



# IoT Chemical Injection Solutions



# Product Catalog



**D6 Labs**

Engineered IoT Solutions

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## 1 Remote Monitoring and Management

The Whisker.io® cloud platform is a powerful IIoT portal that provides all the tools you need to monitor and manage your injection assets from anywhere in the world. It's easy to learn, easy to use, and its enterprise-grade features make it suitable for management of large-scale deployments spread over a wide geographical region. The portal can be accessed from anywhere in the world using a mobile phone, tablet or PC with a modern HTML5 browser. All features, including unlimited users and text messages, are included with the monitoring fees charged for any Sent.io™ Direct2Cloud IIoT gateway.

### 1.1 Drill Down Interface

The intuitive drill down interface allows you to identify and zoom into a problem with just two clicks of the mouse whether you are managing 10 devices at 1 location or 10,000 devices at 1,000 locations.

The top-level map shows color coded icons for every location that has monitored/managed devices. Green means good, red means there is a problem. Click on the location to drill down.

### 1.2 HMI

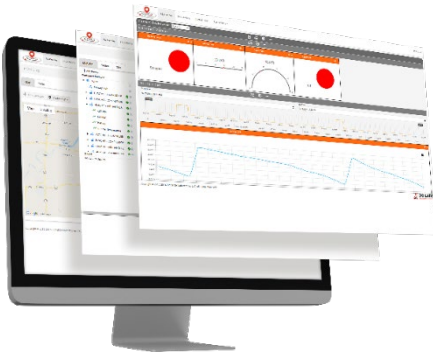
Once you drill down to a location, you have access to HMI style user interfaces for all of your assets. These HMIs are automatically generated when your assets are provisioned but you can also build your own HMI screens if you have custom needs – its as easy as dragging and dropping.

Here, you can monitor the status of your assets and make operational changes. For example, you can check the injection rate for a particular chemical pump and make adjustments to GPS target, cycles, and/or duration to correct any error. They work equally well on mobile phones, tablets, and PCs and you can access them from anywhere in the world without having to drive to the locations.



Contact us at [sales@d6labs.com](mailto:sales@d6labs.com), or call us at **1-844-365-8647** for a demo of our IIoT cloud portal.

## 1.3 Dashboards



The Whisker.io® portal lets you build custom dashboards that display real-time and historical information using widgets and graphs.

Combine data from devices at different locations to see the data you need in the way you want to see it. Create multiple dashboards so each stakeholder can have the data they need to do their job.

Graph panels include a global pan and zoom control, making it easy to zoom in on an anomaly.

## 1.4 Smart Alerts

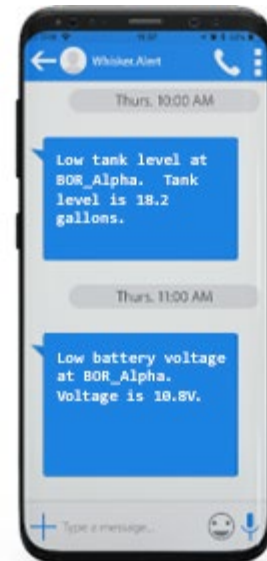
Whisker.io® has a powerful, user configurable alert system. For any channel on any device, you can configure multiple alerts to notify you and your team by text or email whenever there are problems.

Alerts can be configured to trigger when communications are lost (Inactivity), when a channel's latest reading exceeds a threshold for a specified amount of time (Threshold), when a channel's value changes by more than a specified amount in a specified period (RateOfChange), or when a channel's value exceeds the running average by more than a specified amount (TrendPeak).

Alerts can be stacked so notifications are escalated as the problem persists or gets worse. For example, you can set an alert to notify that temperature exceeds a threshold for more than 15 minutes. A second alert could notify the next level in chain of command if the alert exceeds the threshold for more than 2 hours, which is an indication that the first alert notification was not addressed.

Alert notifications can be snoozed whenever the equipment has downtime.

Alerts can also be edited in bulk using our new CMS tool. This is a particularly useful tool for large enterprises that need to change alert thresholds for hundreds of alerts at a time.

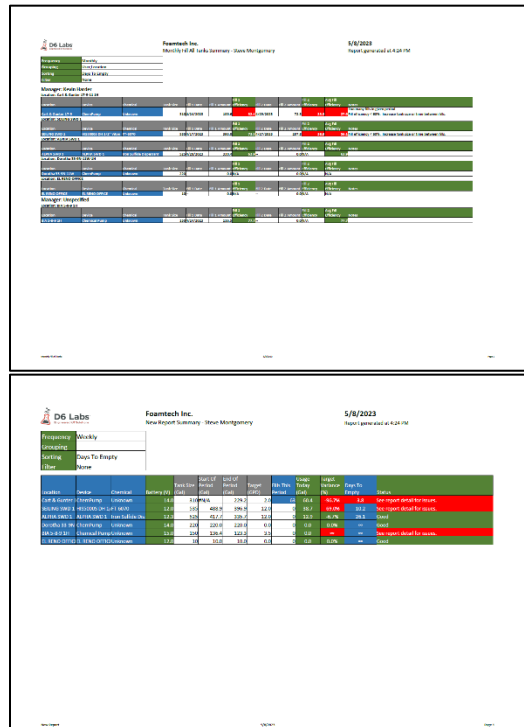


## 1.5 Reporting

Our powerful reporting system can be configured to send daily/weekly/monthly reports directly to your inbox. Reports are highly configurable, allowing to control filtering and sorting so you can see the data you need in the way that you need it.

Fill reports show fill activity for the reporting period, indicating which tanks have poor fill efficiency. Data from this report can be used to maximize fill efficiency and reduce the number of trips needed to maintain your chemical inventory at good levels across your enterprise.

Usage reports are useful in tracking performance to target for injection rate, days to empty, and tank levels for all tanks in your inventory.



The top screenshot shows a report for 'Foamtech Inc.' dated 5/8/2023. It includes a table with columns: Tank, Chemical, Inventory, and various performance metrics. The bottom screenshot shows a similar report for 'Foamtech Inc.' dated 5/8/2023, also with a table of Tank, Chemical, Inventory, and performance metrics.

## 1.6 Third Party Support

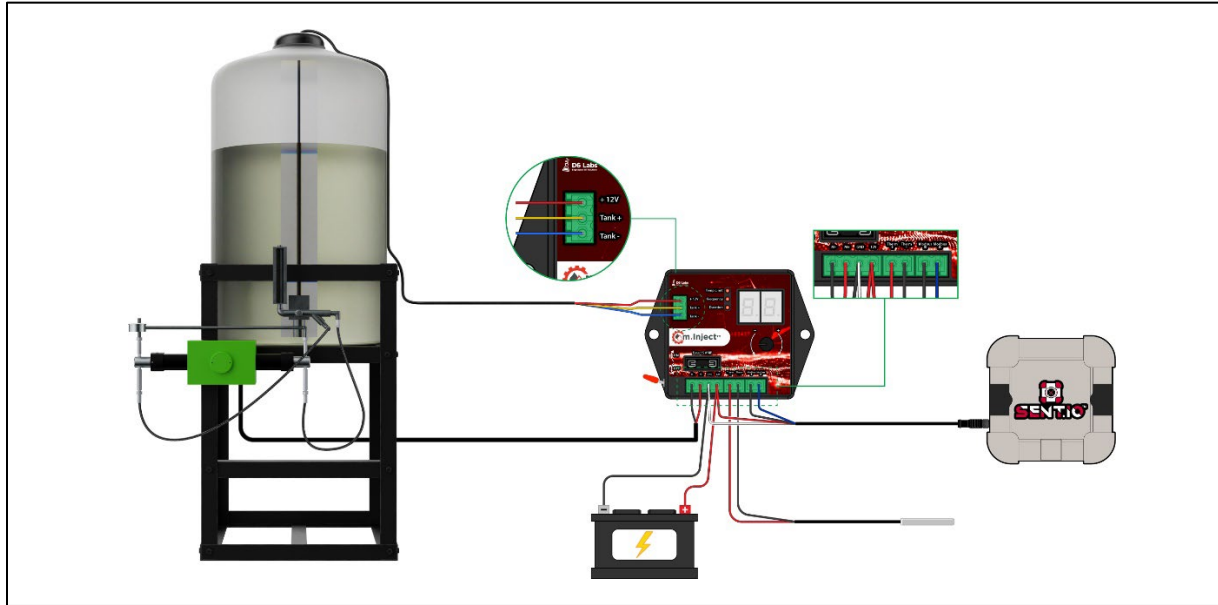
Whisker.io® can be configured to push data to 3<sup>rd</sup> party cloud and SCADA platforms including:

1. Microsoft Azure
2. Amazon AWS
3. Any platform that supports MQTT
4. Any SCADA platform that supports SparkplugB (e.g., Ignition).



## 2 m.Inject CI™ – Continuous Injection

### 2.1 Introduction



**m.Inject CI™** is a low cost retrofit option for operators and chemical companies that need to remotely monitor and manage injection operations.

It can be retrofitted onto any brushed DC, AC, or solenoid operated pump and, once installed, it provides accurate (+/- 10%) control over injection rates, and it can be remotely monitored and managed from anywhere in the world using your laptop, tablet or smartphone.

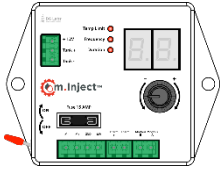
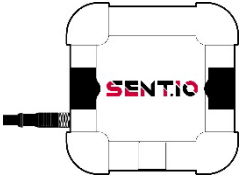
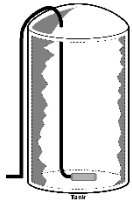
The system is easy to install and simple to use and requires no special skills or technical training.

#### Features:

- Built-in tank level measurement.
- Remote monitoring of tank level, solar voltage, temperature, etc.
- Remote control of GPD target, cycles, duration, and temperature thresholds.
- Built-in controller manages cycles and duration to achieve GPD injection target within +/-10%.
- Works with brushed DC, AC, and solenoid operated pumps.
- Installs in about 15 minutes with common hand tools.
- No special technical skills or training required.
- Remotely monitor and manage the system from anywhere in the world using your laptop, tablet or smartphone.
- DC kits install in existing solar battery box

- AC kits include IP67 enclosure for m.Inject™ pump controller and AC SSR.

## DC Pump Kit:

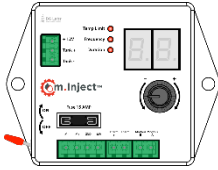
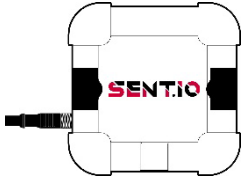
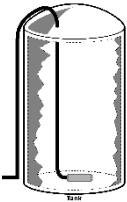
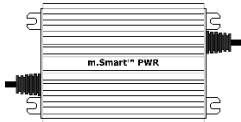
Included In DC Kits		
Product	Qty	Description
	1	<b>m.Inject CI™ DC Pump Controller</b> <ul style="list-style-type: none"> <li>• 12V power, 15A</li> <li>• Tank Level input</li> <li>• Modbus RTU communications</li> <li>• Local display – Cycles, Duration, Temp Threshold</li> </ul>
	1	<b>Sent.io™ Direct2Cloud Modbus Gateway</b> <ul style="list-style-type: none"> <li>• Powered by m.Inject pump controller</li> <li>• Remote monitoring/management of pump/tank</li> <li>• Ultra-reliable CatM1-MC™ cellular</li> </ul>
	1	<b>Hydrostatic tank level sensor.</b> Available in 2 meter (6ft), 3 meter (10ft), and 5 meter (16ft) ranges.
	1	<b>Cables/ Hardware</b> Includes cables, installation hardware, etc.

## DC Kit Ordering Info

Part Number	Description
<b>MIK-S1-B1-CI-2M-5-NNNN</b>	Solar/Battery powered, brushed DC motor (12V), up to 78" tank
<b>MIK-S1-B1-CI-3M-5-NNNN</b>	Solar/Battery powered, brushed DC motor (12V), up to 117" tank
<b>MIK-S1-B1-CI-5M-10-NNNN</b>	Solar/Battery powered, brushed DC motor (12V), up to 196" tank



## AC Pump Kit:

Included In AC Kits		
Product	Qty	Description
	1	<b>m.Inject CI™ AC Pump Controller</b> <ul style="list-style-type: none"> <li>• 12V power, 15A</li> <li>• Tank Level input</li> <li>• Modbus RTU communications</li> <li>• Local display – Cycles, Duration, Temp Threshold</li> <li>• Housed in IP67 rated enclosure</li> <li>• Includes SSR for AC pump</li> </ul>
	1	<b>Sent.io™ Direct2Cloud Modbus Gateway</b> <ul style="list-style-type: none"> <li>• Powered by m.Inject pump controller</li> <li>• Remote monitoring/management of pump/tank</li> <li>• Ultra-reliable CatM1-MC™ cellular</li> </ul>
	1	<b>Hydrostatic tank level sensor.</b> Available in 2 meter (6ft), 3 meter (10ft), and 5 meter (16ft) ranges.
	1	<b>m.Smart™ IP67 240W AC/DC Power Supply</b> <ul style="list-style-type: none"> <li>• 110-130VAC input</li> <li>• 3 foot power cord</li> <li>• Pre-wired to m.Inject™ pump controller</li> </ul>
	1	<b>Cables/ Hardware</b> Includes cables, installation hardware, etc.

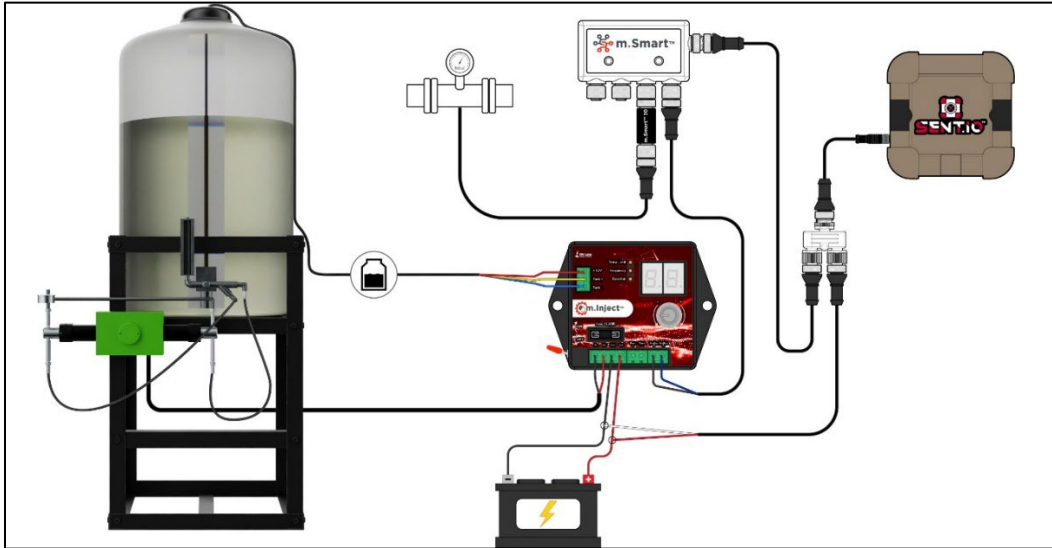
## AC Kit Ordering Info

Part Number	Description
<b>MIK-AC-A1-CI-2M-5-NNNN</b>	AC powered, AC motor (120V), up to 78" tank
<b>MIK-AC-A1-CI-3M-5-NNNN</b>	AC powered, AC motor (120V), up to 117" tank
<b>MIK-AC-A1-CI-5M-10-NNNN</b>	AC powered, AC motor (120V), up to 196" tank



## 3 m.Inject PI™ – Proportional Injection

### 3.1 Introduction



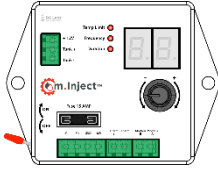
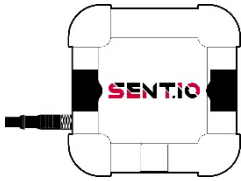
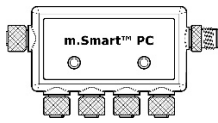
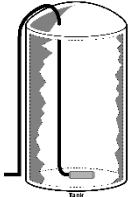
**m.Inject PI™** is a low cost retrofit option for operators and chemical companies that need to remotely monitor and manage injection operations in applications that require proportional injection, such as salt water disposals (SWD).

It can be retrofitted onto any brushed DC, AC, or solenoid operated pump and, once installed, it provides accurate proportional injection, and it can be remotely monitored and managed from anywhere in the world using your laptop, tablet or smartphone.

#### Features:

- 4-20mA flow meter input – scalable in BPD, GPD, QPD
- Built-in tank level measurement.
- Remote monitoring of tank level, solar voltage, temperature, etc.
- Remote control of PPM target, ratio, and temperature thresholds.
- Built-in controller manages cycles and duration to achieve proportional injection target within +/-10%.
- Works with brushed DC, AC, and solenoid operated pumps.
- Installs in about 15 minutes with common hand tools.
- No special technical skills or training required.
- Remotely monitor and manage the system from anywhere in the world using your laptop, tablet or smartphone.
- Simple calibration – takes 60 seconds.

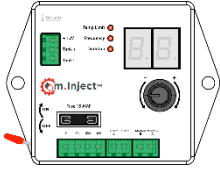
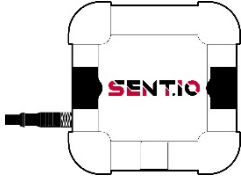
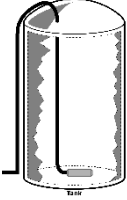
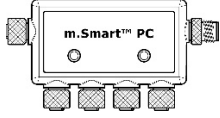
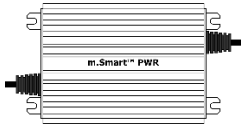
## DC Pump Kit:

Included In DC Kits		
Product	Qty	Description
	1	<b>m.Inject CI™ DC Pump Controller</b> <ul style="list-style-type: none"> <li>• 12V power, 15A</li> <li>• Tank Level input</li> <li>• Modbus RTU communications</li> <li>• Local display – Cycles, Duration, Temp Threshold</li> </ul>
	1	<b>Sent.io™ Direct2Cloud Modbus Gateway</b> <ul style="list-style-type: none"> <li>• Powered by m.Inject pump controller</li> <li>• Remote monitoring/management of pump/tank</li> <li>• Ultra-reliable CatM1-MC™ celular</li> </ul>
	1	<b>m.Smart™ Automation Controller</b> <ul style="list-style-type: none"> <li>• Programmed for proportional injection application</li> <li>• Plug and play – no configuration or programming required</li> <li>• IP67 housing – no need for separate enclosure</li> <li>• Up to two (2) 4-20mA inputs for flow meters (1 is included)</li> </ul>
	1	<b>Hydrostatic tank level sensor.</b> Available in 2 meter (6ft), 3 meter (10ft), and 5 meter (16ft) ranges.
	1	<b>Cables/ Hardware</b> Includes splitter, cables, installation hardware, etc.

## DC Kit Ordering Info

Part Number	Description
<b>MIK-S1-B1-PI-2M-5-NNNN</b>	Solar/Battery powered, brushed DC motor (12V), up to 78" tank
<b>MIK-S1-B1-PI-3M-5-NNNN</b>	Solar/Battery powered, brushed DC motor (12V), up to 117" tank
<b>MIK-S1-B1-PI-5M-10-NNNN</b>	Solar/Battery powered, brushed DC motor (12V), up to 196" tank

## AC Pump Kit:

Included In AC Kits		
Product	Qty	Description
	1	<b>m.Inject CI™ AC Pump Controller</b> <ul style="list-style-type: none"> <li>• 12V power, 15A</li> <li>• Tank Level input</li> <li>• Modbus RTU communications</li> <li>• Local display – Cycles, Duration, Temp Threshold</li> <li>• Housed in IP67 rated enclosure</li> <li>• Includes SSR for AC pump</li> </ul>
	1	<b>Sent.io™ Direct2Cloud Modbus Gateway</b> <ul style="list-style-type: none"> <li>• Powered by m.Inject pump controller</li> <li>• Remote monitoring/management of pump/tank</li> <li>• Ultra-reliable CatM1-MC™ cellular</li> </ul>
	1	<b>Hydrostatic tank level sensor.</b> Available in 2 meter (6ft), 3 meter (10ft), and 5 meter (16ft) ranges.
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	1	<b>m.Smart™ IP67 240W AC/DC Power Supply</b> <ul style="list-style-type: none"> <li>• 110-130VAC input</li> <li>• 3 foot power cord</li> <li>• Pre-wired to m.Inject™ pump controller</li> </ul>
	1	<b>Cables/ Hardware</b> Includes cables, installation hardware, etc.

## AC Kit Ordering Info

Part Number	Description
<b>MIK-AC-A1-PI-2M-5-NNNN</b>	AC powered, AC motor (120V), up to 78" tank
<b>MIK-AC-A1-PI-3M-5-NNNN</b>	AC powered, AC motor (120V), up to 117" tank
<b>MIK-AC-A1-PI-5M-10-NNNN</b>	AC powered, AC motor (120V), up to 196" tank