SE5901B Series

4G LTE Cellular to Ethernet and Serial Secure Industrial Gateway

aws qualified device Internet of things

FEATURE HIGHLIGHTS

- LTE Band Support
  - EU: 2100/1800/850/2600/900/800 MHz (B1/B3/B5/B7/B8/B20)
  - US: 1900/1700/850/700/600 MHz (B2/B4/B5/B12/B13/B14/B66/B71)
- VPN over IPsec, OpenVPN or PPTP, data-rate up to 37.9Mbps*
- Wide temperature, industrial grade platform
- 1 x 10/100/1000Mbps Ethernet port
- 1-port RS-232/485, baud rate up to 921.6 kbps
- Integrated firewall, DMZ, port forwarding, DDNS, ICMP ping
- TCP Server/Client, UDP, Virtual COM supported
- 2 digital inputs/ 2 digital outputs in I/O version
- Additional embedded power-bank for fault-relay capability (-B version)

PRODUCT DESCRIPTION

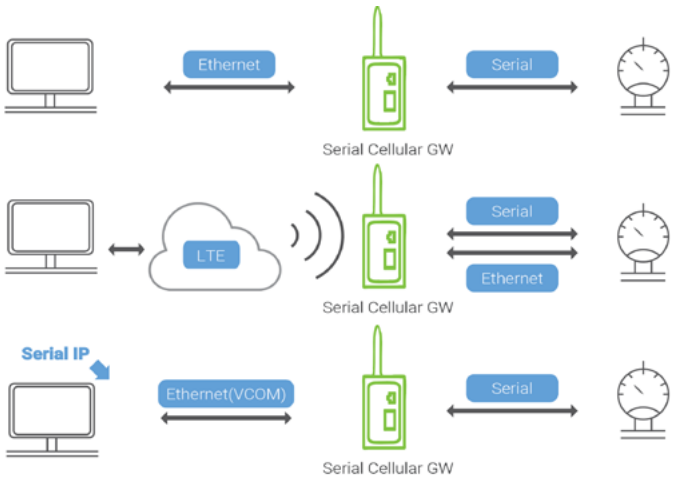
Providing connectivity for the Internet of Things

SE5901B, ATOP's Industrial Serial to Ethernet and Cellular Gateway is a high-performance, cost effective gateway for serial signal communications. It can connect almost any serial device to the Ethernet network, providing connectivity to the world while at the same time protecting your network from intrusions. It provides *up to 37.9Mbps* software-assisted AES encryption for protecting your data flow through the Internet with a secure IPsec VPN tunnel.*

Advanced features available

Flexible configuration options enable this unit to be set up over Ethernet by Telnet, Web Browser, or our Windows Utility.

A dedicated *I/O version* provides 2 digital inputs and 2 digital outputs, *a GPS version* provides Global Positioning System geolocation, and specifically for the Internet of Things, a *"B" version* provides additional 15 seconds power during a power failure, allowing the device to relay back to the host the failure. This is Maintenance 4.0.



Rugged and flexible for advanced developments

SE5901B embeds *high EMC protection, wide temperature operation*, programming and installation flexibility in one device. *SDK versions* allow you to make use of the powerful hardware and develop your own applications on top of ATOP's reliable APIs, with plenty of coding examples included. SDK versions are available upon request. Please contact ATOP's representative for additional information.

** test carried out with one VPN-IPsec Tunnel, Peer-to-Peer mode, Ethernet cable. Performance can change based on the cellular network.*

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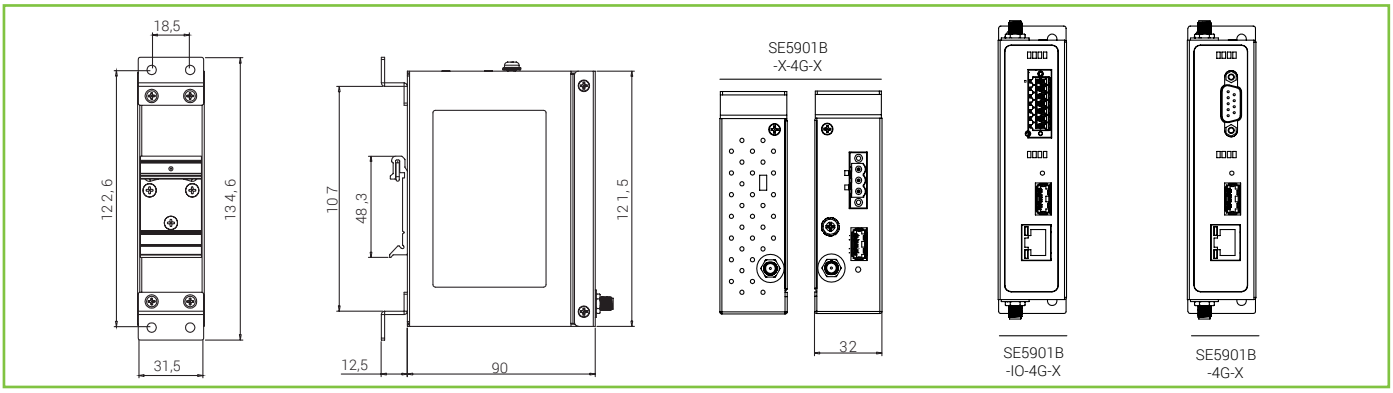
SPECIFICATIONS

Wireless Interface				
Standard	WCDMA/ DC-HSPA+/ LTE			
Antennas/ SIM card	(4G) - Included. Internal SIM card slot (x1)			
Band Options	Version	Standard	Bands	
	EU	FDD LTE TDD LTE WCDMA	2100/1800/850/2600/900/800MHz (B1/B3/B5/B7/B8/B20) 2600/2300/2500MHz (B38/B40/B41) 2100/850/900MHz (B1/B5/B8)	
	US	FDD LTE WCDMA	1900/1700/850/700/600bMHz (B2/B4/B5/B12/B13/B14/B66/B71) 1900/1700/850MHz (B2/B4/B5)	
Data Rate	Version	Standard	Downlink Speed	Uplink Speed
	EU	LTE-FDD LTE-TDD DC-HSPA+ WCDMA	150 Mbps 130 Mbps 42 Mbps 384 kbps	50 Mbps 30 Mbps 5.76 Mbps 384 kbps
	US	LTE-FDD DC-HSPA+ WCDMA	150 Mbps 42 Mbps 384 kbps	50 Mbps 5.76 Mbps 384 kbps
Network Interface				
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT(X)			
Ethernet Port	1x 10/100/1000BASE-TX RJ-45			
Serial Interface				
Connector	D-Sub9 RS-232/485 software selectable (DB model) 14-Pin 5.08mm Terminal Block (integrated with DI/DOs)			
Port	1 port RS-232/485 (2-wire) software selectable 1 port RS-232 (IO model only)			
Configuration	Baud Rate Data Bits Stop Bits Flow Control	1,200 to 921,600bps software selectable 7, 8 software selectable 1, 2 software selectable None, Xon/Xoff, RTS/CTS (RS-232 only)		
Universal Serial Bus				
USB ports	2 x USB A Type (USB 2.0) - 1-port High-Speed OTG + 1-port power only			
Digital Inputs/Outputs (IO Models)				
Digital Inputs (DIs) Digital Outputs (DOs)	2 channels photocoupled isolated digital input 2 channels digital output. N.O. (2A@24VDC)			

GNSS (GPS Models)	
Supported GNSS	GPS, Glonass, Beidou
Connector	1x SMA
Software	
Serial Server-related	VirtualCOM (Serial/IP), Virtual Server (port forwarding)
Security	IPsec, PPTP or OpenVPN VPN tunneling. Max VPN throughput 37.9Mbps *; SMTP/TLS, Firewall, DMZ
Network	ARP, IPv4, DHCP Client, ICMP, TCP, UDP, HTTP, RFC2217,TELNET, NTP Client, NAT, Port Forwarding, ICMP Ping, DDNS
Management	Web, ATOP Device Management Utility, SNMPv1/v2c/v3, SMS
Configuration	Embedded Web-Server (Web UI), TELNET, ATOP Device Management Utility
Link Mode	
TCP Server TCP Client UDP	4 connections, Virtual COM, or Reverse Telnet Dual destination or Virtual COM Up to 4 ranges of IPs
Power	
Input Voltage	9 to 48 VDC
Connector	3-Pin 5.08mm Lockable Terminal Block
Power Consumption	0.65A@12 VDC (Approx. 7.8W)
Power Redundancy	USB DC 5V Power Input
Reverse Polarity Protection	Yes
Environmental limits	
Operating Temperature	-40°C to +70°C (-40°F to +158°F)
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Ambient Relative Humidity	5% to 95% (non-condensing)
Mechanicals	
Housing	IP30 protection, SPCC metal housing
Dimensions(W x H x D) Weight	32mm x 122mm x 92mm 400g
Installation	DIN-Rail or Wall-Mount (optional kit)
Reset Button	Yes

** test carried out with one VPN-IPsec Tunnel, Peer-to-Peer mode, Ethernet cable. Performance can change based on the cellular network.*

DIMENSIONS & LAYOUT



REGULATORY APPROVALS

Regulatory Approvals				
Safety	CB (IEC/EN62368-1 & IEC/EN60950-1), UL60950-1			
EMC/Radio	FCC 47 CFR PART 22H, FCC 47 CFR PART 24H, FCC PART 27L, FCC Part 15B, EN301489-1, EN301489-7, EN301489-19, EN301489-24, EN301489-52, EN301511, EN301908-1, EN303413, ETSI EN300440-1/-2 EN55032,EN55024, EN61000-6-2, EN61000-6-4			
Test	**Item**		**Value**	**Level**
IEC 61000-4-2	ESD	Contact Discharge Air Discharge	±6kV ±8kV	3 3
IEC 61000-4-3	RS	Enclosure Port	10(V/m), 80-1000MHz	3
IEC 61000-4-4	EFT	DC Power Port Signal Port	±2.0kV ±1.0kV	3 3
IEC 61000-4-5	Surge	DC Power Port DC Power Port Signal Port	Line-to-Line±1.0kV Line-to-Earth±2.0kV Line-to-Earth±2.0kV	3 3 3
IEC 61000-4-6	CS	0.15-80MHz	10V rms	3
IEC 61000-4-8	PFMF	(Enclosure)	AC 50Hz 30A/m	3
Shock	MIL-STD-810G Method 516.7			
Drop	MIL-STD-810G Method 516.7			
Vibration	MIL-STD-810G Method 514.7			
RoHS	Yes			
MTBF	20.88 years according to MIL-HDBK-217F (Model average)			
Warranty	5 years			

ORDERING INFORMATION

Ordering information

Model name	Part Number	Cellular	Serial Ports	I/O	Other
SE5901B-4G-US	1P1SE5901B4G03G	4G (US)	1 (DB9)	-	-
SE5901B-IO-4G-US	1P1SE5901BIO04G	4G (US)	1 (TB) +1 RS232	2/2	-
SE5901B-IO-4G-GPS-US	1P1SE5901BIO06G	4G (US)	1 (TB) +1 RS232	2/2	GPS
SE5901B-4G-B-US	1P1SE5901B4G04G	4G (US)	1 (DB9)	-	Battery
SE5901B-IO-4G-B-US	1P1SE5901BIO05G	4G (US)	1 (TB) +1 RS232	2/2	Battery
SE5901B-IO-4G-GPS-B-US	1P1SE5901BIO07G	4G (US)	1 (TB) +1 RS232	2/2	GPS - Battery
SE5901B-4G-EU	1P1SE5901B4G13G	4G (EU)	1 (DB9)	-	-
SE5901B-IO-4G-EU	1P1SE5901BIO14G	4G (EU)	1 (TB) +1 RS232	2/2	-
SE5901B-IO-4G-GPS-EU	1P1SE5901BIO16G	4G (EU)	1 (TB) +1 RS232	2/2	GPS
SE5901B-4G-B-EU	1P1SE5901B4G14G	4G (EU)	1 (DB9)	-	Battery
SE5901B-IO-4G-B-EU	1P1SE5901BIO15G	4G (EU)	1 (TB) +1 RS232	2/2	Battery
SE5901B-IO-4G-GPS-B-EU	1P1SE5901BIO17G	4G (EU)	1 (TB) +1 RS232	2/2	GPS - Battery
SE5901B-IO-4G-GPS-B-US (for Marine)	1P1SE5901BIO0TG	4G (US)	1 (TB) +1 RS232	2/2	GPS - Battery
SE5901B-4G-B-US (for Marine)	1P1SE5901B4G0CG	4G (US)	1 (DB9)	-	Battery

Optional Accessories

Model name	Part Number	Description
UN315-1212(US-Y) LV6	505001511200003G	Y-Type (5.08 mm) adaptor, 100-240VAC input, 1.25A @ 12VDC output, US plug
UNE315-1212(EU-Y) LV6	505001511200013G	Y-Type (5.08 mm) adaptor, 100-240VAC input, 1.25A @ 12VDC output, EU plug
ADP-DB9(F)-TB5	59906231G	Female DB9 to Female 3.81mm TB5 Converter
WMK-315-Black	701000000000050G	Black Aluminum Wall Mount Kit