MAS2-N Spec-sheet

NB-IoT **LTE-M**

NB IoT - Cat-M1 Low Power Humidity and Temperature Sensor

- Compatible with most standard communication protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Wide range of industrial applications
- High accuracy and repeatability
- Designed to meet outdoor applications
- Long-term durable performance in harsh environment
- Ultra-low power

TECHNICAL SPECIFICATION

Humidity Sensor

•	Accuracy	±2 (typ.)	%RH
•	Resolution	0.01 (typ.)	%RH
•	Hysteresis	±0.8 (typ.) at 25°C	%RH
•	Storage Temperature	-10 to +60	°C
•	Operation Temperature	-10 ~ +70	°C

Temperature Sensor

•	Accuracy	±0.5 (typ.)	°C
•	Resolution	0.01 (typ.)	°C
•	Specified Range	-40 to 125	°C
•	Storage Temperature	-10 to +60	°C
•	Operation Temperature	-10 ~ +70	°C

Power

•	Power Supply	Built-in Replaceable Lithium Battery, External Power (option)	
•	Rated Voltage	3.6	V
•	Battery Lifetime	50,000+ readings and 10,000+ transmission (With UDP protocol/ More than 10 years for most applications)	

Physical

•	Materials	Enclosure: Industrial POM Sensor: Sintered metal mesh encasing	
•	Weight	1300	g
•	Protection Rate	IP66 or IP68 and UV Protected enclosure	

Communication

•	SIM Card Type	4FF Nano-SIM, from any Network Provider
•	Firmware Update	Over The Air, Locally via Wireless Connectivity
•	Sampling Period	Configurable via downlink (default 4 hours)
•	Power Consumption	Power Saving: < 5uA, Transmission: < 200mA
•	Communication Standards	Cat-NB1 (NB-IoT) Cat-M1 (option of back support by GPRS)
•	Communication Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 and B39
•	Data Rates	Cat-M1: 375Kbps (DL)/375Kbps (UL), NB-IoT: 32Kbps (DL)/70Kbps (UL)
•	TX Power	23dBm
•	Min Receiver Sensitivity	Cat-M1: -107dBm NB-IoT: -113dBm

	Antenna	Internal (Default)/ External (customised options available)
	Optional Features	• Attach without PDN (Packet Data Network) • Support for IPV6 • SMS communication • Mobility support (Cat-M1 only)

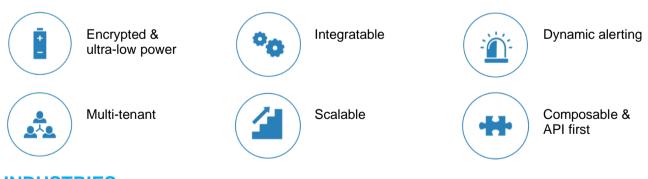## NETWORK CONNECTION AND VISUALISATION

Network Integration

- Pre-configured or configurable to all main narrow band networks (3, A1, AT&T, China Mobile, DU, Etisalat, KPN, M1 Singapore, Optus, Orange, Proximus, Spark, Sprint, Swisscom, Telefonica, Telstra, T-Mobile, Verizon, Vodafone, 1NCE, Emnify and any other network)

Visualisation And Data Management

- Ellenex white label microservice platform and Integratable to all main IIoT platforms directly or through the API(AWS, Azure, PTC ThingWorx, Bosch IoT, Cisco Jasper & Kinetic, Sierra Numerex, MathWorks ThingSpeak, GE Digital Predix, LandisGyr, Siemens MindSphere, Cumulocity, myDevices, Ubidots, TagoIO, AllThingsTalk Maker, HPE IoT and any other major IoT platform).

Ellenex Platform Main Features

- Encrypted ultra-low power communication protocol
- Advanced device inventory
- Integration APIs for enterprise systems
- Multi-tenant role-based access control
- Data export and import
- White-label platform for enterprise runs on private account
- Variable alarm setting for high and low thresholds and multi-channel alerting
- Sampling and transmission interval configuration
- Transmission condition configuration
- Other configurations and customisation available on request

Encrypted & ultra-low power	Integratable	Dynamic alerting
Multi-tenant	Scalable	Composable & API first

INDUSTRIES

Food & Beverage	Smart Building & HVAC	Mining & Construction

APPLICATIONS

- Weather Stations
- Moisture Monitoring Systems

MODEL GUIDE

Model	Schematic
C Model	

ORDERING CODE

MAS2-N						
	NB-IoT Communication Type					
	B: NB-IoT		**C:** LTE Cat-M1			
		Sensor Type				
		S: Standard (±2% RH and ±0.5°C)				
			Enclosure			
			C5: Cylindrical	**Other** options available on request		
				Device Activation		
				S: With On/Off Switch	**X:** No Switch (Always On)	
					Antenna Option	
					I: Internal	**EHG:** High Gain External
						Options
						(On request)
MAS2-N	**B**	**S**	**C5**	**S**	**I**	

Sample Product Code:

- **MAS2-N-B-S-C5-S-I**
  NB IoT Low Power Humidity Sensor, with cylindrical enclosure, activated by on-off switch and internal antenna.

Integrated IoT Solutions

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