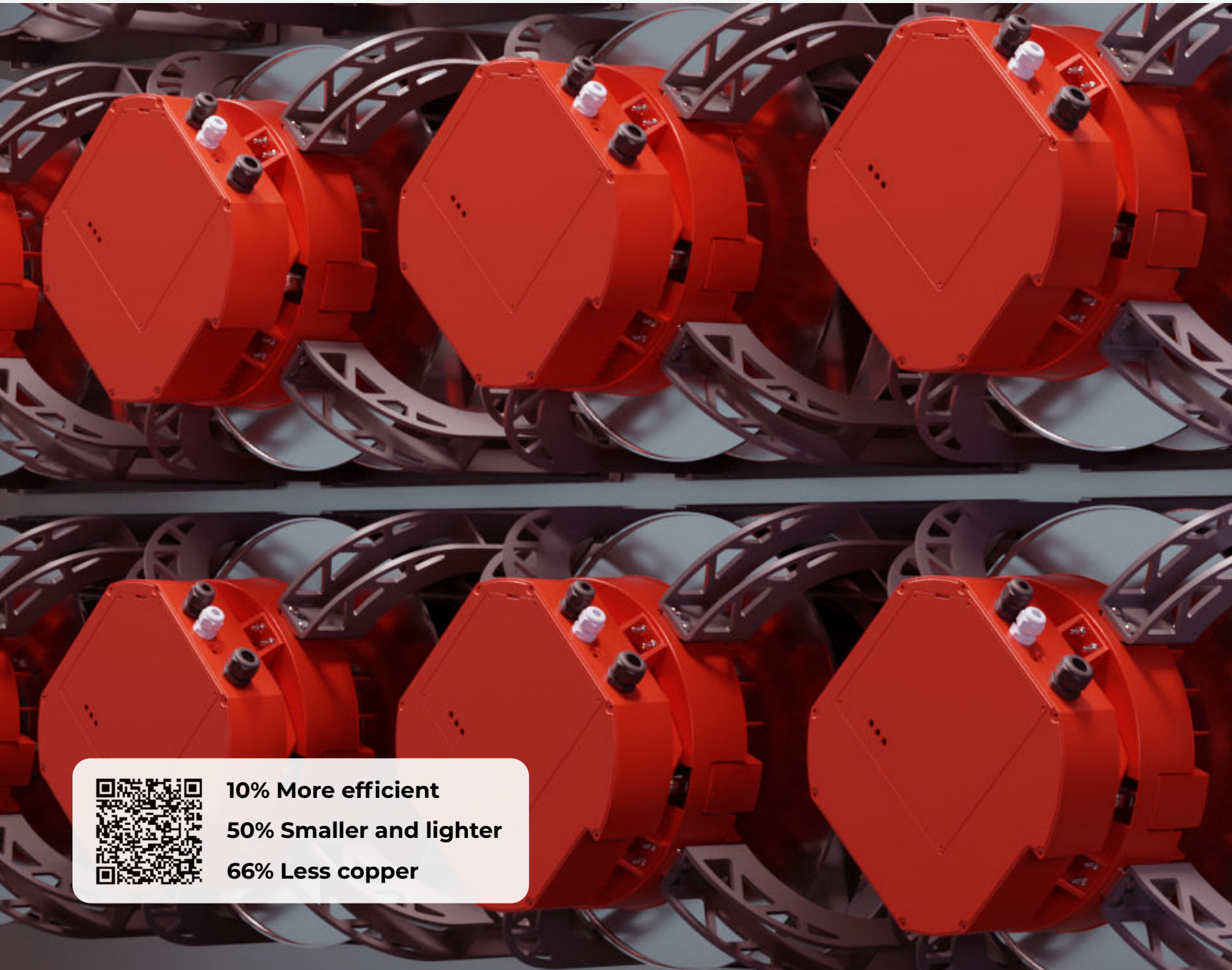




Aircore EC IoT Kit Quickstart Guide



10% More efficient
50% Smaller and lighter
66% Less copper

Table of Contents

Overview	3
IoT Module	3
IoT Portal	3
Infinitum IoT security	3
Cellular plan	3
IoT Module activation	4
IoT Module deactivation	4
Setup	4
Operation	4
IoT Portal features	5
Summary	6
Overview of motor information, connectivity and recent notifications	6
Operation	6
Performance	6
Environment	6
Electrical information	6
I/O Analog & Digital values	6
Lifetime information	6
Faults	6
Gate drive faults	6
Temperature faults	6
Comm I/O faults	6
Physical location of the module	6
Charts	6
Operational graphs	6
Historical data	6
Manage alerts	6
Alert rules	6
Service Records	6
Adding attachments	6
Alerts and notifications	6
Configuration	6
Site identification information	6
Controls	6
RF status	6

Overview

The Infinitem IoT Kit provides real-time motor status and performance for all Aircore EC motors that include the IoT Module. The module in conjunction with the Infinitem IoT Portal provides a live snapshot of motor operations as well as model identification. This information is provided wirelessly using a cellular 4G LTE connection and industry-standard wireless security.

IoT Module

An optional module from Digi that provides cellular (4G LTE) connectivity to cloud-based applications. This module is factory installed by Infinitem personnel onto the CIM (Communication I/O Module) in Infinitem motors. The module utilizes an external (case mounted) antenna to assure reliable cellular connectivity. This antenna must be installed on the motor by customers once the motor is installed in its application. The antenna is shipped with the IoT enabled in a plastic bag attached to the motor.

The module is setup to work out of the box anywhere in North America where AT&T 4G LTE network is available.

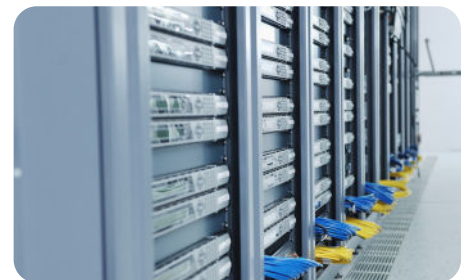


IoT Portal

A cloud-based application providing real-time information on Infinitem motors with the IoT Module installed. It uses industrial-grade encryption to assure end-to-end security of the information transmitted. See the [IoT Datasheet](#) for more information on data transmitted by IoT enabled motors. Customers should install the IoT Portal to see the data provided by their motor(s). The URL for the IoT Portal is [here](#). **User access and a user account must be setup to login to the IoT Portal by contacting Infinitem (support@goinfinitem.com).** The IoT Portal communicates with one motor at a time. The IoT Portal login screen looks like the image to the left.

Infinitem IoT security

Infinitem utilizes industry standard TLS transport, so data is fully encrypted during the transmission between the IoT Module in the motor and the cloud-based application. Data is stored on servers by the highest standard of authentication and authorization mechanisms. The role-based access control implementation ensures a device's data is only shown to the users who have appropriate permissions to access it.



Cellular plan

A carrier data plan is used for the IoT Module and IoT Portal to communicate. This is a subscription-based plan. This plan is for North America currently. AT&T provides the cellular plan.



IoT Module activation

The IoT Module cellular connection must be “activated” to initiate communication with the cloud-based application. This activation is performed by Infinitem personnel utilizing the IMEI information on the IoT Module for that motor. The IoT Module will only communicate with the IoT Portal if the motor is powered-on and activated.

IoT Module deactivation

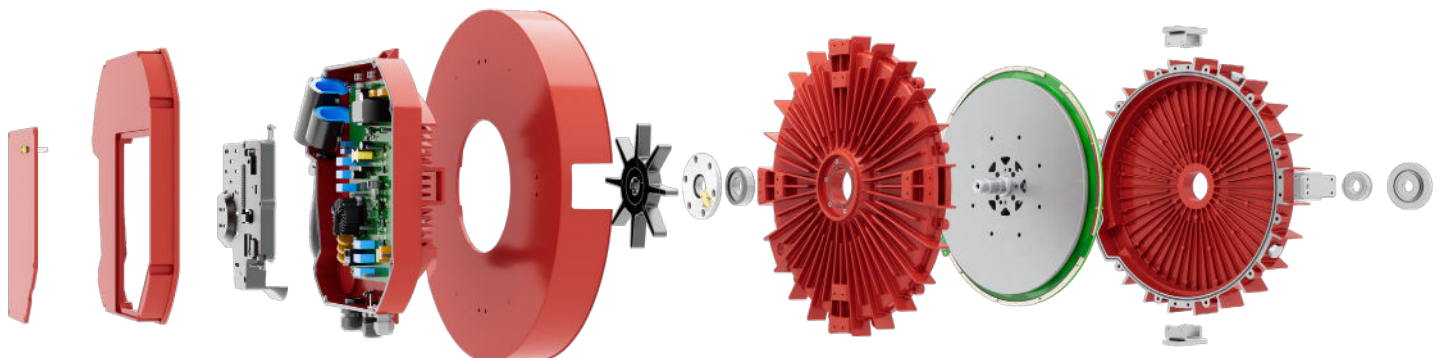
Contact Infinitem (support@goinfinitem.com) to deactivate your IoT Module.

Setup

1. Install the supplied antenna to the outside of your motor. The SMA connector is close to the LEDs.
2. Contact Infinitem (support@goinfinitem.com) so we can activate your account. We will supply you with a login for the IoT Portal.

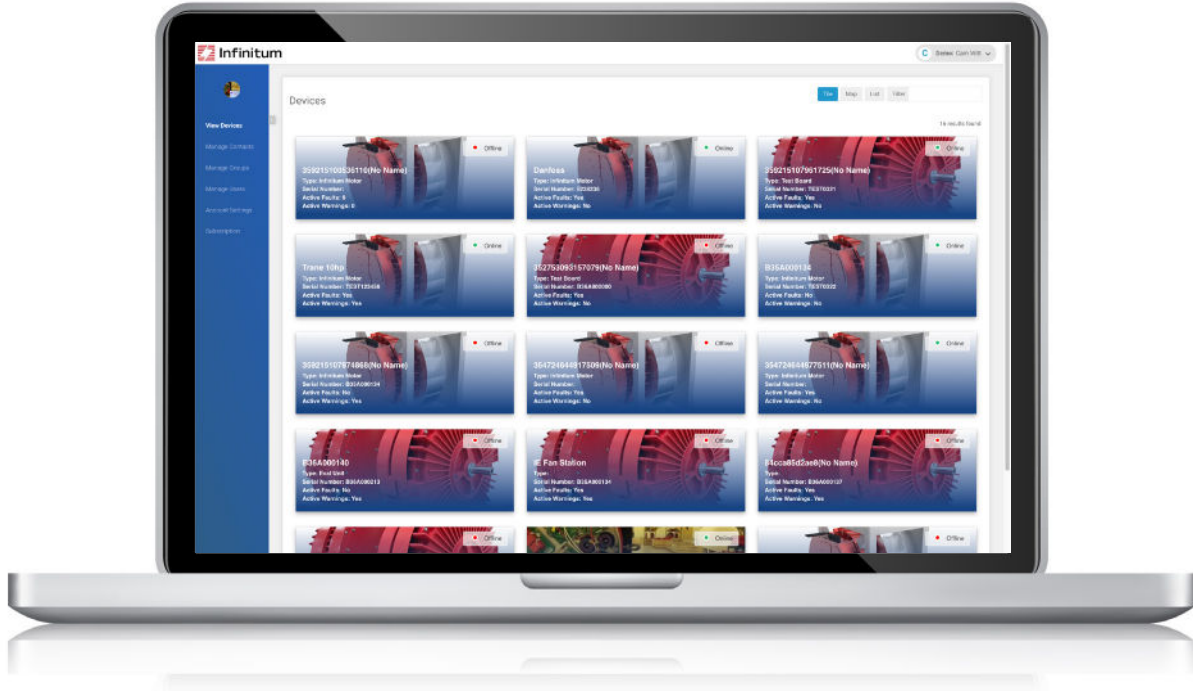
Operation

Your motor's performance and operational data can be monitored via Infinitem's cloud based IoT Portal. Once the motor is powered on the Digi communication module communicates with this portal. The communication rate between the motor and the IoT Portal is programmable and set by the Infinitem **Motor Control Software Manual**. See the section on Parameter Settings in that manual for the IoT Update rate.

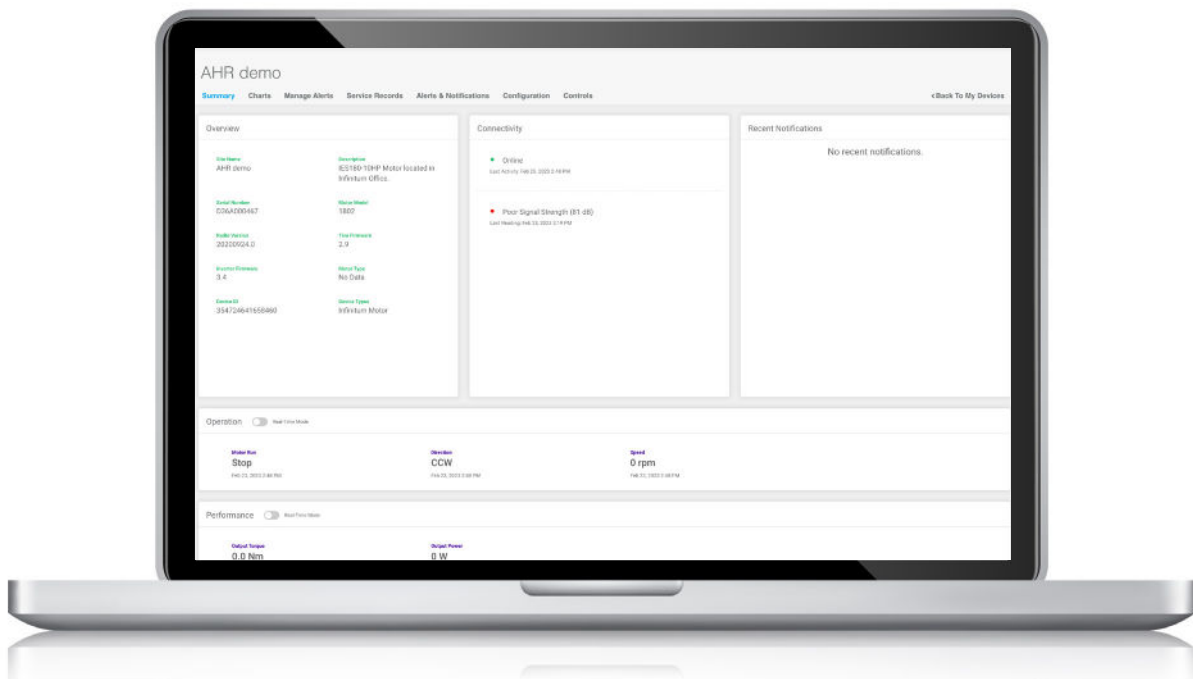


IoT Portal features

1. Power on your motor.
2. Open your IoT Portal at this URL: insight.goinfinitum.com
3. Once the IoT Portal has opened, click on “View Devices”.
4. You should see a screen like this:



5. Click on your motor.
6. The IoT Portal should display the following screen for your motor:



All the IoT Portal screens are explained below:

Summary

- Overview of motor information, Connectivity status and Recent Notifications in the top section.
- Operation section shows you current run-time motor information of movement, direction, and speed.
- Performance is the third section showing Output Torque and Output Power.
- Environment is the next section showing temperatures of Stator, Inverter and CIM board.
- Electrical Information is the next section showing DC Bus Voltage and Average RMS current.
- All the I/O Analog and Digital values are in the next section.
- Lifetime Information including Drive Runtime and Motor Runtime are next section.
- Any Faults are in the next section.
- Gate Drive Faults have their own section.
- Temperature Faults have a dedicated section as well.
- Following this are Comm I/O Faults, if any.
- The last section is the physical location of the module.

Charts

- User settable real-time operational graphs.
- Programmable Historical data in a table form.

Manage alerts

- Alert rules can be added via this window.

Service records

- Service records can be created via this window. Attachments can be added.

Alerts and notifications

- A table of logged alerts and notifications. These can be exported in various formats (Excel, PDF, CSV).

Configuration

- Site identification information, Labels and Location Information.

Controls

- RF status including last communication with module.



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