

Description

Syscor's IIoT System Enclosure is a rapidly deployable solution to establish a local WirelessHART network and contains monitoring software that collects and interprets field device data. Information can be transmitted to the site's existing SCADA and/or viewed via a cloud application. The IIoT box can contain a cellular modem for installations that lack communication infrastructure.

Applications

The IIoT System Enclosure provides a WirelessHART device network which can include above and below ground hydrocarbon monitoring of wells, water bodies, production facilities, pipeline-right-of-ways, and other petroleum infrastructure (butane and heavier).

Communication

WirelessHART field device data can be viewed through Syscor's Human-Machine Interface (HMI) using cellular or ethernet options. No reconfiguring of existing systems is required.

Installation & Power

As a plug-and-play device, the IIoT System Enclosure can be rapidly deployed with standard hardware (struts) and a 120VAC connection. A robust, lockable enclosure protects internal components from harsh environmental conditions.

Monitoring Software & Security

Syscor's HMI is a fully customizable, mobile device-compatible, performance dashboard that scales easily for monitoring of geographically dispersed assets. Alarm rationalization tools provide flexibility of information management and threat analysis. The solution can be on-premise, server-based, or entirely cloud-based.

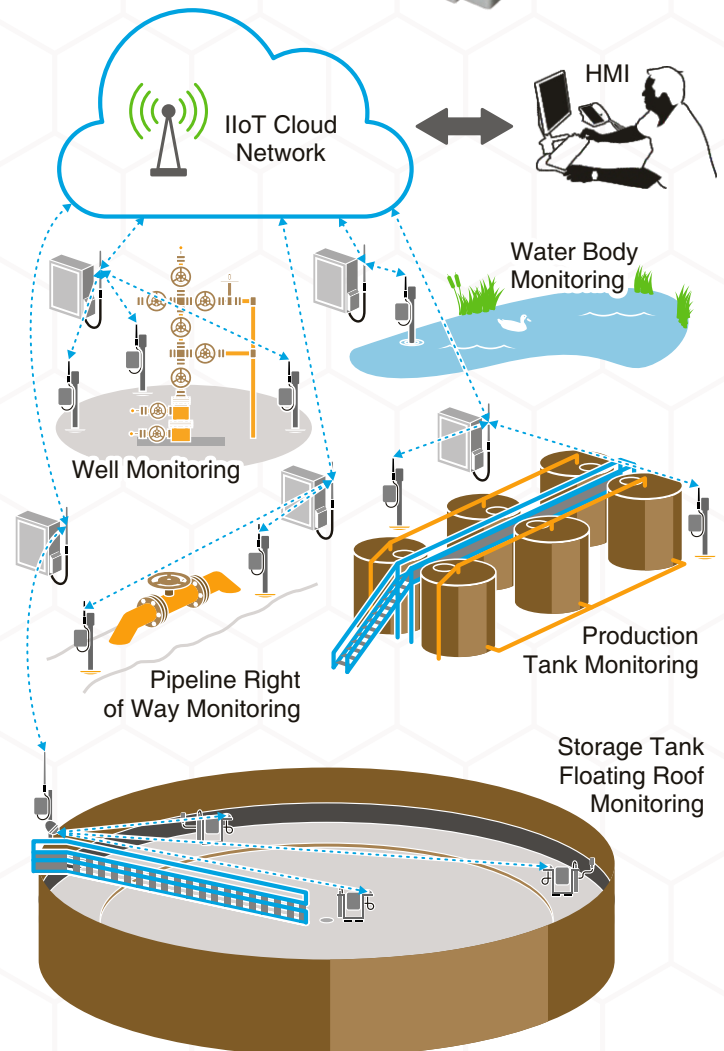
Connections to the HMI are encrypted using industry standard HTTPS and enforce modern ciphers and protocols to prevent Man-in-the-Middle (MITM) attacks. Access to HMI servers hosted in Syscor's cloud are also filtered through intermediary servers to reduce potential attack vectors.

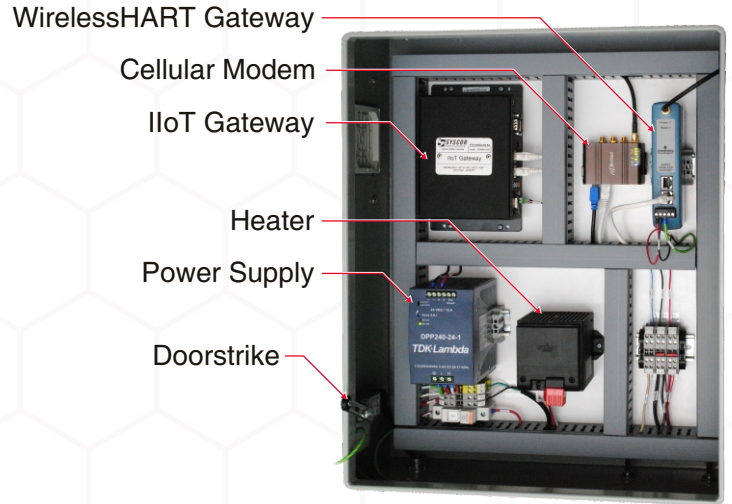
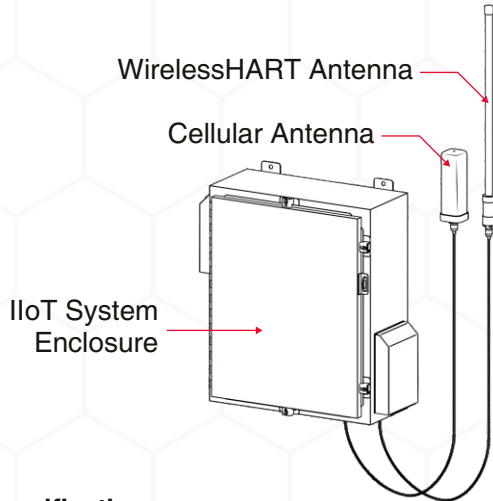
To avoid direct protocol-level interconnect, data can be transmitted to existing SCADA in a cyber-secure fashion through fixed-format email that is parsed and interpreted by SCADA. Alternatively, a purpose-built protocol translation device can communicate to existing SCADA through dry contact digital outputs.

WirelessHART Communication

The IIoT System Enclosure interacts with the wireless mesh network using the WirelessHART protocol, which accounts for roughly 30% of the industrial wireless sensing market.* WirelessHART (IEC 62591) is a secure, full mesh technology capable of self-forming, healing, and scaling.

* <https://www.controlglobal.com/articles/2019/arc-report-details-growth-of-fspan-stylefont-size-x-smallfoundationspan-fieldbus-hart-and-emwirelessemhart/>





Specifications

Functional Specifications

Communication	Field device to IloT Gateway (IEC 62591 <i>WirelessHART</i>), 2.4-2.5 Ghz DSSS; Cellular (4GLTE)
Supported device update rate	User selectable; 1 minute to 1 hour for Sycor's Field Transmitters

Physical Specifications

Power Supply	120VAC; Field wiring through 1.27cm (½ in.) gland onto barrier strip
Enclosure	LxWxH: 50.8cm (20in.) x 20.3cm (8in.) x 60.96cm (24in.); Door LxH: 53.34cm (21in.) x 43.18cm (17in.); Formed 14 gauge steel bodies and doors; Provision for padlock; Doorstrike monitors open/close events
Communication	HMI can be viewed through an IloT cloud or by plugging an ethernet cable directly into the IloT System Enclosure.
Antennas Required	Gateway Remote-Mounted Antenna: Omni-directional, 8dBi peak gain, straight, N-Type female; Dimensions: Length-553mm (21.77in.), Diameter-24mm (0.94in.); Weight: 380g (0.83lbs); Remote mounted requiring 30'-to-N type extension cable (provided). Cellular Remote-Mounted Antenna: Omni-directional, 6dBi peak gain, straight, N-type female; Dimensions: Length-190.5mm (7.5in.), Width-63.5mm (2.5in.), Thickness-63.5mm (2.5in.); Weight: 34.2g (1.2oz) including bracket; Remote mounted requiring 30'-to-N type extension cable (provided).
Antenna Lightning Arrestors	Optional for both antennas
Antenna Port	Gateway: N-type female connector Cell: N-type female connector
Sensor Probe Ports	1/2in. NPT
Weight	Enclosure, devices, and other components: Approximately 33.8kg (74.5lbs)
Mounting Options	Struts available depending on application

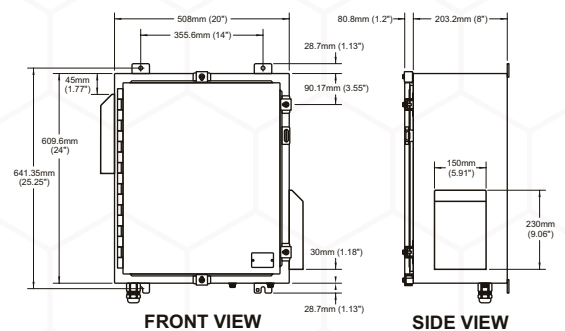
Performance Specifications

Electromagnetic Compatibility	EN61326-1:2006
Operating Temp.	-40°C to +70°C [-40 °F to +158 °F]

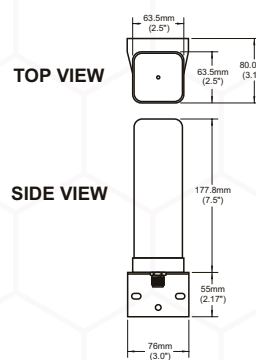
Product Certifications

Enclosure	UL 508A Type 3R, 12, 4 CSA Type 3R, 12, 4 Complies with - NEMA Type 3R, 4, 12 and 13 - IEC 60529, IP66
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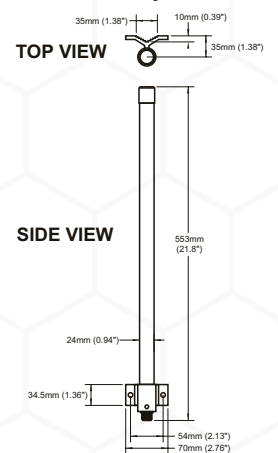
Enclosure



Cellular Antenna



Gateway Antenna



Learn More

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