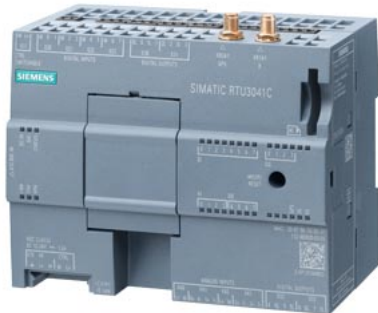


product type designation



RTU3041C

SIMATIC RTU3041C compact low-power RTU; battery or solar-operated; connection external power supply 10.8 V to 28.8 V DC; integrated modem for LTE-M/NB-IoT; GPS; Connection to TeleControl Server Basic; loadable protocols: DNP3, IEC 60870-5-104, SINAUT ST7 or MQTT; onboard I/Os: 8 DI, 8 DO, 4 AI; FTP client; Ethernet port, configuration/diagnostics via web server, time-of-day synchronization, SMS, email, SD card slot. Observe national approvals!

operating mode

Standby mode (Sleep mode), Actualization mode, Communication mode

transfer rate

transfer rate

• for Industrial Ethernet	10 ... 100 Mbit/s
• for GPRS transmission	
— with downlink / maximum	85.6 kbit/s
— with uplink / maximum	107 kbit/s
• for LTE-M transmission	
— with downlink / maximum	300 kbit/s
— with uplink / maximum	375 kbit/s
• for NB-IoT transmission	
— with downlink / maximum	21 kbit/s
— with uplink / maximum	62.5 kbit/s

interfaces

number of interfaces / according to Industrial Ethernet	1
number of electrical connections	
• at the 1st interface / according to Industrial Ethernet	1
• for external antenna(s)	2
• for power supply	1
number of slots	
• for SIM cards	1
• for memory cards	1
type of electrical connection	
• at the 1st interface / according to Industrial Ethernet	RJ45 port
type of electrical connection	
• for external antenna(s)	SMA socket (50 ohms)
• for power supply	5-pole pluggable terminal block
type of antenna	
• at connection 1 / connectable	mobile wireless antenna
• at connection 2 / connectable	Active GPS antenna
slot version	
• for SIM card	Mini SIM card, with adapter Micro SIM card also
• of the memory card	SD 1.0, SD 1.1, SDHC, Siemens SMC
storage capacity / of the memory card / maximum	32 Gbyte
design of the removable storage	
• C-PLUG	No

signal inputs/outputs

number of electrical connections / for digital input signals	8
type of electrical connection / for digital input signals	pluggable screw terminal block

digital input version	Suitable for open-drain transistor or switch, 2-wire-technique
number of electrical connections / as counter inputs / for digital input signals	2
pulse duration / at counter input / minimum	0.1 ms
pulse frequency / at counter input / maximum	5000 Hz
number of electrical connections / for digital output signals	8
type of electrical connection / for digital output signals	pluggable screw terminal block
digital output version	4DO bistable relay, 2-wire technology 4DO solid-state relay
output current / at digital output	300 mA; Limiting continuous current, with solid-state relays 60 mA
number of analog inputs / integrated	4
connector type / at the analog input	pluggable screw terminal block
type of analog input	2-/3-/4-wire-technique
product function / parameterizable analog inputs	Yes; Current 0/4..20mA, Voltage 0..5/10V, Temperature (Pt1000) -80..+140°C
A/D resolution / at the analog input	12 bit

wireless technology

type of mobile wireless service	
<ul style="list-style-type: none"> • is supported / SMS 	Yes
<ul style="list-style-type: none"> • is supported / GPRS 	Yes
<ul style="list-style-type: none"> • note 	GPRS (Multislot Class 10)
<ul style="list-style-type: none"> • is supported / LTE-M 	Yes
<ul style="list-style-type: none"> • is supported / NB-IoT 	Yes
type of wireless network / is supported	
<ul style="list-style-type: none"> • GSM 	Yes
operating frequency / for GSM transmission	850 MHz, 900 MHz, 1800 MHz, 1900 MHz
operating frequency / for LTE-M transmission	band 1 (2100 MHz), band 2 (1900 MHz), band 3 (1800 MHz), band 4 (1700 MHz), band 5 (850 MHz), band 8 (900 MHz), band 12 (700 MHz), band 13 (700 MHz), band 18 (850 MHz), band 19 (850 MHz), band 20 (800 MHz), band 26 (850 MHz), band 28 (700 MHz)
operating frequency / for NB-IoT transmission	band 1 (2100 MHz), band 2 (1900 MHz), band 3 (1800 MHz), band 5 (850 MHz), band 8 (900 MHz), band 12 (700 MHz), band 13 (700 MHz), band 18 (850 MHz), band 19 (850 MHz), band 20 (800 MHz), band 26 (800 MHz), band 28 (700 MHz)

supply voltage, current consumption, power loss

type of voltage / of the supply voltage	DC
supply voltage / external / at DC	12 ... 24 V
supply voltage / external / at DC / rated value	10.8 ... 28.8 V
type of output voltage / for the supply of external devices	DC 12 V or 24 V
supply voltage / for GPS antenna / maximum	3.8 V; Nominal 3.8 V (3.575 V @5 mA, 3.35 V @ 10 mA, 3.125 V @ 15 mA)
consumed current / note	without connected consumers
consumed current	
<ul style="list-style-type: none"> • from external supply voltage / at 24 V DC 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — in standby mode / typical 	14 mA
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — in update mode / typical 	35 mA
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — in communication mode / typical 	83 mA
<ul style="list-style-type: none"> • with battery operation / at 7.2 V DC 	
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — in standby mode / typical 	0.28 mA
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — in update mode / typical 	71 mA
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — in communication mode / typical 	208 mA
output current / for GPS antenna / maximum	15 mA
power loss [W]	without connected consumers
power loss [W] / with external supply voltage / at 24 V DC	
<ul style="list-style-type: none"> • in standby mode / typical 	0.34 W
<ul style="list-style-type: none"> • in update mode / typical 	0.85 W
<ul style="list-style-type: none"> • in communication mode / typical 	2 W
power loss [W] / with battery operation / at 7.2 V DC	
<ul style="list-style-type: none"> • in standby mode / typical 	0.002 W
<ul style="list-style-type: none"> • in update mode / typical 	0.51 W
<ul style="list-style-type: none"> • in communication mode / typical 	1.5 W

ambient conditions

ambient temperature	
<ul style="list-style-type: none"> • for vertical installation / during operation 	-40 ... +60 °C
<ul style="list-style-type: none"> • for horizontally arranged busbars / during operation 	-40 ... +70 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +70 °C

<ul style="list-style-type: none"> during transport 	-40 ... +70 °C
relative humidity <ul style="list-style-type: none"> at 30 °C / without condensation / during operation / maximum 	95 %
protection class IP	IP20; IP68 with protective housing (see accessories)
design, dimensions and weights	
module format	Compact module
width	130 mm
height	100 mm
depth	75 mm
net weight	0.37 kg
fastening method <ul style="list-style-type: none"> 35 mm top hat DIN rail mounting wall mounting 	Yes Yes
product features, product functions, product components / general	
product function <ul style="list-style-type: none"> DynDNS client no-ip.com client 	Yes Yes
product functions / cloud connectivity	
protocol / is supported <ul style="list-style-type: none"> Message Queuing Telemetry Transport (MQTT) 	Yes
product function / for cloud connectivity <ul style="list-style-type: none"> trigger management time stamping 	Yes Yes
product feature / for cloud connectivity / buffered message frame memory	Yes
performance data	
number of users/telephone numbers/email addresses / definable / maximum	20
number of user groups / definable / maximum	10
number of program block types	44
number of configurable program blocks	48
number of digital bit memories / maximum	40
number of analog bit memories / maximum	24
performance data / IT functions	
number of possible connections <ul style="list-style-type: none"> as client / by means of FTP / maximum 	1
number of entries / in the FTP buffer / maximum	12
number of possible connections <ul style="list-style-type: none"> as server / by means of HTTP / maximum as server / by means of HTTPS / maximum 	2 2; http and https can be combined (max. number of 2 connections cannot be exceeded). Max. one connection via https is possible on the mobile wireless interface.
<ul style="list-style-type: none"> as email client / maximum 	1
number of free texts / for emails and SMS / maximum	20
number of characters / per free text for emails or SMS / maximum	160
number of entries / in the email buffer / maximum	12
performance data / telecontrol	
suitability for use <ul style="list-style-type: none"> node station substation TIM control center 	No Yes No
control center connection <ul style="list-style-type: none"> by means of a permanent connection by means of demand-oriented connection 	IEC 60870-5-104, DNP3-capable control stations, SINAUT ST7cc/sc, TeleControl Server Basic supported supported
protocol / is supported <ul style="list-style-type: none"> DNP3 IEC 60870-5 SINAUT ST1 protocol SINAUT ST7 protocol 	Yes Yes No Yes

product function / data buffering if connection is aborted	Yes; number of telegrams for: IEC 60870: approx. 5,000, DNP3: approx. 10,900, SINAUT ST7: approx. 7,700, TeleControl Server Basic: approx. 10.900
data volume / as user data per station / in telecontrol mode / maximum	256 Kibyte
product feature / buffered message frame memory	Yes
performance data / teleservice	
diagnostics function / online diagnostics with SIMATIC STEP 7	No
product function	
• program download with SIMATIC STEP 7	No
• remote firmware update	Yes
• remote configuration	Yes
product functions / management, configuration, engineering	
configuration software	
• required	No, configuration by using the integrated webserver
product function / gateway / for SIMATIC PDM	
• with Modbus TCP	Yes
• with HART-IP protocol	Yes
product functions / diagnostics	
product function / web-based diagnostics	Yes
product functions / security	
operating mode / Virtual Private Network (VPN)	Yes; OpenVPN client
product function / with VPN connection	OpenVPN
type of encryption algorithms / with VPN connection	AES-128, AES-256
type of authentication procedure / with VPN connection	certificate based
type of authentication / with Virtual Private Network / PSK	No
type of hashing algorithms / with VPN connection	SHA-256
number of possible connections / with VPN connection	2; one simultaneous productive connection only
product function	
• password protection for Web applications	Yes
• password protection for teleservice access	Yes
• password protection for VPN	Yes
• encrypted data transmission	Yes
• switch-off of non-required services	Yes
• SysLog	Yes
product functions / time	
protocol / is supported	
• NTP	Yes
product component / hardware real time clock	Yes
product feature / hardware real time clock w. battery backup	Yes
accuracy / of the hardware real time clock / per day / maximum	1.8 s
time synchronization	
• from NTP-server	Yes
• from GPS-signal	Yes
• from control center	Yes
• from mobile network provider	Yes
• PC	Yes
• manual setting	Yes
product functions / position detection	
product function	
• position detection with GPS	Yes
• pass on position data	Yes
standards, specifications, approvals / hazardous environments	
certificate of suitability / CCC / for hazardous zone according to GB standard	Yes
• as marking	Ex nA IIC T4 Gc
further information / internet links	
internet link	
• to website: Industrial communication	http://www.siemens.com/simatic-net
• to website: Industry Mall	https://mall.industry.siemens.com
• to website: Information and Download Center	http://www.siemens.com/industry/infocenter
• to website: Image database	http://automation.siemens.com/bilddb

- to website: CAx-Download-Manager
- to website: Industry Online Support

<http://www.siemens.com/cax>

<https://support.industry.siemens.com>

security information

security information

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