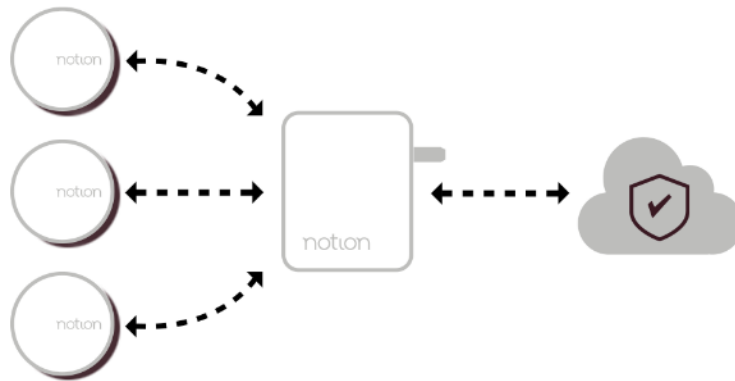


Notion Data Sheet

1 What is Notion?

Notion allows you to monitor your home with a single sensor, wherever you are. Notion sensors can tell you when a door or window is opened or closed, if there is a water leak, when your house gets too hot, as well as many other possible events configurable for Notion sensors.

One or more Notion sensors connect to a single Notion bridge. The Notion bridge connects to your Wi-Fi to enable the system to upload sensor data to the cloud. Finally, you can access the state of your sensors anywhere around the world using an Android or iPhone smartphone.



This document describes the overall system. The bridge in this system was previously released and is described in a prior product specification. This document describes the new (model 0007) sensor details.

2 Key Features

2.1 Many Different Functions in a Single Device

The Notion sensor device contains many individual sensors that can report on a wide array of events. The currently supported events are listed below.

2.1.1 Door Open/Closed Alerts

If installed on a door, Notion can alert you when that door is open or closed. Notion supports both hinged and sliding doors.

2.1.2 Window Open/Closed Alerts

If installed on a window, Notion can alert you when that window is open or closed. Notion supports both hinged and sliding windows as well as vertical or horizontal windows.

2.1.3 Temperature Alerts

Notion can alert you if the temperature in a certain room or area goes above or below a certain range.

2.1.4 Water Leak Alerts

If installed where water might leak in a basement or crawlspace, Notion can inform you if water is detected by the sensor.

2.1.5 Smoke or Carbon Monoxide Alarm Alerts

If installed near a smoke detector or carbon monoxide detector, Notion can alert you if that detector begins alarming.

2.2 End-to-end Encryption

The Notion system uses AES-256 bit encryption to encrypt all data end-to-end during transmissions.

2.3 Battery Life

The target battery life of the Notion sensor is 1 year using Lithium primary AAA cells provided (ANSI type 24LF / IEC reference FR03).

3 Usage Guidelines

3.1 Requirements

The Notion system requires you to have a smart phone with at least iOS 10 or Android 5.0 (or newer), an available power outlet, and internet enabled Wi-Fi.

3.2 Installation

To install your Notion system, simply follow the steps below.

- Plug the bridge into any centrally located power outlet
- Download the Notion app from the Apple App Store or the Google Play Store.
- Register your account
- The Notion app will guide you through the rest of the installation

3.3 LED Indicators

Both the sensor and the bridge contain LED's that will flash in certain patterns to indicate the internal state of the sensor or bridge. What each LED pattern indicates is listed below.

3.3.1 Sensor

LED Status	Sensor State
Blue flash (4x)	Searching for bridge
Green flash (4x)	Successfully found bridge
Red flash (4x)	Could not find bridge

3.3.2 Bridge (Model 0002 – reference only)

LED Status	Bridge State
Blue on 1 sec / off 1 sec	Booting – initial state, stays here if not yet configured
Red on 1 sec / off 1 sec	Connection Timeout – the connection to the back end has timed out, attempting a reset of the Wi-Fi module. (Should last no more than a few seconds)
Red on 10 sec / off 0.5 sec	Error – abnormal condition detected, attempting to reset (should last only few seconds unless non-recoverable)
Solid Red	Hard Fault – processor failure.
Green on 10 sec / off 0.5 sec	Normal Connected State
Red 1 sec / blue 1 sec	Radio Upgrade – the 802.15.4 radio is being upgraded and is not currently available to sensors.
Red 0.5 sec / Green 0.5 sec / Blue 0.5 sec	Wi-Fi Associated – Wi-Fi connection established to router, no Internet connection
Red 200 ms/ off 200 ms	WiFi Down – cannot find the Wi-Fi access point, or access point authentication failure
Blue 200 ms/ off 200 ms	WiFi Internet Connected – WiFi connection established to router, and Internet verified
Green 1 sec / blue 1 sec	Wi-Fi Upgrade – The Wi-Fi module is being upgraded and no internet connection is possible (sensor traffic is being queued as memory allows)

4 Specifications

4.1 **Wireless Communications**

4.1.1 Sensor (Model 0007)

Protocol	2.4-GHz IEEE 802.15.4
Receiver Sensitivity	-97 dBm
Output Power	6.65 ± 2.39 dBm
Approximate Range	75 feet

4.2 **Power**

4.2.1 Sensor (Model 0007)

Battery Type	2 ea: AAA cell, Ships with Energizer LiFeS2 cells (ANSI 24LF / IEC FR03), compatible with ANSI 24LF, or 24A (Alkaline) batteries (IEC FR03 or LR03)
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4.3 Physical

4.3.1 Sensor (Model 0007)



Dimensions	Diameter: 2.2 in. (56 mm) Depth: 0.8 in. (20 mm)
Weight	1.85 oz (53 g)
Operating Temperature Range	-20° C to 78° C
Ingress Protection (IP)	Designed to meet IP 67
Storage Temperature Range	-40° C to 80° C
Operating Relative Humidity Range	5% to 95%
Max Altitude	16,000 ft (550 mbar)

5 Materials

All materials and components used in both the Notion sensor (0007) and Notion bridge (0008) are RoHS compliant.

Sensor Adhesive Material: 3M VHB 4950

Sensor Housing:

Sensor Sealing Ring:

6 Regulatory Certifications

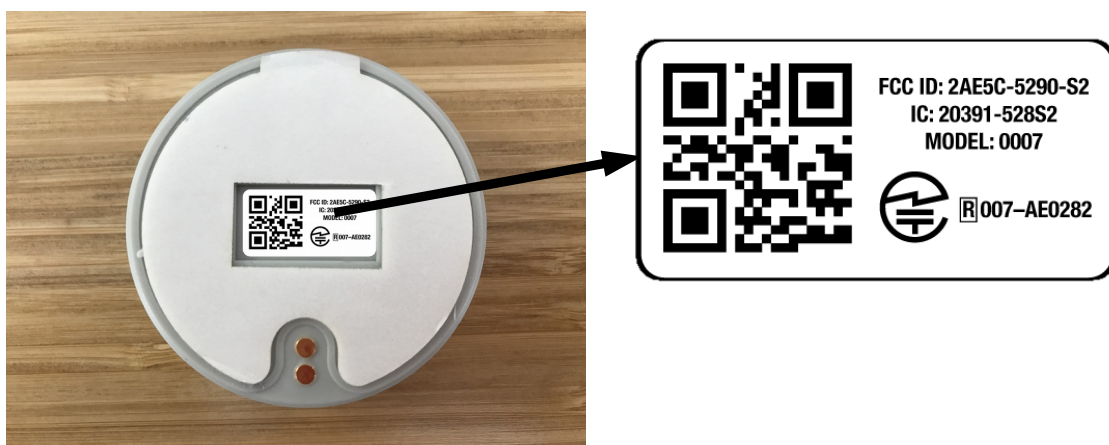
Both the Notion sensor as well as the Notion bridge are certified with FCC, Industry Canada and Japan MIC. The ID numbers for these certifications are listed below.

6.1 Sensor

Sensor FCC ID	Test pass, submitted, Pending approval expect: 2AE5C-5280-S2
Sensor IC ID	Test pass, submitted, Pending approval expect: 20391-5280S2
Sensor MIC ID	Test pass, submitted, Pending approval expect: [R]007-AE0282

7 Product Markings

7.1 Sensor



7.2 External carton markings

7.2.1 TBD

Revision History:

Revision	Date	Description
01	5/24/2017	Initial Draft
02	7/21/2017	Updated with test results, Sensor Only version.
03	8/1/2017	Corrected sensor output power figures not updated in rev 02