

RTCU-A9i MAX

Remote Telemetry and Control Unit

The RTCU-A9i MAX is another member of the versatile RTCU product line. The unit has an impressive list of features including full support for GPRS, SMS, Voice/DTMF and Datacalls. The RTCU-A9i is based on the RTCU-A6, but with additional features such as an extra serial port, battery backup, advanced power-saving features, etc. The unit is supported by the RTCU IDE development tool and the RTCU GPRS Gateway product.



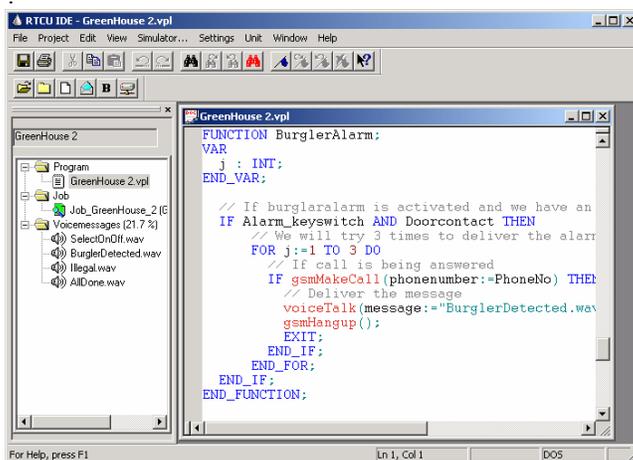
The RTCU-A9i MAX product allows rapid development of custom specified applications combining control / monitoring / datalogging with advanced communication techniques such as Voice / DTMF interaction (voice response systems), alarm/messages send to / from the unit as SMS (both as SMS and PDU) messages or via data-transfer directly to / from a Windows application. The RTCU-A9i includes a full TCP/IP stack and therefore fully support the GPRS technology. Using the Logic IO proprietary VSMS (Virtual SMS) technology SMS, GPRS and Datacalls merges together allowing any RTCU application that uses SMS-messages to transparently send/receive messages using either SMS, GPRS or Datacall *without* any changes to the software already developed. The RTCU-A9i fully supports the RTCU GPRS gateway solution also available from Logic IO. Please see separate product sheet for this product.

The RTCU-A9i is fully programmable using the user-friendly Integrated Development Environment (RTCU IDE) running under Windows. In the environment the complete application is developed, simulated and finally transferred to the unit via a standard serial port, or alternatively using the GSM Datacall / GPRS capability.

The unit is programmed in a PLC language called VPL based on the ST language from the international standard IEC1131-3. This language is very easy to learn and can be compared to BASIC / PASCAL but with a number of facilities to allow easy development of PLC-like applications. Voice-messages are also created within the environment by the use of a simple microphone and a soundcard in the PC. The RTCU IDE environment also includes a very sophisticated simulator so that the complete application can be executed and debugged under Windows - before being transferred to the physical unit !. From the VPL language all the resources on the platform is easily accessible, such as: send / receive SMS-messages, receive / initiate GSM calls, voice, DTMF interaction, Realtime clock, datalogging as well as low level functions such as Timers, up / down counters, edge triggers etc.

Some of the application areas includes:

- ❖ Surveillance of industrial equipment
- ❖ Remote site control and data acquisition
- ❖ Dataloggers
- ❖ Process monitoring and reporting
- ❖ Remote Meter Reading
- ❖ Alarm / Security systems
- ❖ ... *your application*



The RTCU-IDE Integrated Development Environment for the RTCU, is an easy-to-use program for all aspects in the development of applications for the RTCU. The RTCU-IDE contains a broad range of features, such as project control, comprehensive online help, built-in syntax highlighting editor, code generating wizard, voice recorder etc. A built-in simulator enables complete simulation of all features on the RTCU: GSM phone, SMS messaging, GPS, Analog / Digital I/O etc. A remote update feature allows the application developer to download new versions of a program or voice messages to a remote RTCU, via a simple telephone modem connected to the PC. Together, all of these features enables the user to cut development time to a minimum.

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Key features:

- ❖ 512 Kbyte RAM.
- ❖ 1 Mbyte Flash for application and voice messages.
- ❖ 512 Kbyte Flash for datalogging/parameters.
- ❖ 8 Kbyte FRAM for fast access, no write endurance limit.
- ❖ Standard 3V SIM card reader.
- ❖ Advanced power-saving modes.
- ❖ RS232 Service port / general purpose.
- ❖ RS232 / RS485 port.
- ❖ Monitors supply voltage.
- ❖ Built-in NiCd battery charger circuit.
- ❖ Real Time Clock with battery backup and wake-up facility.
- ❖ Upto 145 seconds storage for voicemessages
- ❖ Fully compatible with the RTCU GPRS gateway
- ❖ 4 Digital inputs galvanically isolated.
- ❖ Input can be configured as S0 inputs (IEC 62053-31-A)
- ❖ 4 Relay outputs 230V / 5A.
- ❖ 4 Analog inputs (0..5V)
- ❖ 4 Analog outputs (0..5V)
- ❖ GSM Phone for voice, data, SMS, GPRS etc.
- ❖ 4 user defined- / 2 system defined LED indicators.
- ❖ 3 User defined dipswitches
- ❖ 1-wire bus for connection to external devices.
- ❖ 256 Kbyte storage for VPL programs.
- ❖ 64 Kbyte storage for user variables.
- ❖ 16 simultaneous VPL jobs operating in one of two priorities
- ❖ Options: RS485 multidrop network, Internal NiCd battery pack.

Analog inputs	Min	Typ	Max		Resolution is 10 bits. All inputs are protected against transients and lowpass filtered.	
	0	-	+5	VDC		
Analog outputs		0	-	+5	VDC	Resolution is 10 bits. All outputs are protected against transients and lowpass filtered.
Digital inputs	Logic "High"	8	10	40	VDC	All inputs are protected against transients and lowpass filtered
	Logic "Low"	-5	-	5	VDC	
Digital outputs (Relay SPST)		-	-	5	A	@ 250 VAC
		0.0	-	5	A	@ 30 VDC
Operating Voltage DC		18	-	26	VDC	Protected against wrong polarity. Self healing fuse.
Restricted Operating Voltage DC		12			VDC	IEC 62053-31-A and battery charger is not supported at this voltage.
Mains voltage (instead of DC)			230		VAC	Fused
U* Act. + GSM off + DO*not set.			80	350	mA	@ 24 VDC supply voltage
U* Act. + GSM on + DO* not set.			90		mA	
U* Act. + GSM on + DO* set			210		mA	*U = Unit
U* DS* + GSM off + DO* not set			70		mA	*DO = Digital Outputs
Unit in PowerDown			0,3		mA	*DS = Deep Sleep
Storage temperature		-40	-	+90	°C	External connections: • 3 PG11 cable glands for cable entry • SMA-Female for GSM antenna.
Operating temperature (According to GSM 11.10 specification)		-20	-	+55	°C	
Restricted operation (deviations from the GSM specification may occur)		-29	-	+70	°C	
Humidity (non condensing)		5	-	90	%	
Weight		0.88			Kg	
External dimensions		W 130 x H 180 x D 60 mm				
Ingress Protection (IP)		IP67				
Approvals		EN-50081-1 Emission EN-61000-6-2 Immunity			Unit is CE Approved	

Technical data subject to change

For more information:

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