LINGJACK COMBAT

Facility Digitalization

SMART Wireless Monitoring and Control System

(Patent Pending)

Introduction:

At this digital era, everything is getting smarter. We have the technologies to make your current facility smarter at a fraction of the cost, by using the state of art low powered mesh system. Our system is able to monitor as well as control equipment in the facility without any additional infrastructure work. (No wiring is required, setup within minutes for our portable sensors based nodes, and 100% secure network!) Peace of mind for all stakeholders.

We focus on digital facility management, providing critical emergency information such as Environmental, Fire and Safety conditions. Our system is also capable of scheduling automatic tests for critical equipment such as Emergency and Exit light, thus reducing labour cost and repetitive work in the facility and provide data for analysis.

Together with our customers and partners around the world, we create a smart future in their facilities by applying our technologies and our experience in wireless monitoring and control system, to make the working space safe, secure and efficient. Most importantly you feel comfortable to work in this digital environment and can be more productive.

Features and Benefits:

- Secured network up to 10,000 nodes in one system
- Reliable monitoring and control system
- Battery operated
- Wireless mesh network (max range: indoor 30m, outdoor 150m)
- Infrastructure-independent
- Plug and play system
- Non-intrusive design to maintain compliance and easy retrofit for existing equipment
- Offsite monitoring and control feature

Certifications:

- FCC approval
- IMDA approval

Compliance:

- ACMA Radio communication (Low Interference Potential Devices)
- Compliant • mesh enabled (2.4GHz, IEEE 802.15.4)

Application:

- Fire Extinguishers Monitoring
- Emergency And Exit Light Automatic Testing
- Temperature And Humidity Control
- Electrical Equipment Control
- Valves Status Monitoring
- Wireless Carpark Control
- Out Of Bound Space Monitoring
- Street Lights Monitoring
- Cold Room Monitoring
- HVAC Air Quality Monitoring
- Room Lighting Control
- Remote Site Pump Testing And Control
- Many More…

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Fire Extinguisher Node

(Model: LSM-N01)

Fire Extinguisher for illustration only

Introduction:

LSM-N01 series fire extinguisher node uses the latest mesh technology and sensors, together with customised hook bracket to detect fire extinguisher status:

1. Missing of fire extinguisher
2. Air pressure leakage
3. Obstruction in front of fire extinguisher
4. Temperature and humidity

Device Information:

- Overall dimensions (L x W x H) : 85mm x 60mm x 190mm
- Enclosure and IP rating IP52
- Wall Mounting Hook
- Working Range : - 20°C to 70°C
- Weight : 90g
- Power : Lithium Battery 3.7V, 8500mAh
- Frequency : 2.4GHz Bluetooth 5.0, IEEE 802.15.4, transceiver
- Topology : Mesh
- Antenna : Internal
- Typical Distance : Indoor 30m (max), Outdoor 150m (max)

Temperature Sensor:

Measuring
Range : - 40°C to 125°C
Resolution : 0.01°C
Accuracy : +/- 0.3°C

Humidity Sensor:

Range (% RH) : 0 to 95% RH
Resolution : 1% RH
Accuracy : +/- 3% RH

Blockage Sensor:

Detection : 0.6m - 2m

Weight Sensor:

Up to 20kg full load

Accessories:

- Wall Bracket
- Extinguisher Holder
- Screws

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Emergency Door Node

(Model: LSM-ED01)

Introduction:

LSM-ED01 series uses proximity sensor to detect door status and ultrasonic sensor to detect physical blockage by objects in front of the door. Temperature and humidity sensor is also built into the node for environmental control, therefore it is much more superior than conventional open/close detector used in BMS system.

Device Information:

- Overall dimensions (L x W x H) : 60mm x 50mm x 40mm
- Enclosure and IP rating IP52
- Wall Mounting Hook
- Working Range : - 20°C to 70°C
- Weight : 90g
- Power : Lithium Battery 3.7V, 8500mAh
- Frequency : 2.4GHz Bluetooth 5.0, IEEE 802.15.4, transceiver
- Topology : Mesh
- Antenna : Internal
- Typical Distance : Indoor 30m (max), Outdoor 150m (max)

Temperature Sensor:

Measuring
Range : - 40°C to 125°C
Resolution : 0.01°C
Accuracy : +/- 0.3°C

Humidity Sensor:

Range (% RH) : 0 to 95% RH
Resolution : 1% RH
Accuracy : +/- 3% RH

Blockage Sensor:

Detection : 0.6m - 2m

Accessories:

- Emergency Door
- Electrical Switch Board Cabinet Door
- Sensitive Door Access Control
- Sprinkler Tank Water Level

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System Gateway

(Model: LSM-G01)

Introduction:

The only device in the whole system that requires mains power and internet connection. If internet connection is not available, a simple wireless router with SIM card can be used. Gateway sends the devices' data wirelessly and securely to user via the Internet. It supports up to 10,000 nodes in one system.

Device Information:

- SoC : Broadcom BCM2837B0 quad-core A53 (ARMv8) 64-bit @ 1.4GHz
- GPU : Broadcom Videocore-IV
- RAM : 1GB LPDDR2 SDRAM
- Networking : Gigabit Ethernet (via USB channel), 2.4GHz and 5GHz 802.11b/g/n/ac Wi-Fi
- Bluetooth : BLE 5.0
- Storage : Micro-SD
- GPIO : 40-pin GPIO header, populated
- Ports : 4x USB 2.0, Ethernet
- Dimensions : 82mm x 56mm x 19.5mm, 105g

Optional Accessories:

- UK Adapter
- Wireless Router/Data Router

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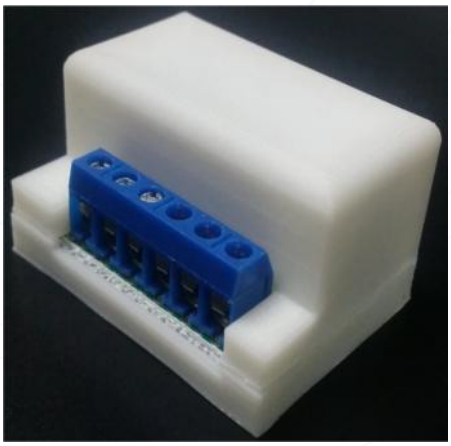
Relay Node

(Model: LSM-LRelay)



Introduction:

State of the art device to control electrical equipment remotely. Programmable for any complicated schedule or link to other node setting to activate the relay. LSM-LRelay series can be used to control equipment or activation function.

Device Information:

- Overall dimensions (L x W x H) mm : 65x46x42
- Enclosure and IP rating IP52
- Mounting Wall
- Working Range : - 20°C to 70°C
- Weight : 90g
- Power : Lithium Battery 3.7V, 8500mAh
- Frequency : 2.4GHz Bluetooth 5.0, IEEE 802.15.4, transceiver
- Topology : Mesh
- Antenna : Internal
- Typical Distance : Indoor 30m (max), Outdoor 150m (max)
- Rated load:10A/250VAC,30A/30VDC
- 2 ports switch

Application:

- On/Off Electrical Fan
- Flash Light For Alert
- Activate HVAC Control Unit
- On/Off Air Conditioner
- On/Off Lighting
- Activate Magnetic Lock

Indoor Air Quality Node

(Model: LSM-IAQ)

Introduction:

7 in 1 air quality monitoring unit will give you peace of mind in the air you breathe around you. LSM-IAQ detect air-quality and transmit the data securely to the system, LSM-IAQ can be deployed easily without any hard wiring where you need and is able to link to electrical equipment (eg. fan) for immediate control.

Device Information:

- Overall dimensions (L x W x H) mm : 60x120x65
- Simultaneously output seven sets of data of carbon dioxide, formaldehyde, TVOC, PM2.5, PM10, temperature and humidity
- Enclosure and IP rating: IP52
- Mounting Wall
- Working Range :0°C to 50°C
- Weight : 377g
- Power : Lithium Battery 3.7V, 8500mAh; 7.2V, 17,000mAh
- Frequency : 2.4GHz Bluetooth 5.0, IEEE 802.15.4, transceiver
- Topology : Mesh
- Antenna : Internal
- Typical Distance : Indoor 30m (max), Outdoor 150m (max)

Specifications:

eCO2 400ppm～2000ppm ±100ppm
eCH2O 1ug～1000ug
TVOC 0ug～2000ug
PM2.5 5ug～1000ug ±10%
PM10 5ug～1000ug ±10%
Temp -40℃～125℃ ±0.5℃
Humid 0～100% ±3%RH

Application:

- Underground Carpark
- Workshop
- Kitchen
- Warehouse
- Road / Cable Tunnel

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Temperature & Humidity Node

(Model: LSM-TH)

Introduction:

LSM-TH Series plug and play wireless mesh can be used to monitor the general temperature and humidity of any room, area of activity or cabinets' compartment. Data readings can be set per minutes / hours depending on requirement. Temperature node can also set limits and link to electrical equipment like air conditioner / fan with automatic activation. For better air quality monitoring: Optional CO2, CO sensor can be added to the node.

Device Information:

- Overall dimensions (L x W x H) mm : 65x46x42
- Enclosure and IP rating IP52
- Mounting Wall
- Working Range : - 20°C to 70°C
- Weight : 90g
- Power : Lithium Battery 3.7V, 8500mAh
- Frequency : 2.4GHz Bluetooth 5.0, IEEE 802.15.4, transceiver
- Topology : Mesh
- Antenna : Internal
- Typical Distance : Indoor 30m (max), Outdoor 150m (max)

Temperature Sensor:

Measuring
Range : - 40°C to 125°C
Resolution : 0.01°C
Accuracy : +/- 0.3°C

Humidity Sensor:

Range (% RH) : 0 to 95% RH
Resolution : 1% RH
Accuracy : +/- 3% RH

Accessories:

- Data Centre Room
- Cabinet's Compartment
- Cold Room
- Event Hall
- Office
- Airport Waiting Area
- Cables Tunnel
- Etc…

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Emergency & Exit Light Testing Node

(Model: LSM-EL)

Introduction:

Emergency & Exit light are critical equipment used during evacuation. It is mandatory by law to test monthly on the standby battery and light bulb, which is tedious, time consuming and prone to human error. LSM-EL series test node is developed specifically to replace the manual work. You can set schedule for the node to activate automatically with test result recorded for review or link to alarm message. Two options are available, direct or indirect solenoid activation.

Device Information:

- Overall dimensions (L x W x H) mm : 65x46x42
- Enclosure and IP rating IP52
- Working Range : - 20°C to 70°C
- Weight : 90g
- Power : Lithium Battery 3.7V, 8500mAh
- Frequency : 2.4GHz Bluetooth 5.0, IEEE 802.15.4 transceiver
- Topology : Mesh
- Antenna : Internal
- Typical Distance : Indoor 30m (max), Outdoor 150m (max)

Optional:

Solenoid
Vibration Sensor for Pump activation

Application::

- Emergency Light
- Exit Light
- Smoke Control Fan
- Sprinkler Pump
- Street Light

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