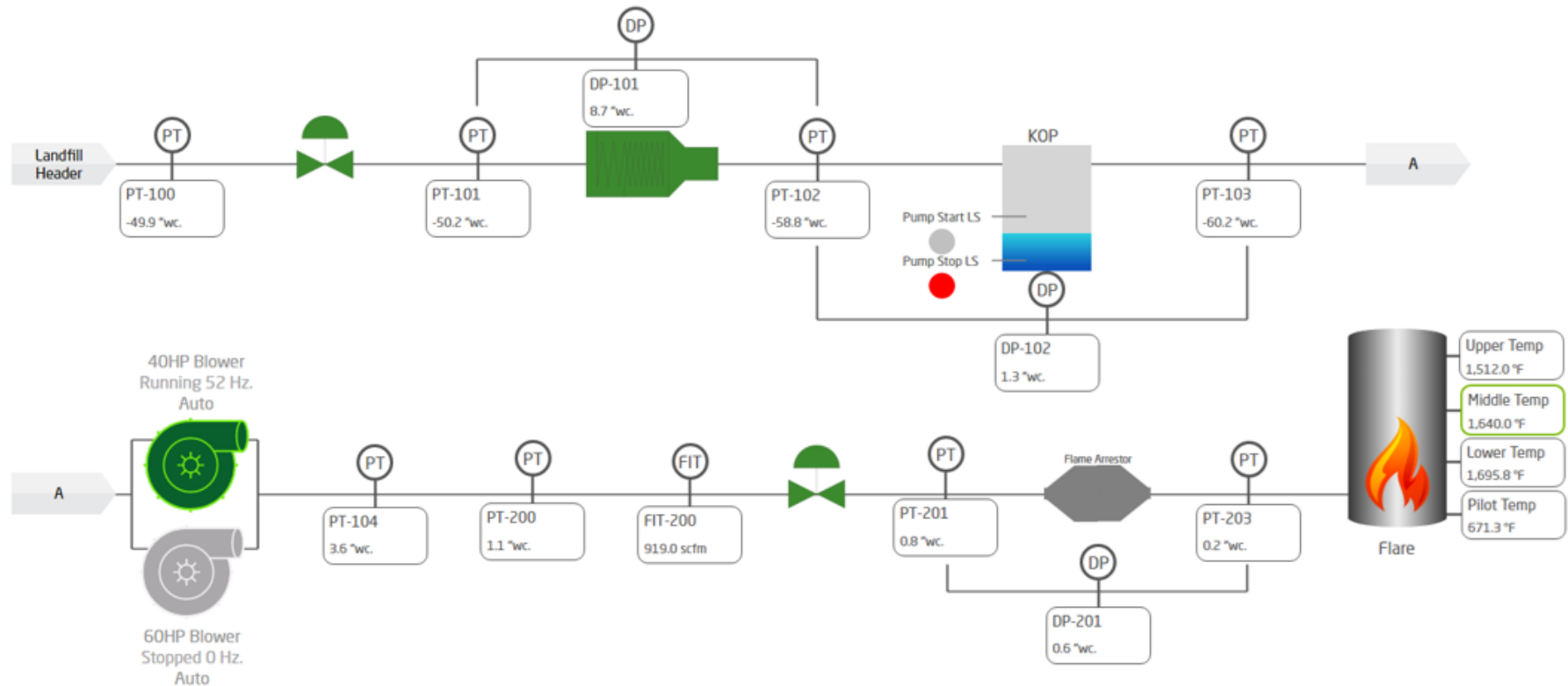
Trends P&ID

Flare P&ID

Start

Stop

Alarm Reset



Case Study: Landfill Applications



Admin's Center

- Overview
- Pump Stations >
- Lift Stations >
- Tanks

Tank Farm

Tank 1



Level (inches)
0 3.8 30
Volume: 3,146gal
Percent Full: 12.58 %



Tank 2



Level (inches)
0 3.6 30
Volume: 2,998gal
Percent Full: 11.99 %



Tank 3



Level (inches)
0 3.7 30
Volume: 3,109gal
Percent Full: 12.43 %



Tank 4



Level (inches)
0 3.6 30
Volume: 3,035gal
Percent Full: 12.14 %



Containment Sump

Sump Pump

- Start Level Float
- Stop Level Float

Sump Pump 1 Stopped

Today's Runtime: 0 hrs

Pump Control

Sump Pump 2 Stopped

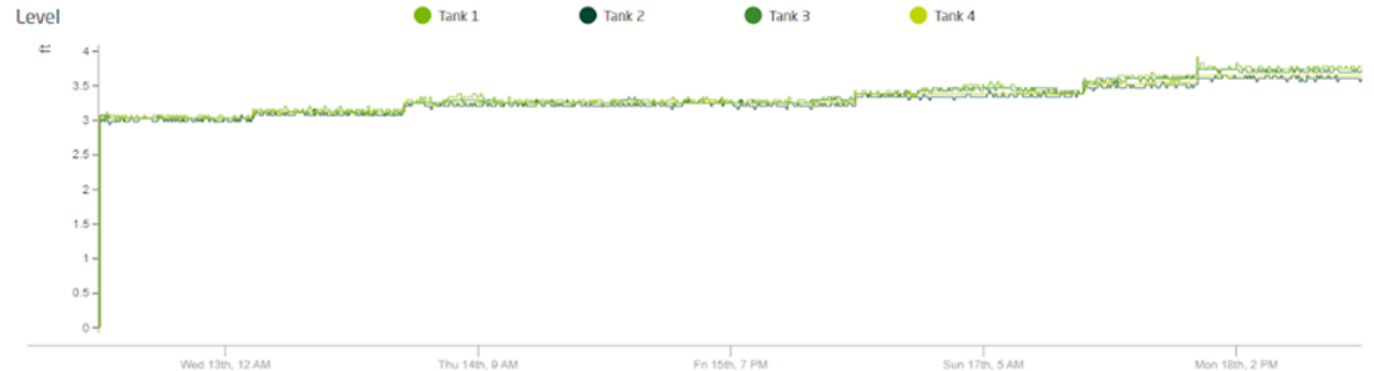
Today's Runtime: 0 hrs

Pump Control

Alarm Reset



Tank Level Trend



10 Minutes

1 Hour

12 Hours

24 Hours

7 Days

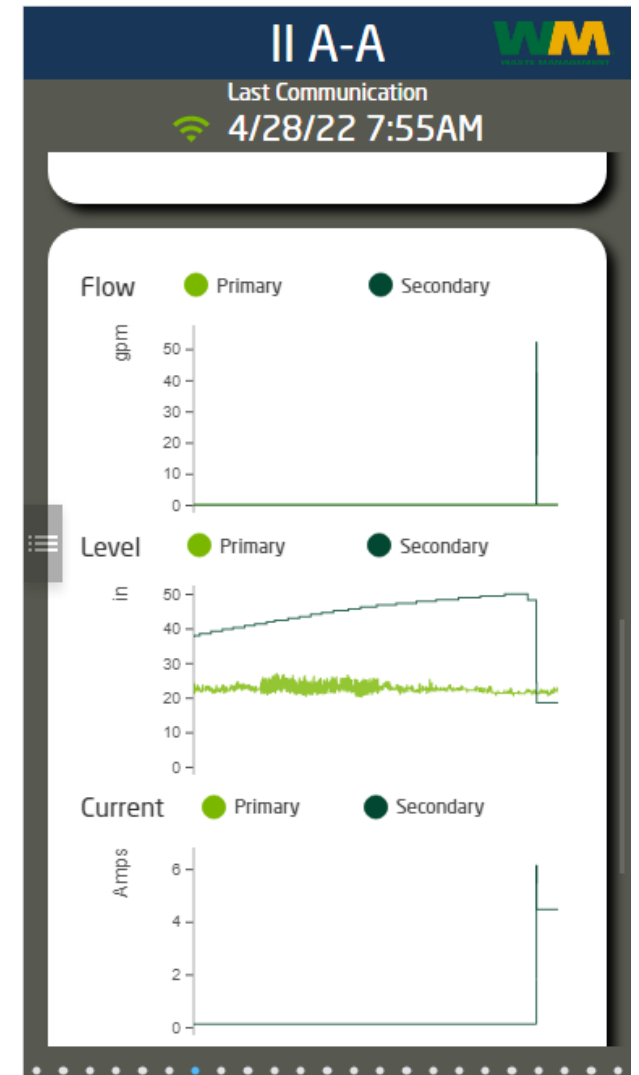
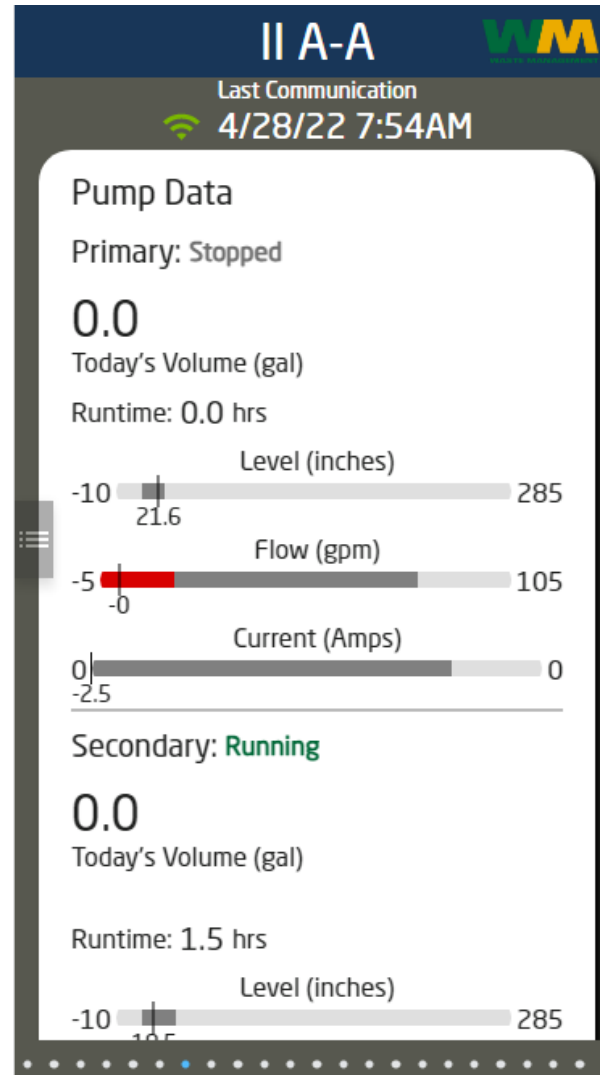
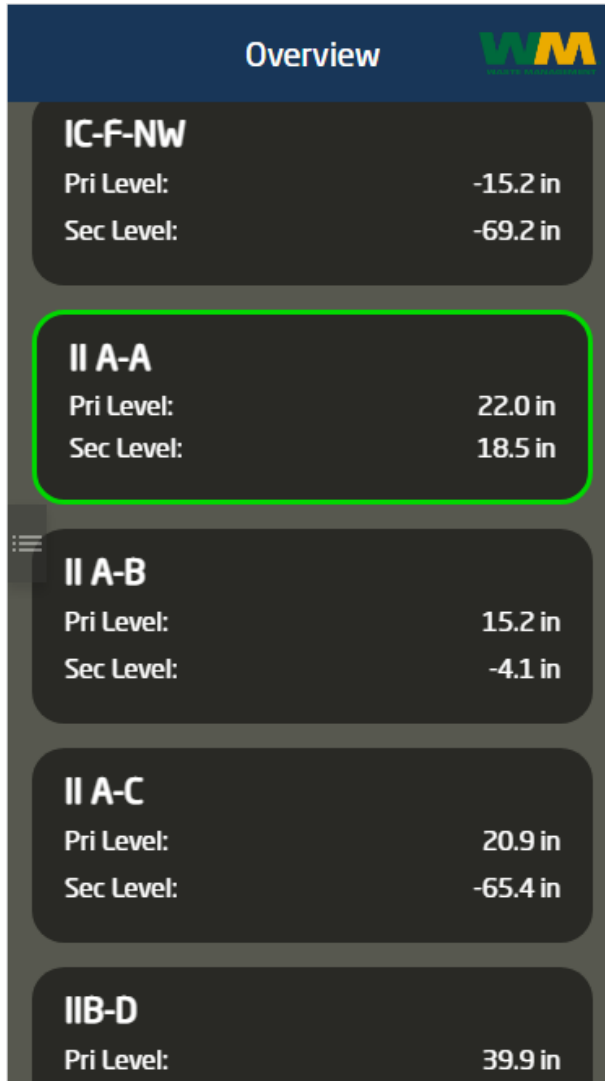
14 Days

30 Days

Last 168 Hours

Trace Realtime Historical

Case Study: Landfill Applications



Case Study: Upstate NY

- Brock Solutions is leading a multi-year program to uplift a water SCADA system
 - Using Ignition SCADA to deliver a sustainable, modern solution
 - Addressing critical obsolescence and cyber security concerns
 - Upgrading PLC hardware, Drives, and implementing new sensing hardware
- Extensively leveraging Ignition's edge computing capabilities



60+ PLCS



40+ Sites



34 Edge-Enabled Sites

Case Study: Upstate NY

Ignition Edge

- 45 Sites utilize Ignition Edge Panel
- Found at edge of the network, and communicate back to centralized server via MQTT
 - Device control
 - Operator alarm
- Sites are critical, so need to have local control if network with central fails
 - More cost-efficient than having full-blown Ignition at each of the sites
- Was able to grab PC panels off the shelf from Advantech



Solutions to Keep You Running

Download Ignition Edge at:
inductiveautomation.com

Browse Ignition Onboard Panel PCs with Ignition
Edge Panel pre-loaded and pre-licensed at:
inductiveautomation.com/onboard





Ready to Try Ignition for Yourself?

Download the full version for free at:
[inductiveautomation.com](https://www.inductiveautomation.com)



inductiveuniversity.com

*Ignition User Manual also available at:
docs.inductiveautomation.com*

THE
DISCOVER
GALLERY

Submissions Due by April 30

Submit your project at: <https://icc.inductiveautomation.com/discover-gallery-2022>

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Questions & Comments

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