Programmable IoT Gateway with LTE

GW-100AN

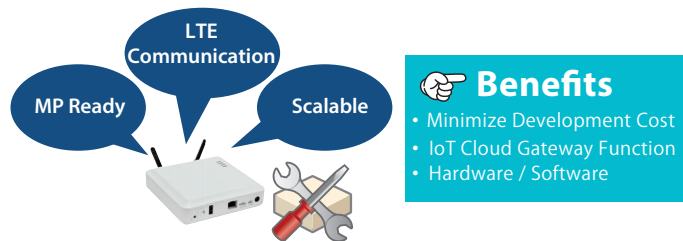## *Ideal Platform to take your Gateway Application to Mass Production*

Overview

GW-100AN is Silex's programmable platform with dual band wireless radio, that allows you to develop your own applications in Linux by using our SDK (Software Development Kit). Additionally, it supports internal cellular modem and secure M2M (machine to machine) remote access VPN gateway function. This is an ideal development platform to build custom IoT gateways quickly for your industrial machines. It minimizes the initial hardware development investment and driver development costs thus reducing your time to market.
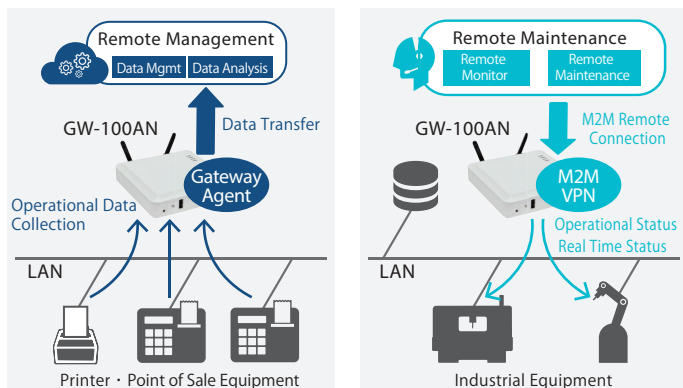
Key Features

❶ Mass Production Ready

Customers can focus their resources on building applications. Silex offers services to integrate those applications and take your product from proof of concept to mass production. We can build and support your product exactly how you need it.

LTE Communication

MP Ready Scalable

☞ Benefits
- Minimize Development Cost
- IoT Cloud Gateway Function
- Hardware / Software
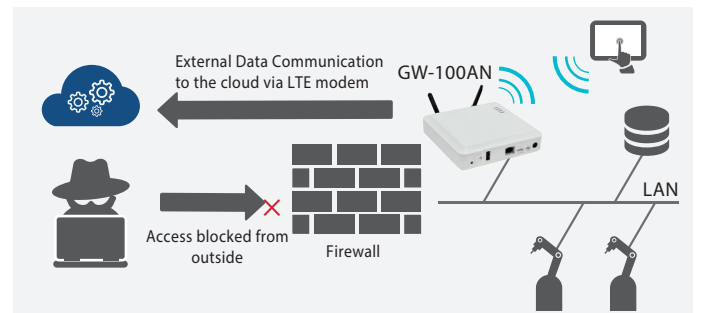
❷ M2M VPN Functions and Service Support

Supports MQTT protocol which is ideal for IoT devices and services to exchange data. The "Cloud Gateway Function*" can be used to visualize data using the cloud. The "M2M Remote Connection Function" enables remote maintenance to increase operational efficiency.

Remote Management
Data Mgmt Data Analysis

GW-100AN Data Transfer
Gateway Agent
Operational Data Collection
LAN
Printer・Point of Sale Equipment

Remote Maintenance
Remote Monitor Remote Maintenance

GW-100AN M2M Remote Connection
M2M VPN
Operational Status Real Time Status
LAN
Industrial Equipment

* Compatible with Kii Corporation's IoT Platform and Asset Monitoring Solution. Status monitoring, failure detection and repair request for various devices in the Cloud App can be built quickly.
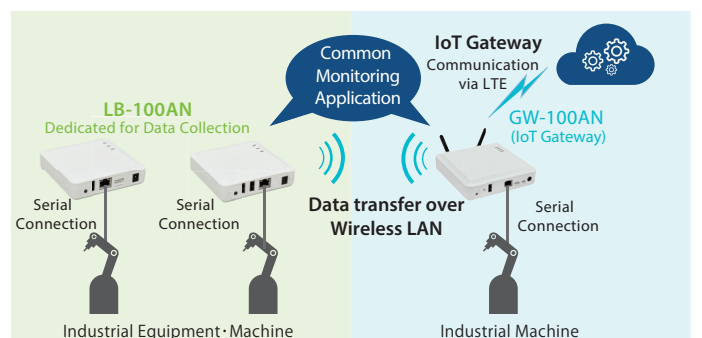
❸ Secure IoT Cloud Gateway Support

By using the built-in LTE modem, GW-100AN can be used for remote data collection and monitoring. The firewall installed in the built-in module blocks packets from outside (on WAN side), making the internet connection secure.

External Data Communication to the cloud via LTE modem
GW-100AN
Access blocked from outside Firewall
LAN

❹ Development Environment Compatible with LB-100AN

The GW-100AN architecture is based on the LB-100AN design, which adds on internal cellular modem for LTE communication. What this means is that applications built on the development platform can be shared back and forth easily between the LB-100AN and GW-100AN resulting in cost savings and faster time to market.

IoT Gateway Communication via LTE
Common Monitoring Application
LB-100AN Dedicated for Data Collection
GW-100AN (IoT Gateway)
Serial Connection Serial Connection Data transfer over Wireless LAN Serial Connection
Industrial Equipment・Machine Industrial Machine

Product Specification

Product Name	GW-100AN (WLAN + LTE)	GW-100 (LTE Only)
CPU	Marvel (SoC) Armada 370 88F6W11 CPU Clock=800MHz	

Memory	ROM	SPI Flash ROM 32Mbyte
	RAM	DDR3 1066 Memory 512Mbyte
	MMC	eMMC 2Gbyte (Pseudo SLC)

Wired LAN

Interface	RJ-45 x 1 (Ethernet)
Ethernet Specification	10BASE-T/100BASE-TX/1000BASE-T (auto-recognition)

Wireless LAN

Wi-Fi Specification	IEEE 802.11 a/b/g/n 2Tx2R	Not Applicable (Wired Only)
Antenna	Built-in Dual Band (2.4GHz/5GHz)	

LTE Modem

Specification	LTE Cat.1 * 1 (Gemalto ELS31-J)
SIM Card Type	Micro SIM Card
Antenna	External x 2

Device Interfaces

USB	USB: x1 (USB2.0 Hi-Speed Type-A)
Serial	Serial: x2 (RS-232C: external 5pin, UART: 4pin for internal debugging)

Other Interfaces

Switch	Push Button Switch: x1
LED	Body (Case Top) x 4 Link LED and Status LED (RJ45 x 2)

Additional Details

Operating Environment	Temperature : 0 to + 40 ℃ Humidity : 20 to 80% RH (no condensation)	
Storage Environment	Temperature : -10 to + 50 ℃ Humidity : 20 to 90% RH (no condensation)	
Power Supply	AC 100-240V (operating voltage: 12V) ; DC24V	
Max. Power Consumption	9.6W (DC12V , 0.8A)	8.4W (DC12V , 0.7A)
Dimension	W:130mm x D:130mm x H:32mm	
Weight	270g	260g
Configuration Method	WEB Browser	
Compliance Standards	VCCI Class B, RoHS Directive	
Included Items	Main Unit, LTE Antenna, AC Adapter, Setup Guide, GPL statement, Warranty Card.	

- Band1(2G), Band19(800MHz) Support
  The maximum transmission speed of LTE Cat.1 is 5Mbps upstream and 10Mbps downstream.
- A micro SIM card compatible with NTT Docomo's LTE (Xi ©) and MVNO using NTT DoCoMo LTE network can be used. Micro SIM card and mobile communication service are sold separately.
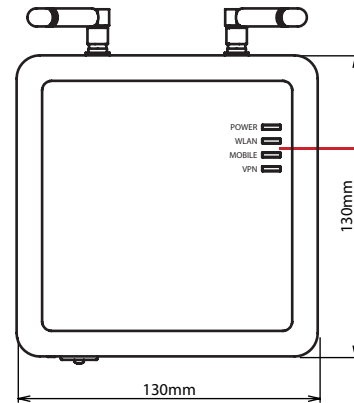
SKU's

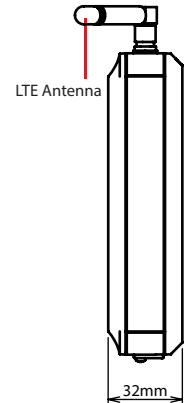| Model	Deliverable	Details	Price
GW-100AN	Main Unit	Main hardware platform x 1	Contact Sales
	Development Kit	Development kit sold seprately (DVD)	Contact Sales
GW-100	Main Unit	Main hardware platform x 1	Contact Sales
	Development Kit	Development kit sold seprately (DVD)	Contact Sales

- Development kit is required for customers to develop and incorporate Linux applications into the product. The deliverable is provided on a DVD separately and includes the development environment including toolchain, libraries and documentation. The virtual environment is Debian 7.1 (32bit).
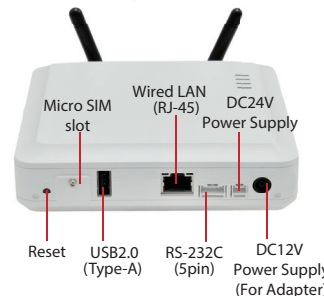
Mechanical Drawing

● Top View

● Side View

LED's

LTE Antenna

130mm

130mm

32mm

● Interfaces / Ports

Micro SIM slot

Wired LAN (RJ-45)

DC24V Power Supply

Reset

USB2.0 (Type-A)

RS-232C (5pin)

DC12V Power Supply (For Adapter)

Serial & DC24V Power Supply Connector Specification

- External RS-232C Connector
  Model : JST S05B-PASK-2
  Pin Assignment : 1.TXD, 2.RTS, 3.RXD
  4.CTS, 5.GND

- DC 24V Power Connector
  Model : JST S03B-PASK-2
  Pin Assignment : 1.NC, 2.GND, 3.VCC

When using DC24V power supply, a separate cable needs to be prepared per the above specifications.

Accessories (Sold Separately)

Item	Description	Price
RS-232C Serial Cable	5pin – DSUB 9pin (Conversion Cable) (Cable Length 1.5m)	Contact Sales

Other Similar Products

Linux Box for Custom Applications LB-100AN (IoT Gateway)

Silex hardware with Linux OS for embedded applications supports both wired and wireless LANs. Silex's proven hardware supporting a dual band wireless LAN and development kit includes a wireless LAN driver enabling customers to embed their services and applications by in to their products

- CPU: Marvell Armada370 / Clock 800MHz
- 32Mbyte ROM / 4Gbyte eMMC built-in storage (MLC)
- RJ-45 x1: 10BASE-T, 100BASE-TX, 1000BASE-TX (auto recognition)
- IEEE 802.11a / b / g / n (2.4GHz / 5GHz)

Hardware Compatibllity with Wireless Bridge BR-300AN

BR-300AN is a wireless bridge device which can easily convert a 10/100/1000BASE-T wired LAN device to a wireless LAN device. It supports a wireless LAN communication in the 2.4GHz and 5GHz bands and enables a wired LAN device to join in a wireless LAN environment easily.

- 10BASE-T, 100BASE-TX, 1000BASE-T (auto recognition)
- IEEE 802.11a/b/g/n (2.4GHz / 5GHz)
- Supports two types of operation modes, single client mode, multi-client mode
- WEP, WPA, WPA2, IEEE 802.1X EAP authentication for enterprise security
- Easy configuration via LAN cable.

Any questions about the product? Contact our customer support team!

https://www.silextechnology.com/support/contact-silex-support

ISO 9001 JQA-2667

ISO 14001 JQA-EM3813