



**Document Title:**  
IoT Gateway (hazardous  
zone) Specifications

## IoT Gateway Specifications Document

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### Revision History:

S.No.	Revision Number	Published Date	Author	Approved by
1	A	25 Nov,2021	Kawshik	Aman Agarwal





**Overview:**

Syook's IoT Gateway collects the BLE tags data to compute the real time location of the person or an asset. The Gateway further routes it to the local server or remote cloud server by MQTT protocol over Wi-Fi. Uninterrupted power supply and Internet connectivity are required to ensure proper functioning of the IoT Gateways.

<b>Syook IoT Gateway Specifications</b>		
Model	21-4BN-0001	21-CMN-0001
Bluetooth Version	5.0	5.0
Protocols	MQTTS	MQTTS, HTTP
Communication	Ethernet	Wi-Fi (2.5Ghz and 5Ghz)
Power Supply	DC 48V POE	AC 230V
Transmission Range (BLE)	25-35 meters	25-35 meters
Status Indication	LED	LED
Size	165*165*130 mm	200*200*110 mm
Features	Hazardous zone certified	Hazardous zone certified
Operating temperature	135 - 300 °C	135 - 300 °C
Certifications	PESO/CIMFR	PESO/CIMFR

Syook IoT Gateways are designed to work in the toughest environmental conditions. They are highly configurable as per the project requirements to filter out unnecessary data and send only the project specific data packets to the Syook InSite server for processing. This edge processing will reduce the amount of data being sent to the server by increasing the functional productivity, thereby providing faster location calculations at lower bandwidth.



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Syook IoT Gateway comes with a hardened Linux based OS with the following features.

**Salient Features:**

- Secure access to the OS via SSH
- Firewall enabled
- Fail2ban to block brute force attack
- Wi-Fi connectivity using WPA2 encryption
- COTA (remote configurations) and FOTA (remote firmware updates)
- Edge processing capabilities for Immobility, Fall Detection, SOS Detection (data sent to server for processing and alerting)
- Secure Cloud Server connectivity for Data transfer
  - Secure MQTT (SMQTT) with authentication
  - PKI infra for SSL certificate and key management
- Physical Security:
  - Tamper proof security screws to limit access to the hardware inside the enclosure

The Syook IoT Gateways are affixed to the walls or mounted on poles at locations identified after a technical site survey to provide seamless coverage in the target area. Syook utilises a proprietary calibration process to configure the IoT Gateways, this provides a higher coverage area with lower number of Gateways when compared with off the shelf BLE Readers. Lesser hardware translates to lower points of failure, reduced wiring/installation complexities and lower costs.