

SE5201B-M1

Low Power Consumption Gateway LTE Cat-M1



FEATURE HIGHLIGHTS

Comprehensive Connectivity

- Global LTE Cat M1 & Cat NB2 with GSM fallback
- Support LTE-M 450 MHz – EU Version
- 2x 100 Base TX RJ 45, 1 RS 232/485 Ports
- 1 DI & 1 DO I/O Interface

Compact and Robust Design

- Low standby Power Consumption (~100 mW)
- Dimensions: 136 x 95 x 30 mm
- Industrial EMC Protection
- -30°C to +75°C Operation

Reliable & Trustworthy Platform

- Dual SIM auto Failover
- Secure VPN and Firewall Isolation
- LED indicators for signal reception

Other Features

- SD Slot for Configuration and Storage
- GNSS Positioning and Optional TPM Module
- Schedulable Power Management

Quick Deployment & Management

- ATOP NIMBL Device Management

High Quality Guaranteed

- Made in Taiwan with 5 Years Warranty

* Coming soon

PRODUCT DESCRIPTION

ATOP SE5201B-M1 IoT gateway offers multi-mode connectivity, supporting the 3GPP Release 14 protocol standards (LTE Cat M1/LTE Cat NB2/EGPRS). In an LTE Cat M1 network, it can achieve a maximum uplink speed of 1119 kbps and a maximum downlink speed of 588 kbps. Featuring low standby power consumption, schedulable power management, high EMC protection, wide-temperature operation, dual SIM failover, and rugged metal housing, this gateway is ideal for IoT applications that demand environmental resilience, redundancy, and power efficiency.

Low Standby Power Consumption



The SE5201B-M1 is ideal for a wide range of low-throughput, ultra-low power consumption applications, including industrial sensors and smart metering, agriculture automation and more. These devices periodically wake up to transmit small amounts of data before returning to sleep mode. Designed with efficiency in mind, the SE5201B-M1 also helps you save on monthly ISP fee.

Exceptional Security



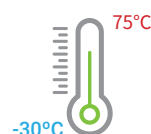
Integrating Firewall, Zone forwarding, and VPN functions, ATOP SE5201B-M1 allows you to connect your industrial network to the internet without fearing intrusions to your organization data.

Expandable SD Storage



SE5201B-M1 reserves the flexibility to extend its storage capacity through a built-in SD slot, so you can store more data on the IoT gateway for work efficiency as well.

Endurance of Harsh Environments

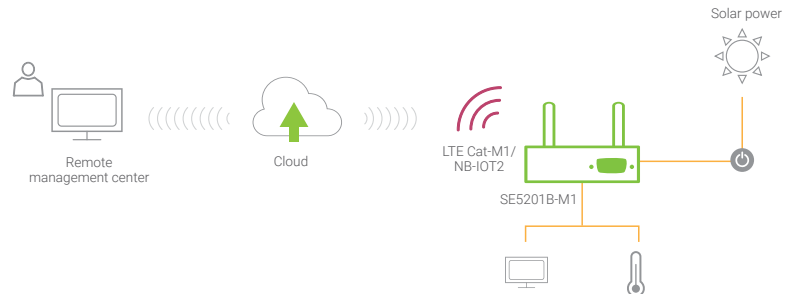


ATOP SE5201B-M1 is proven to run at its maximum loading in the harshest EMC and climate environments.

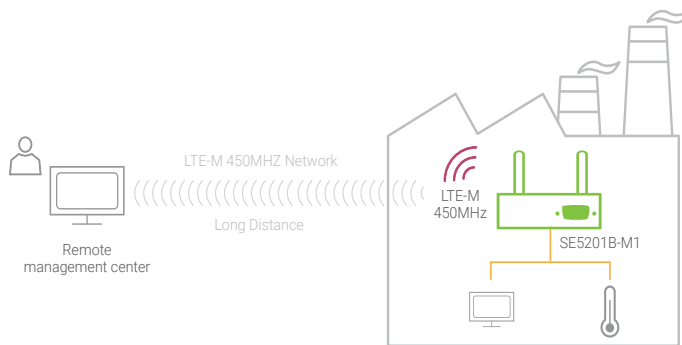
APPLICATIONS

As a Low Power Consumption IoT Gateway

SE5201B-M1 can act as a low power consumption gateway. Through its smart power management mechanism, the device switches to sleep mode or hibernation mode during non-service phases, and can be woken via scheduled management policies to serve functions when needed. It is especially suited where power supply is limiting, such as in systems powered by solar batteries.

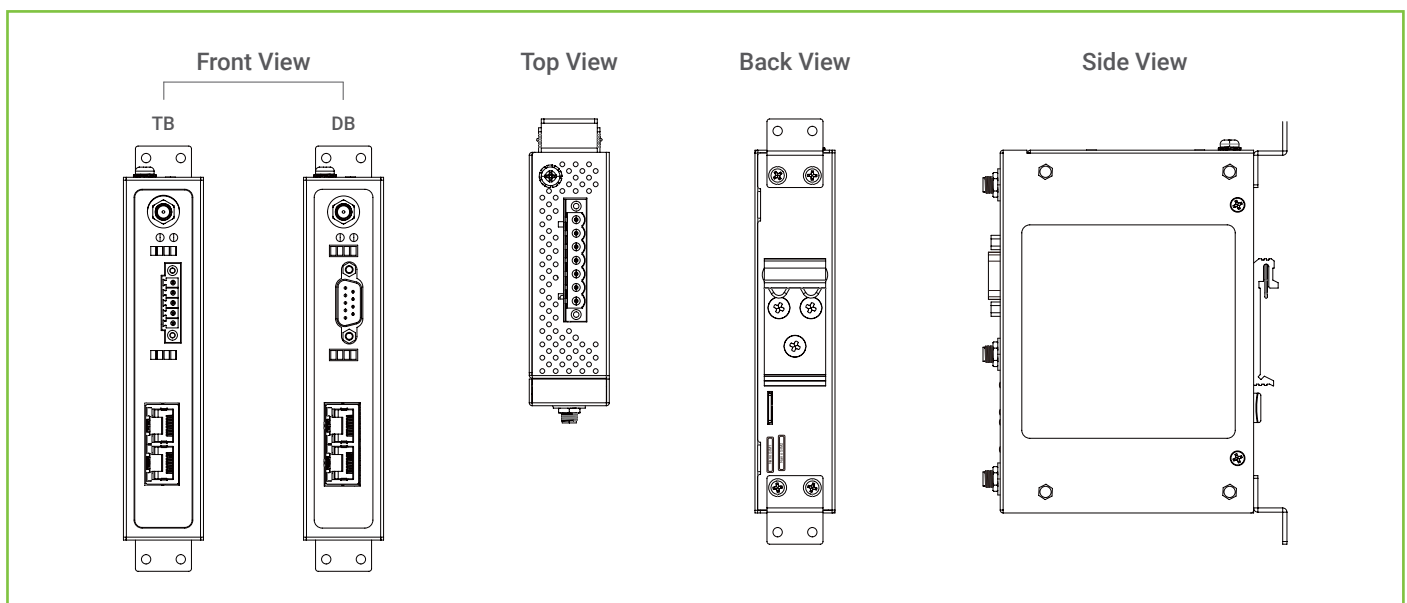


LTE-M 450MHz IoT Gateway for Suburban, Indoor, and Basement LTE Signal-Challenged IoT Applications



Introducing our advanced SE5201B-M1 LTE-M 450MHz IoT Gateway, designed specifically to address LTE signal challenges in suburban, indoor, and basement environments. This powerful gateway ensures reliable connectivity for your IoT applications, even in areas where LTE signals are typically weak or unreliable.

DIMENSIONS & LAYOUT



SPECIFICATIONS

Hardware Specifications	
Model Name	SE5201B-M1
Cellular Interfaces	
Standards	LTE Cat M1 & Cat NB2 with GSM fallback
Ethernet Interfaces	
Standards	802.3 for 10BaseT(X) 802.3u for 100BaseT(X)
Ports	2 x RJ-45 10/100 BaseT(X), 1.5kV isolation
GNSS	
Standards	GPS/GLONASS/BeiDou/Galileo/QZSS
Serial Interfaces (SE5201B only)	
Connector Type	9-Pin D-Sub or 5-Pin Terminal Block
Ports	1 x RS-232/RS-485-2W, software selectable
Baud Rate	1200 to 460,800 bps
Parity	None, Odd, Even
Data Bits	5, 6, 7, 8, software selectable
Stop Bits	1, 2, software selectable
Flow Control	None, Xon/Xoff, RTS/CTS (RS-232 only)
Terminal Resistor (Ω)	120
Pull High/Low Resistor (Ω)	On: 1K; Off: 100K
External I/O Interfaces (SE5201B only)	
Digital Input & Output	1 x DI, Photo coupled isolated (5VDC) 1 x DO Normal Open Digital Relay Output (1A@ DC 24V)
Default/Reset Button	1 key
Mode Button	1 key
SIM card slots	2 push-pull SIM card holder
SD Slot	1x Micro SD slot
LED Indicators	
Power LED	1x Green LED
Run LED	1x Green LED
COM LED	1x Tx Green LED; 1x Rx Green LED
DI/DO LED	1x DI LED; 1x DO Green LED
LTE Signal	4X Green LED

SPECIFICATIONS

Antennas	
Cellular	1 x SMA(M) Antenna for LTE Cat.M1
GNSS (Optional)	1 x Wide-Band
Power Characteristics	
Connector Type	Terminal Block
Rated Voltage	9 to 48 VDC
Input Voltage	9 to 48 VDC
Power Consumption (SE5201B only)	Idle < 3W@12VDC; Hibernate ~ 100mW@12VDC
Reverse Polarity Protection	Yes
Physical Characteristics	
Housing	Metal housing, IP30 Protection
Dimension (W x H x D)	136 x 95 x 30 mm
Weight	550g
Installation	DIN-Rail, Wall mount (Optional)
Reset Button	Yes
Environmental Limits	
Operating Temperature	-30 to +75 °C
Storage Temperature	-40 to + 85 °C
Ambient Relative Humidity	5% to 95% (non-condensing)
Ingress Protection Rating	IP30
Software Specifications	
Protocols	TCP/IP, UDP, ARP, DHCP, SMTP, SNMP, Https, SNMP v1/v2/v3
Security	OpenVPN, IPSEC, L2TP
Virtual COM	Yes
Firewall	ACL, NAT, Port-forwarding
VPN	IPSEC, OpenVPN, L2TP
System Management	WEB, SSH, Telnet
Power Management	Scheduled power management - Sleep mode - Hibernation mode Multi waken-up mechanisms from sleep/hibernation modes - Timer

REGULATORY APPROVALS

Regulatory Approvals				
Safety	EN62368-1, IEC62368-1			
EMC	EN55032, EN61000-6-4, EN55035, EN61000-6-2, FCC Part 15B			
CE	Cellular	EN301489-1/-52, EN301908-1		
	GNSS	EN303413, EN301489-19		
FCC	FCC Part 15B, Part 22H/24E/27L/90			
Test	Item		Value	Level
IEC 61000-4-2	ESD	Contact Discharge Air Discharge	±4KV ±8KV	2 3
IEC 61000-4-3	RS	Enclosure Port	10 (V/m) , 80-1000MHz 3 (V/m), 1.4-6.0GHz	3 3
IEC 61000-4-4	EFT	DC Power Port Signal Port	±1.0KV@ 5.0kHz ±1.0KV @ 5.0kHz	2 3
IEC 61000-4-5	Surge	DC Power Port Signal Port	Line-to-Line ±0.5KV Line-to-Earth ±1.0KV Line-to-Earth ±1.0KV	2 2 2
IEC 61000-4-6	CS	DC Power Port Signal Port	10V, 150KHz to 80MHz, 80%AM 10V, 150KHz to 80MHz, 80%AM	3 3
IEC 61000-4-8	PFMF	Enclosure	30A/m (r.m.s), 50Hz or 60Hz	4
Shock	IEC 60068-2-27			
Freefall	IEC 60068-2-32			
Vibration	IEC60068-2-64			
Others	- ROHS, including 2015 amendment - REACH - TSCA (US) - TPCH (US) - Conflict mineral free			
MTBF	20 Years			
Warranty	5 years			

ORDERING INFORMATION

Ordering information-M1					
Model name	Description				
	Part Number	Cellular	Band	RS232/485 Serial Port	SIM Slots
SE5201B-Q-T-M1-DB-EU	1P1SE5201B001BG	LTE Cat.M1	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B31/B66/B72/B73/B85	1x DB9	2
		LTE NB2*	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B31/ B66/B72/B73/B85		
SE5201B-Q-T-M1-TB-EU	1P1SE5201B001CG	LTE Cat.M1	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B31/B66/B72/B73/B85	1x TB5	2
		LTE NB2*	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B31/ B66/B72/B73/B85		
SE5201B-Q-T-M1-DB-US	1P1SE5201B000BG	LTE Cat.M1	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B66/B85	1x DB9	2
		LTE NB2*	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B66/ B71/B85		
SE5201B-Q-T-M1-TB-US	1P1SE5201B000CG	LTE Cat.M1	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B66/B85	1x TB5	2
		LTE NB2*	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B66/ B71/B85		
SE5201B-Q-T-M1-DB-LA	Contact Headquarters	LTE Cat.M1	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B66/B85	1x DB9	2
LTE NB2*		B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B66/ B71/B85			
SE5201B-Q-T-M1-TB-LA		LTE Cat.M1	B1/B2/B3/B4/B5/B8/B12/B13/ B14/B18/B19/B20/B25/B26/B27/ B28/B66/B85	1x TB5	2
		LTE NB2*	B1/B2/B3/B4/B5/B8/B12/B13/ B18/B19/B20/B25/B26/B28/B66/ B71/B85		

*Certification pending; proceeding based on requirements.

Optional Accessories

Model name	Part Number	Description
UN315-1212(US-Y) LV6	50500151120003G	Y-Type (5.08 mm) adaptor, 100-240VAC input, 1.25A @ 12VDC output, US plug
UNE315-1212(EU-Y) LV6	50500151120013G	Y-Type (5.08 mm) adaptor, 100-240VAC input, 1.25A @ 12VDC output, EU plug
WALL MOUNT-P13	70100000000082G	SECC Wall mount Kit