



Farm Environment Monitoring System



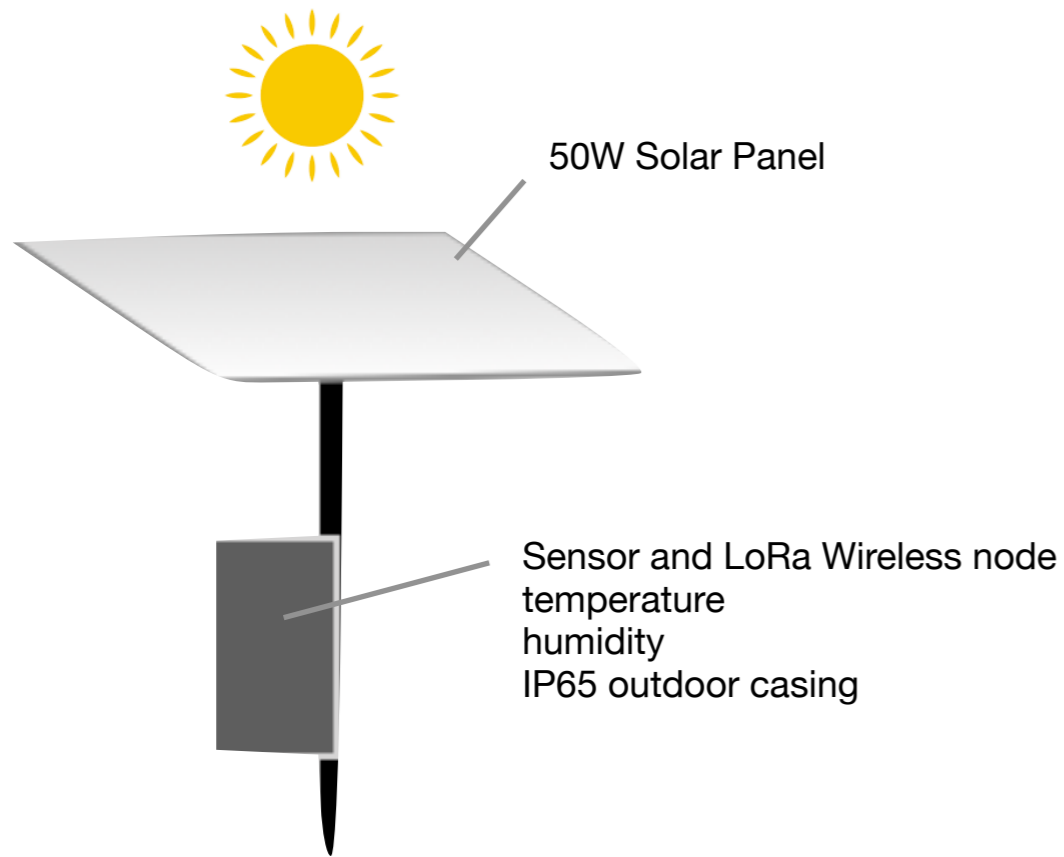
Key features

- Long range wireless sensor technologies up to 5km line of sight for ultra wide outdoor coverage
- Support multiple type of sensors
- IP65 weather case for outdoor deployment
- Powered by green energy solar power
- Cloud data aggregation support unlimited number of sensors
- Individual site access and master user access with intelligent dashboard and 12 months data
- Hardware and Software by Malaysian design and support

Smart Weather Station

Solar Panel Rechargeable Battery system
LoRa long range transmitter
supports various sensing requirements

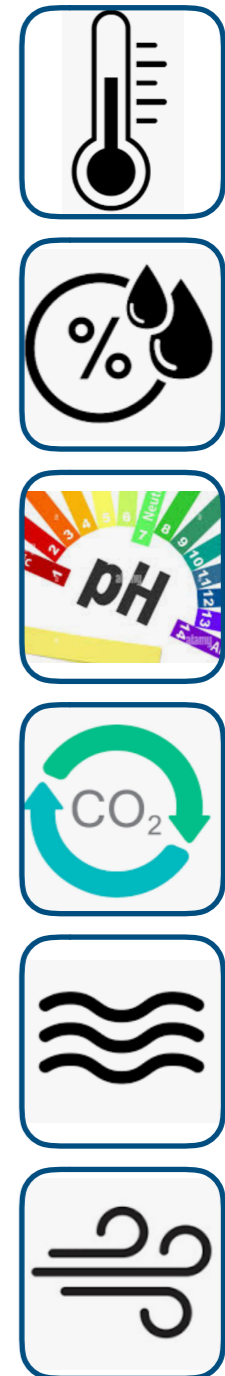
types of sensor



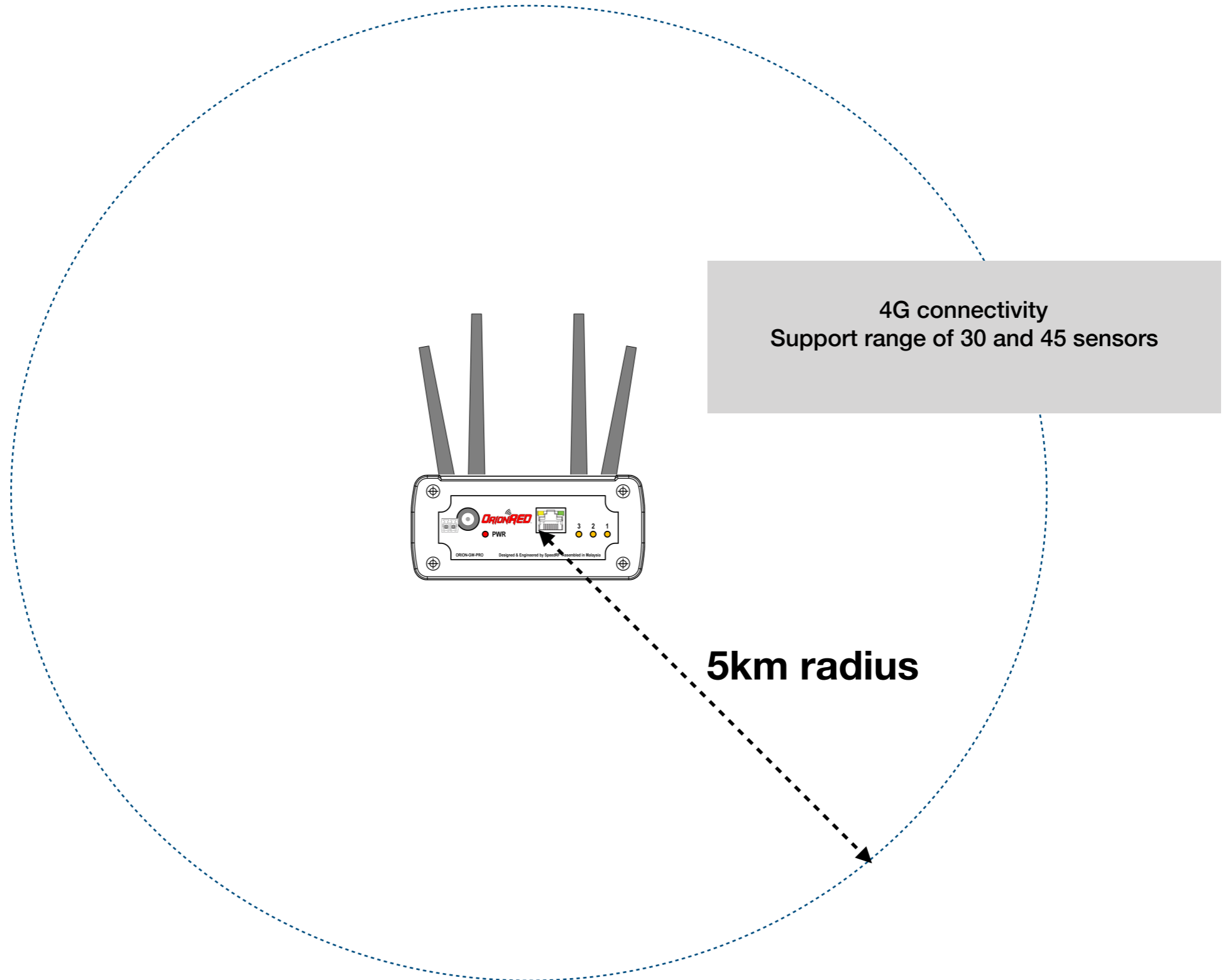
wireless nodes



various industrial sensor interface supported



LoRa Gateway



LoRa (Long Range wide area)



LoRa is a proprietary low-power wide-area network modulation technique. It is based on spread-spectrum modulation techniques derived from chirp spread spectrum technology.



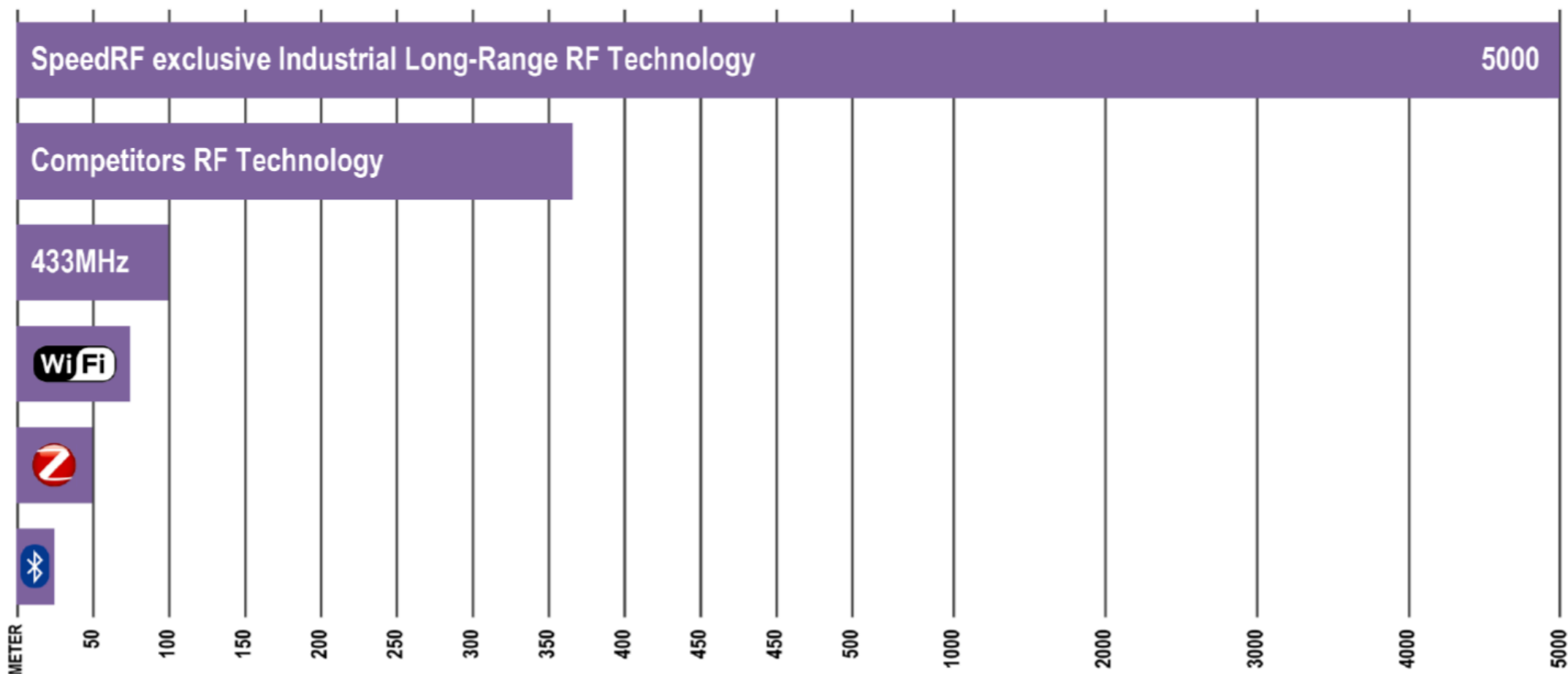
Key Features

- Powered by SpeedRF exclusive Industrial Long-Range license-free Sub-1GHz Wireless Technology
- Operating frequency range (ISM Band): 919MHz to 923MHz (Compliant with MCMC SRD standard)
- Superior communication range in open space up to 5000 meters (Line-of-Sight) or 10+ multiple floors / walls (Non-Line-of-Sight) *
- Longer communication range and superior penetration through concrete and steel than 2.4GHz
- All RF communication is secured by AES encryption with 128 bit key size (AES-128) cbc mode
- Superior low-power sleep mode performance up to 6 Years Battery Life with 2 x AA Energizer L91 Lithium Batteries (replaceable) **
- Highly scalable IIoT platform with various wireless smart sensors, actuators and end nodes available to meet future requirement and demand
- Designed, Engineered and Made in Malaysia

Superior Wireless Operating Range

GOING THE DISTANCE

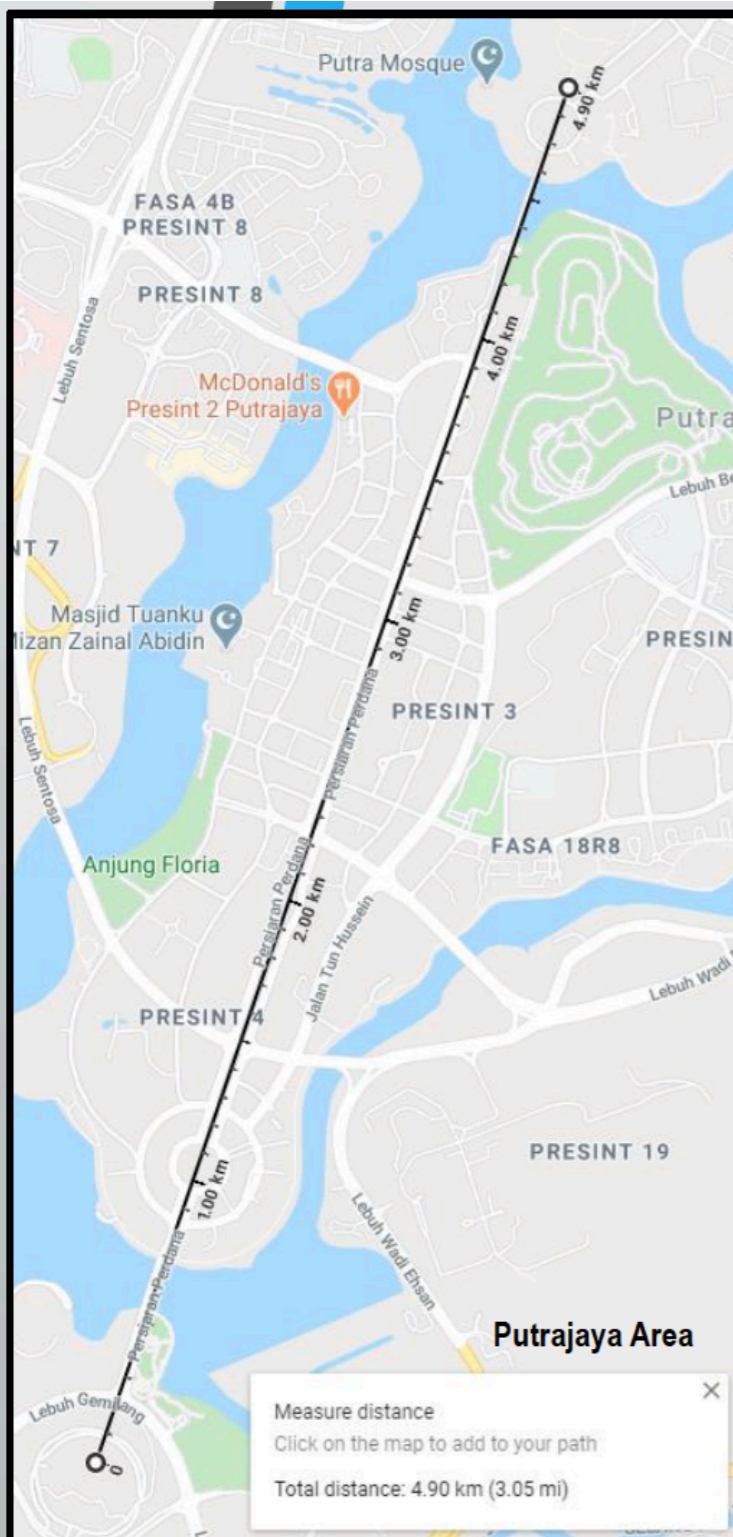
The freedom to deploy where sensor node is needed



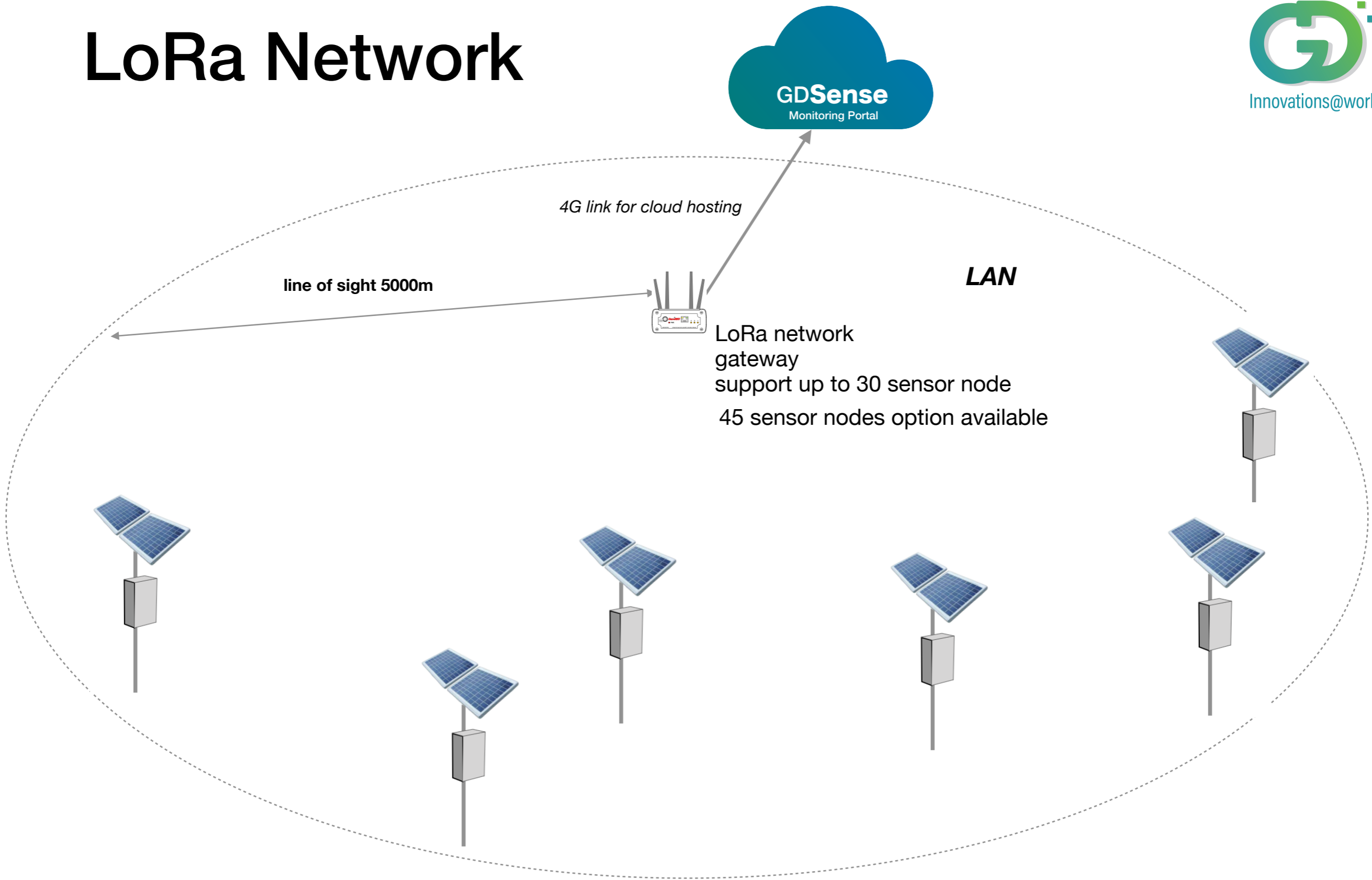
Why is range so important?

OrionRED sensors node can have communication range in open space environment up to 5000 meter (line-of-sight) or 10+ multiple floors / walls deployment condition (non line-of-sight). This is one more reason OrionRED IIoT Technology is the industrial best-in-class solution for various industrial internal of things (IIoT) application.

Besides is the google maps showing the measure distance between Putrajaya International Convention Centre (PICC) and Dataran Putra which we conducted actual field testing. Total distance is 4.90km (4900 meter).



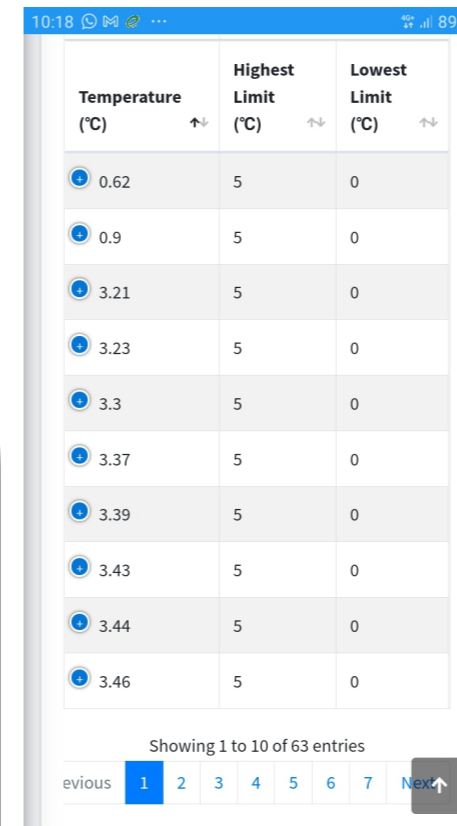
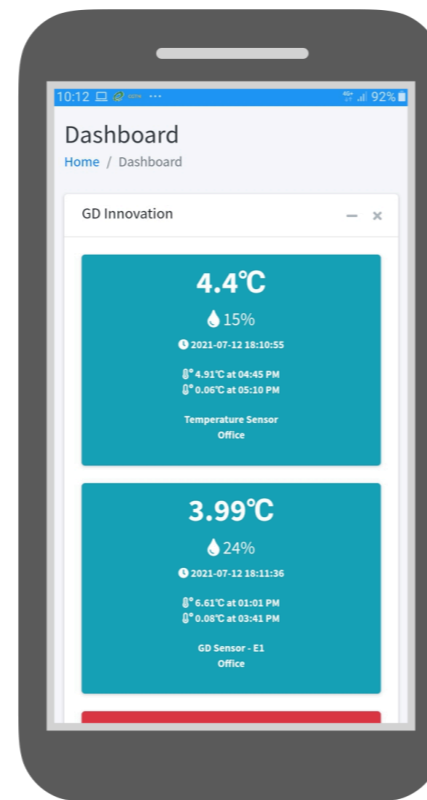
LoRa Network



Single gateway can cover 78km² area on line of sight

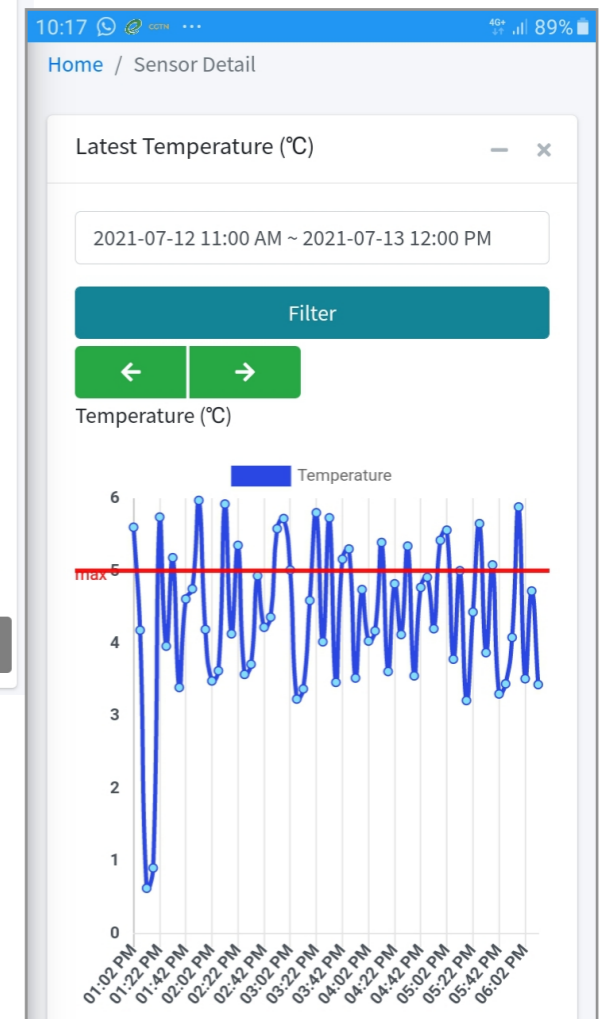
GD Sense Cloud Monitoring

Cloud solution enables easy scaling of number of IOT devices
Dashboard data presentation on web, smart phone apps
Alert notification to be deliver real time on user smartphone



Temperature (°C)	Highest Limit (°C)	Lowest Limit (°C)
0.62	5	0
0.9	5	0
3.21	5	0
3.23	5	0
3.3	5	0
3.37	5	0
3.39	5	0
3.43	5	0
3.44	5	0
3.46	5	0

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Thank You.

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