

**EXPEMB**  
360



 **LoRa™ Alliance**

*LoRa Multi-Connectivity Service Gateway*

**SGWMC-X86LR-12132**

### Modular and upgradeable gateway

SGWMC-X86LR-12132 Gateway is a multiservice upgradeable LoRa platform part of the Expemb LoRa Gateway product line. This product line has been designed to bring hardware and software flexibility to meet the IoT technical challenges.

Beyond LoRa support, SGWMC-X86LR-12132 Gateway offers a flexible Cloud and field connectivity within a unique platform ready to adapt to local configuration and facilitate deployment, maintenance and installation.

### Flexible processing power

SGWMC-X86LR-12132 Gateway integrates last generation of Intel low power multi-CPU cores. This flexible architecture offers a processing power that can easily be adapted to different use cases.

### LoRa Concentrator “full power” inside

SGWMC-X86LR-12132 Gateway includes a real LoRa concentrator structured around the dedicated Semtech SX1301 chip having the capability to simultaneously listen to 8 LoRa channels in order to communicate with several thousand connected objects.

### Multi-connectivity towards Cloud

SGWMC-X86LR-12132 Gateway offers a rich connectivity with 1 Gbit Ethernet link, Wi-Fi, 3G/4G and Bluetooth. All links are simultaneously available on the Gateway and fall back can be set according to different scripts. This approach ensures communication whatever local topology.

Embedded Experts

### Full range of field I/O's

With 2 USB ports, 1 serial port and GPIO's, SGWMC-X86LR-12132 Gateway is capable, beyond LoRa support, of interfacing with other local devices with wired communication such as Modbus devices.

### Management services dedicated to IoT

SGWMC-X86LR-12132 Gateway is supplied with a Framework dedicated to IoT who takes advantage of the flexible CPU power to make available software services for the IoT world. This open architecture allows easy integration of any new services.

Modular Linux Framework provides integrated services such as remote firmware upgrade (FOTA) or highly secured layers.

### A highly reliable system

Powered in DC or by PoE+ module, SGWMC-X86LR-12132 Gateway is designed to work round the clock, 7 days a week. Integrating industrial components with no part in movement, SGWMC-X86LR-12132 Gateway is a high reliability platform designed for industrial applications.

Operating in commercial temperature, it can be optionally equipped to support extended temperature range with IP65 case and associated waterproof connectors.



### Specifications

#### x86 platform

Processor : Intel® Atom™ Bay Trail E3800 product family, 1-4 cores  
 RAM : 2GB to 8 GB DDR3L  
 eMMC : 4GB to 16 GB on board

#### LoRa Connectivity

Chip : Semtech SX1301 / SX1257 based concentrator  
 High speed SPI interface  
 ISM bands : 868 MHz  
 Channels : 8 simultaneous channels  
 Compatibility : LoRaWAN

#### Field connectivity

USB : 2x USB2.0 Type A  
 Serial : 1x RS232/422/485 DB9  
 GPIO : 4 inputs / 4 outputs opto-isolated DB26HD

#### LAN/WAN

Ethernet : 1x Gigabit Ethernet Intel® I210 RJ45  
 Wifi : 1x 802.11 a/b/g/n Mini PCIe module [Option]  
 3G/4G : 1x Mini PCIe module, SIM slot [Option]  
 Bluetooth : 1x 4.0 BLE [Option]

#### System

Dimensions : 121mm x 121mm x 50mm  
 Package : IP32  
 Weight : 750 gr  
 Operating : 0°C/+55°C ■ -30°C/+70°C [Option]  
 Power : PoE+ ■ 48V DC / 0.6A  
 MTBF : 50.000 H [Ground Benign]

#### Operating System

Linux : Wind River Linux 7 - Kernel 3.14  
 Moon Island "ready"  
 Build system : Yocto Project 1.7 Dizzy

#### Management Services

Supervision : Hardware and RF Monitoring  
 Security : TLS, IPsec  
 Others : FOTA, Data compression

#### IoT Middleware

Compatibility : Intel® Gateway Solutions for the Internet of Things  
 Wind River Intelligent Platform XT 3.0  
 Wind River Helix Device Cloud

#### Various

Watchdog : Hardware & software



Put Technology On



EXPEMB  
2, Rue Georges Méliès  
78390 Bois d'Arcy  
France

Tel : +33 177 048 035  
Fax: +33 134 600 808  
[www.expemb.com](http://www.expemb.com)  
[lora@expemb.com](mailto:lora@expemb.com)