

The Droplet is Nube-iO's multi-purpose wireless (LoRa) IoT environmental sensor. Designed to capture the most useful sensor data, in a small package, with minimum install time.

Measuring Temperature, Humidity, Light (Lux), and Motion, the Droplet sensors collect the most useful environmental data that can be used to monitor, control, and utilize spaces better.

The Droplet is a surface mount sensor, making installation time trivial by eliminating sensor wiring. This greatly reduces cost, and interruption to the building occupants.

LoRa wireless IoT technology provides a very long transmission range that is energy efficient and less susceptible to object interference than other wireless technologies.

Powered by 3 x AA batteries, Droplet sensors have a runtime of 3-5 years depending on the configured push rate.



Technical Data

General	
Dimensions	86mm x 86mm x 25.5mm or 3.39in x 3.39in x 1.0in
Power Supply	3 x AA Batteries (3-5 years runtime depending on configured push rate)
Push Rate	Adjustable: 30sec, 1min, 3min, 5min, 10min, 15min, 30min, 1hour
IP Rating	IP40
Sensor Specifications	
Temperature Sensor	Operating Range: -10°C -> 80°C, Accuracy: ± 0.25°C
Humidity	Operating Range: -10°C -> 80°C, Accuracy: ± 0.1 %RH
LUX Sensor	Detection Range: 1-65535 lx
PIR Sensor	Detection Range: 5 meters Field of View: 120deg cone
Wireless Communications (LoRa)	
Transmit Frequency	915 MHz
Spreading Factor	7
Bandwidth	250 kHz

Ordering Information

Device Models	
<p>D - LR - _ _ _ _</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: left;"> <p><u>Product Family</u> D - Droplet</p> <p><u>Communication</u> LR - LoRa Raw</p> </div> <div style="text-align: left;"> <p><u>Sensors (add all required)</u> TH - Temperature and Humidity L - Light / Lux M - Motion / PIR</p> </div> </div>	
D-LR-TH	LoRa RAW wall mount sensor. Temperature, Humidity.
D-LR-THL	LoRa RAW wall mount sensor. Temperature, Humidity, Light/Lux.
D-LR-THLM	LoRa RAW wall mount sensor. Temperature, Humidity, Light/Lux. Motion (PIR).

Configuration

DIP Switch Settings																			
DIP Switches 1-3 Data Interval/Push Rate	<table border="1"> <thead> <tr> <th>Interval</th> <th>30 sec</th> <th>1 min</th> <th>3 min</th> <th>5 min</th> <th>10 min</th> <th>15 min</th> <th>30 min</th> <th>1 hour</th> </tr> </thead> <tbody> <tr> <td>Switches 1,2,3</td> <td>100</td> <td>010</td> <td>110</td> <td>001</td> <td>101</td> <td>000</td> <td>011</td> <td>111</td> </tr> </tbody> </table>	Interval	30 sec	1 min	3 min	5 min	10 min	15 min	30 min	1 hour	Switches 1,2,3	100	010	110	001	101	000	011	111
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DIP Switch 4* PIR Interrupt Enable	Set switch to ON/1 to enable data push on Motion (PIR) detection.																		
DIP Switch 5 Serial Debug Enable	Set switch to ON/1 to enable debug messages over serial.																		
DIP Switch 6 Hard Reset	Hard reset. When the switch is set to ON/1 a new Sensor ID will be assigned everytime the device is powered up.																		
DIP Switches 7-8 Testing Mode - Sensor ID Assignment	<p>If switches 7 or 8 are set to 1 (Testing Mode), this will override other Push Rate settings and assign a fixed Sensor ID and send data at a 6 second Push Rate. When both switches are set to 0, the device will use its configured push rate, and self assigned Sensor ID.</p> <table border="1"> <thead> <tr> <th>Switch Position</th> <th>Sensor ID Assignment</th> </tr> </thead> <tbody> <tr> <td>00</td> <td>Self Assigned ID</td> </tr> <tr> <td>10</td> <td>AAB2AAAA - 6 Sec Intervals</td> </tr> <tr> <td>01</td> <td>BBB2BBBB - 6 Sec Intervals</td> </tr> <tr> <td>11</td> <td>CCB2CCCC - 6 Sec Intervals</td> </tr> </tbody> </table>	Switch Position	Sensor ID Assignment	00	Self Assigned ID	10	AAB2AAAA - 6 Sec Intervals	01	BBB2BBBB - 6 Sec Intervals	11	CCB2CCCC - 6 Sec Intervals								
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*Only on D-LR-THLM

