100% Made & Designed in Italy

S6001

ALL-IN-ONE REMOTE TELEMETRY AND CONTROL UNITS

RTUs for power generation, gas, water telecontrol systems and public networks

RTUs for power transmission and distribution based on IEC 80870-101/104 and IEC 61850 protocols

RTUs for pumping and pressure boosting systems



SENECA

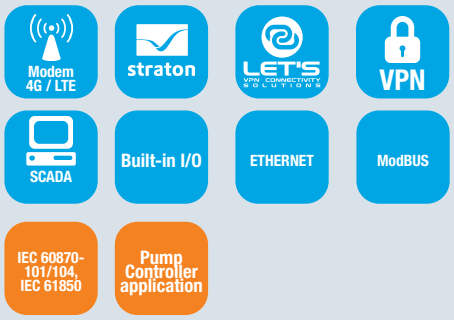
www.seneca.it

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S6001 - ALL-IN-ONE REMOTE TELEMETRY AND CONTROL UNITS

The SENECA **S6001** devices are a perfect combination between automation and remote control. The all-in-one solution concentrates I/O, control logic and communication system in one device. The synthesis of compatible platforms and the most widespread technological standards offers the user the opportunity to improve the efficiency and quality of investments in their applications. The S6001 family can be integrated with SENECA and third-party hardware as well as with LET'S remote assistance platform. It also benefits from flexible programming tools and dedicated libraries for remote monitoring.

- ✔ **All-in-one RTU range for multi-sector telecontrol applications**
- ✔ **4G / LTE, Ethernet, Serial communication**
- ✔ **24/7 Remote control installations**
- ✔ **Archiving and sending data with VPN / SSL security technology**
- ✔ **Real-time management via SMS / email and alarm history**
- ✔ **Automation of water pumping stations**
- ✔ **Energy monitoring**
- ✔ **Maintenance Optimization Services**
- ✔ **Reduction operational costs**



VERSIONS

S6001-RTU

RTU WITH BUILT-IN I/O, 4G/LTE MODEM AND STRATON PROGRAMMING SYSTEM



The **S6001-RTU** is a compact all-in-one telecontrol unit with 31 channels. Thanks to the extended connectivity (4G, Ethernet, Serial) the unit is expandable and can be interfaced with other systems through the support of protocols (ModBUS TCP-IP, ModBUS RTU) and allows communications to and from central units and the remote monitoring of the plants. Using the IEC 61131 Soft Logic on Straton platform, S6001-RTU can be used as a stand-alone control system.
Features of compactness and technological concentration of the S6001-RTU allow a significant reduction in costs and an optimization of intervention times in remote control applications for water and general purpose networks.

S6001-RTU-E

RTU WITH BUILT-IN I/O, 4G/LTE MODEM, STRATON PROGRAMMING SYSTEM, ENERGY PROTOCOLS



For energy applications the controller **S6001-RTU-E** provides for the support for IEC 60870-101 / 104 and IEC 61850 communication protocols. The unit it can be used as a redundant controller for plant automation, management energy produced, management of renewable energy plants (biomass, photovoltaic, wind power), smart grids, distributed networks, etc. It is also settable as a web server, gateway and TCP-IP node that can be integrated with SCADA supervision platforms, EMS and Web.
S6001-RTU-E integrates Straton programmable logic control and offers a flexible solution for automation, remote control and communication in the field of power grids where high performance and system availability are among the essential requirements

S6001 PUMP CONTROLLER

RTU WITH BUILT-IN I/O, 4G/LTE MODEM AND PUMPING / PRESSURE BOOSTING SYSTEMS, HMI 7"



S6001 Pump Controller is a controller for pumping and pressure boosting systems fit to manage from 2 to 6 pumps (with possible expansion I/O modules Z-D-IO), with constant regulation of flow, level and pressure and exchange running by inverter. S6001 Pump Controller allows you to receive commands via SMS (on / off, auto / man) to the pumping stations and to calculate the estimated flow based on the characteristic curve of motors. It also allows you to send information about the operating and alarm status following SMS commands. Basic configuration and management of alarms, trends and historical data is easily done through 7" touchscreen HMI.

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DATA COLLECTION, AUTOMATION, TELECONTROL AND REMOTE ASSISTANCE IN 1 DEVICE ONLY

I/O CHANNELS

Nr. 15 PNP digital inputs
Nr.2 Thresholds digital inputs
Nr.4 Analog inputs 0..20 mA
Nr.8 SPDT relay outputs
Nr.1 Analog output 0..10 V
Nr.1 Analog output 0..20 mA

Sensors | Actuators | Counters | Alarms | Analyzers | Thresholds

LOCAL CONTROL AND COMMUNICATION

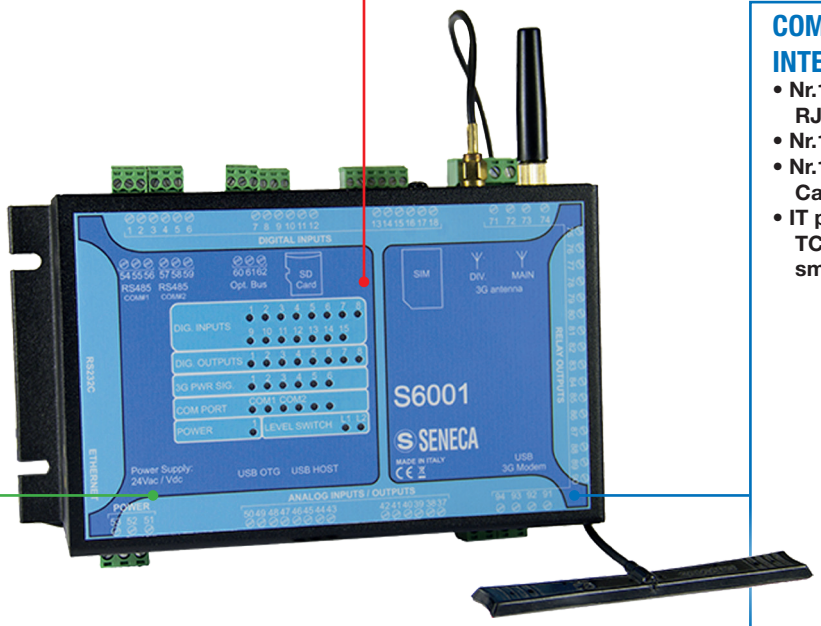
- CPU @32bit
- 1GB Flash Memory
- 64MB RAM
- Nr.1 RS232 serial port
- Nr.2 RS485 (ModBUS RTU) serial ports
- Nr.1 USB host port

straton
IEC 61131 programming

Data storage

Modbus network extension

Local devices connection



COMMUNICATION INTERFACES

- Nr.1 Fast Ethernet port, RJ45, 10/100 Mbps
- Nr.1 modem 4G LTE
- Nr.1 push-pull slot for Mini Card SIM
- IT protocols: ModBUS TCP, http. http ftp, sftp, smtp, ppp, Open VPN

Sending reports and alarms

Remote plant operator

SCADA / OPC / WEB / CLOUD open connectivity

PUMPS AND PRESSURIZATION BOOSTER CONTROL

S6001-PC

Pump Controller application managed by 7" HMI

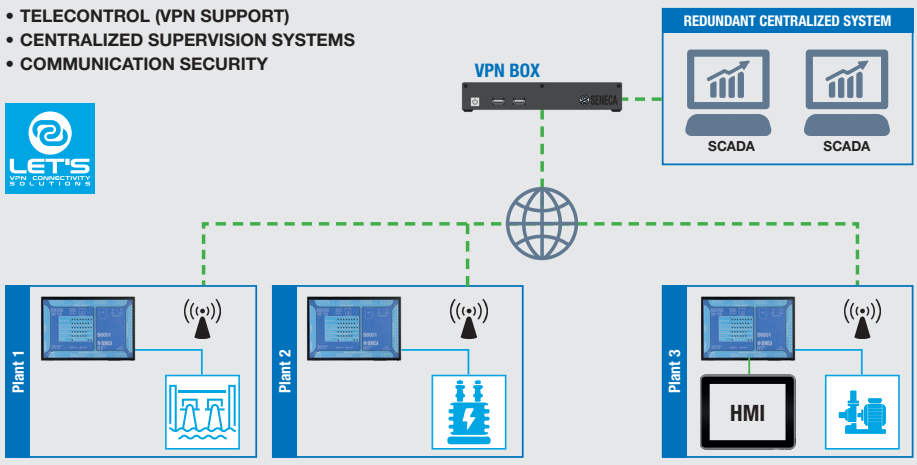
ENERGY APPLICATION

S6001-RTU-E

Electrical networks telecontrol compliant to IEC 60870-101/104 and IEC 61850 protocols

VPN REMOTE ASSISTANCE / REMOTE ACCESS

- TELECONTROL (VPN SUPPORT)
- CENTRALIZED SUPERVISION SYSTEMS
- COMMUNICATION SECURITY



S6001 controllers are fully integrable in LET'S, remote access SENECA platform, with the support VPN and SSL technology. LET'S supports up to 496 devices in Single LAN Telecontrol mode (always on) or Point-To-Point Remote Assistance (on demand). With the centralized software of server management, VPN BOX Manager, network configuration can be set up in a few steps.
On each client it runs VPN Client Communicator, an intuitive software which guarantees an easy remote access to machines and plants and by installation sites

S6001 - ALL-IN-ONE REMOTE TELEMETRY AND CONTROL UNITS

	S6001-RTU	S6001-RTU-E	S6001-PC
			
	RTU with built-in I/O, 4G modem and Straton programming system	**RTU with built-in I/O, 4G modem, Straton programming system and energy protocols**	**RTU with built-in I/O, 4G modem, pumps/pressure booster control, HMI 7"**
GENERAL DATA			
Power supply	24 Vac/dc	24 Vac/dc	24 Vac /dc
Power consumption	10 VA max, 6 VA (typical)	10 VA max, 6 VA (typical)	10 VA max, 6 VA (typical)
Removable terminals	0,2..2,5 mm2 (AWG 24-12)	0,2..2,5 mm2 (AWG 24-12)	0,2..2,5 mm2 (AWG 24-12)
Isolation	1.500 Vac	1.500 Vac	1.500 Vac
LED status indicators	Power supply Serial communication Ethernet communication GSM-UMTS signal level Digital I/O status	Power supply Serial communication Ethernet communication GSM-UMTS signal level Digital I/O status	Power supply Serial communication Ethernet communication GSM-UMTS signal level Digital I/O status
Protection degree	IP20	IP20	IP20
Operating temperature	-10..+65°C	-10..+65°C	-10..+65°C
Dimension	105 x 190 x 60 mm	105 x 190 x 60 mm	105 x 190 x 60 mm
Weight	720 g	720 g	1250 g
Enclosure	Coated aluminum	Coated aluminum	Coated aluminum
Connection	Removable terminals, conductors max dimension 2,5 mm^2	Removable terminals, conductors max dimension 2,5 mm^2	Removable terminals, conductors max dimension 2,5 mm^2
Mounting	35 mm DIN rail (IEC EN 60715)	35 mm DIN rail (IEC EN 60715)	35 mm DIN rail (IEC EN 60715)
COMMUNICATION			
Ethernet	Nr.1 Ethernet port 10/100 Mbps (RJ45)	Nr.1 Ethernet port 10/100 Mbps (RJ45)	Nr.1 Ethernet port 10/100 Mbps (RJ45)
RS485	Nr.2 RS485 ports from 110 bps to 115 kbps	Nr.2 RS485 ports from 110 bps to 115 kbps	Nr.2 RS485 ports from 110 bps to 115 kbps
RS232	Nr.1 RS232 port D9M	Nr.1 RS232 port D9M	Nr.1 RS232 port D9M
USB	Nr.1 USB port host A max current 300 mA	Nr.1 USB port host A max current 300 mA	Nr.1 USB port host A max current 300 mA
Modem / Router	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/ B20/B25/B26/B28 - LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 - GSM: B2/B3/B5/B GPS / GLONASS / BeiDou(compass) / Galileo / QZSS	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/ B20/B25/B26/B28 - LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 - GSM: B2/B3/B5/B GPS / GLONASS / BeiDou(compass) / Galileo / QZSS	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/ B19/ B20/B25/B26/B28 - LTE-TDD: B38/B39/B40/B41 WCDMA: B1/B2/B4/B5/B6/B8/B19 - GSM: B2/B3/B5/B GPS / GLONASS / BeiDou(compass) / Galileo / QZSS
Supported SIM card	Mini SIM type @ 3V with push-pull connector	Mini SIM type @ 3V with push-pull connector	Mini SIM type @ 3V with push-pull connector
Supported protocols	ModBUS RTU/TCP (Slave), http, ftp, sftp, smtp, snmp, ppp, Open VPN	ModBUS RTU/TCP (Slave), http, ftp, sftp, smtp, snmp, ppp, Open VPN, IEC 60870-101/104, IEC 61850	ModBUS RTU/TCP (Slave), http, ftp, sftp, smtp, snmp, ppp, Open VPN
LET'S - Remote Acces	Yes	Yes	Yes
INPUT DATA			
Channels	Nr.15 optoisolated digital inputs PNP (max voltage 24 Vdc) Nr.2 digital inputs for conductive level control, adjustable sensitivity Nr. 4 analog inputs 0..20 mA @12bit, accuracy ±0,3% f.s., impendance 50 Ohm	Nr.15 optoisolated digital inputs PNP (max voltage 24 Vdc) Nr.2 digital inputs for conductive level control, adjustable sensitivity Nr. 4 analog inputs 0..20 mA @12bit, accuracy ±0,3% f.s., impendance 50 Ohm	Nr.15 optoisolated digital inputs PNP (max voltage 24 Vdc) Nr.2 digital inputs for conductive level control, adjustable sensitivity Nr. 4 analog inputs 0..20 mA @12bit, accuracy ±0,3% f.s., impendance 50 Ohm
OUTPUT DATA			
Channels	Nr.8 SDPT relay output 5A - 250 Vac Nr.1 analog output 0..10 V, @12bit, accuracy ±0,3% f.s., min impedance 1kOhm Nr.1 analog output 0..20 mA, @12bit, accuracy ±0,3% f.s., max impedance 500 Ohm Nr.1 alarm output 12V/50mA	Nr.8 SDPT relay output 5A - 250 Vac Nr.1 analog output 0..10 V, @12bit, accuracy ±0,3% f.s., min impedance 1kOhm Nr.1 analog output 0..20 mA, @12bit, accuracy ±0,3% f.s., max impedance 500 Ohm Nr.1 alarm output 12V/50mA	Nr.8 SDPT relay output 5A - 250 Vac Nr.1 analog output 0..10 V, @12bit, accuracy ±0,3% f.s., min impedance 1kOhm Nr.1 analog output 0..20 mA, @12bit, accuracy ±0,3% f.s., max impedance 500 Ohm Nr.1 alarm output 12V/50mA
PROCESSOR / MEMORY			
CPU	32 bit, 400 MHz	32 bit, 400 MHz	32 bit, 400 MHz
Flash Memory (data)	1 GB	1 GB	1 GB
RAM / FeRAM	64 MB / 8 kB	64 MB / 8 kB	64 MB / 8 kB
Slot Micro SD	Yes for SD card up to 32 GB	Yes for SD card up to 32 GB	Yes for SD card up to 32 GB
SETTINGS			
PLC programming	Straton (IEC 61131-3)	Straton (IEC 61131-3)	Straton (IEC 61131-3)
System configuration	Z-NET4	Z-NET4	HMI app: pressure / flow / level (switch or probe) regulation from 2 to 6 pumps
Web server	Yes	Yes	Yes
Datalogger	Yes	Yes	Yes
STANDARDS			
Approvals	CE	CE	CE
Norms	EN 301489-1, EN 301511, EN 301489-7, 61000-6-4, EN 61000-6-2, EN 60950	EN 301489-1, EN 301511, EN 301489-7, 61000-6-4, EN 61000-6-2, EN 60950	EN 301489-1, EN 301511, EN 301489-7, 61000-6-4, EN 61000-6-2, EN 60950
HMI			
Display			TFT Color/LED 7", resistive touchscreen, 800x400
Memory			30 MB Flash / 512 MB DDR
Communication			Nr.1 RS232, Nr.1 Ethernet 10/100 Mbps, Nr. 1 USB host 2.0
Hardware clock			Clock/calendar with backup battery (< 100 ppm)
Rated voltage / current			18-32 Vdc / 0,3 A
Settings			Pumps, alarms, reports, trends, setpoints management

ORDER CODE

Code	Description
S6001-RTU	RTU with built-in I/O, 4G modem and Straton programming system
S6001-RTU-E	RTU with built-in I/O, 4G modem, Straton programming system and energy protocols
S6001-PC	RTU with built-in I/O, 4G modem, pumps/pressure booster control, HMI 7"
S6001-4GUPG	Upgrade and replacement of 3G Modem -4GLTE/WW c/o laboratory

For related software and accessories order codes please visit **www.seneca.it** in Products section

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