# Indoor Femto Gateway

Gemtek has been instrumental in the development of LPWAN system solutions, and is an early provider of LoRaWAN protocol-based, end-to-end LPWAN solutions. The LoRaWAN technology is designed to connect low-cost, battery-operated sensors over long distances in harsh environments that were previously too challenging or cost-prohibitive to connect. Because of its long range, high penetration and high sensitivity capabilities, it is a much more cost effective way for service providers to deploy LoRaWAN network for sensor applications in vertical market domain.

This Femto Gateway is specifically designed for wide area IoT applications. Applications include, but not limited to home security, automatic meter reading, monitoring fault indicators, monitoring street lights, etc. This gateway is Femto type and very suitable for small business or private area use case like parking space, exhibition center or campus etc. It is also suitable for providing coverage for indoor blind spots.

## STANDARD FEATURES

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|---|---|
| Compliance to LoRaWAN 1.0.2 | Web UI for LoRa and network configuration |
| Up to 8 concurrent channels for LoRa transmission | Cloud service for gateway health monitor |
| Built-in 2.4G 802.11b/g/n Wireless LAN | Support Listen Before Talk for downlink |
| Patented repeater mode for last mile coverage | Ideal for indoor positioning |
| Option support wide frequency range from 470MHz to 928MHz | Support OTA and USB upgrade |
| Active scan for channel availability with RSSI levels | Various internet connections: Ethernet, Wireless bridge, 3G/4G dongle (via USB port) |

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## SPECIFICATIONS

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|---|---|
| Model Name | WLRGFM-100 |
| Frequency Band | EU 862~870 MHz / US 902~928 MHz / India 865~867 MHz / AS 923 MHz / CN 470~510  MHz |
| Number of Channels | Up to 8 concurrent channels |
| Wireless LAN | 802.11 b/g/n 2.4G |
| WAN Protocol | LoRaWAN |
| Modulation | Based on LoRaWAN |
| RF Transceiver | SX1301 with SX1257 or SX1255 for CN-470 SKU |
| Transmit RF Power | 0.5W (up to 27 dBm) |
| Receive Sensitivity | Down to -142 dBm |
| Operating Temperature | -10ºC ~ 55ºC |
| Storage Temperature | -10ºC ~ 60ºC |
| Power Voltage | 5VDC/2A via mini-USB port |
| Antenna Type | Built-in Wi-Fi antenna and one (1) external SMA LoRa antenna |
| Interfaces | 1 LAN 10/100Mbps, 1 USB 2.0 for upgrade and 3/4G dongle, 4 LED indicators |
| Dimensions | L:116 x W:91 x H:27 mm |
| Weight | 160 g |
| Security | AES 128 |

## SKU DETAIL

| SKU | COUNTRY | CHANNELS | FREQUENCY BAND (MHZ) |
|---|---|---|---|
| US | USA | 8 | US915 (902~928) N |
| CN-920 | China | 8 | 920~925 N |
| CN-470M | China | 8 | CN470 (470~510) N |
| JP-920M | Japan | 8 | 920~928 N |
| EU-800M | Europe | 8 | EU868 (862~870) |

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