# RTCU-A5i MAX
Remote Telemetry and Control Unit

The RTCU-A5 MAX offers an impressive list of features and possibilities. The product is a unique combination of a powerfull Programmable Logic Controller (PLC) and a GSM phone tightly connected in a single easy programmable unit. The RTCU-A5 MAX product provides the user friendly answer to your remote monitoring, remote control, surveillance and datalogging needs.
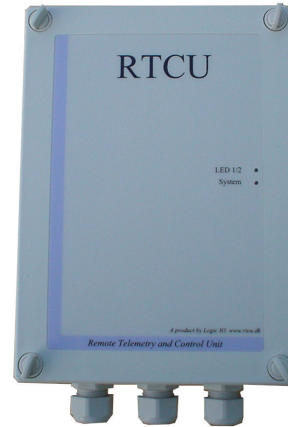
The RTCU-A5 MAX product allows rapid development of custom specified applications combining control / monitoring / datalogging with advanced communication techniques such as voice / DTMF interaction (voice response systems), alarm/messages send to / from the unit as SMS messages or via data-transfer directly to / from a Window application. The product includes a user-friendly Integrated Development Environment (RTCU IDE) running under Windows where the complete application is developed and finally transferred to the unit via a standard serial port, or alternatively using the GSM data transfer capability available as a standard feature..

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 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 accesible, 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. As an option a support package for data-transfer is available that allows easy data-transfer to / from the unit from within a standard Windows application.

Stay ahead and choose the Logic IO RTCU-A5i MAX product when dealing with advanced and flexible GSM based control/monitoring/datalogging applications!

Some of the application areas includes:
- ❖ Surveillance of industrial equipment
- ❖ Remote site control and data aquisition
- ❖ Dataloggers

- ❖ Process monitoring and reporting
- ❖ Remote Meter Reading
- ❖ Alarm / Security systems
- ❖ Mobile applications using optional GPS module
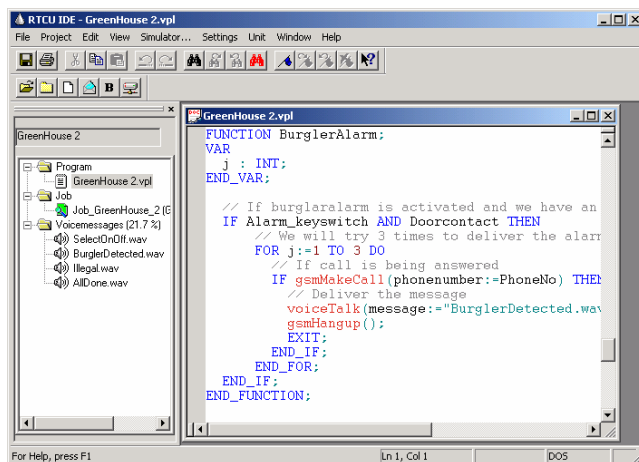
The RTCU-IDE Integrated Development Environment for the RTCU, is an easy-to-use program for all aspects in the development of applications for the RTCU. The RTCU-IDE contains a broad range of features, such as project control, comprehensive online help, built-in syntax highlighting editor, code generating wizard, voice recorder etc. A built-in simulator, enables complete simulation of all features on the actual RTCU: GSM phone, SMS messaging, 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:

- ❖ 4 Digital inputs, galvanically isolated
- ❖ Inputs can be configured as S0-A input (contact closure)
- ❖ 4 Relay outputs. 230V/5A
- ❖ 4 Analog inputs, 0..5VDC
- ❖ GSM Phone for voice, data, SMS, fax, email etc.
- ❖ Real Time Clock with battery backup
- ❖ 3 User defined dipswitches
- ❖ 4 User defined LED indicators
- ❖ Supervision of supply voltage (DC)
- ❖ Built-in NiCd battery charger circuit.
- ❖ RS232 Serial port (110 bps to 57.6 Kbps)

- ❖ Standard SIM card reader
- ❖ Power-saving mode.
- ❖ 128 Kbyte storage for VPL programs
- ❖ Upto 4 Kbyte storage for user variables
- ❖ 110 seconds storage for voicemessages
- ❖ Maximum of 128 seperate voicemessages
- ❖ 512 Kbyte memory for datalogging.
- ❖ 8 Kbyte FRAM for fast access, no write endurance limit.
- ❖ 16 simultaneous VPL jobs operating in one of two priorities
- ❖ Options: Internal NiCd battery pack.

Analog inputs	Min		Max		
	0	-	+5	VDC	Resolution is 10 bits. All inputs are protected against transients and lowpass filtered.

Digital inputs		Min	Typ	Max		
	Logic "High"	8	10	40	VDC	All inputs are protected against transients and lowpass filtered. All inputs are optically isolated
	Logic "Low"	-5	-	5	VDC	

Digital outputs (Relay SPST)	Min		Max		
	-	-	5	Amp	@ 250 VAC
	0.01	-	5	Amp	@ 30 VDC

Operating Voltage DC (*Can be operated at 12V but devations from SO standard will occur)	18 (12*)	-	26	VDC	Protected againts wrong polarity. Self healing fuse.
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.		85		mA	*U = Unit
U* Act. + GSM on + DO* set		210		mA	*DO = Digital Outputs
U* DS* + GSM off + DO* not set		50		mA	*DS = Deep Sleep

Storage temperature	-40	-	+90	ºC	External connections:
Operating temperature (According to GSM 11.10 specification)	-20	-	+55	ºC	• 3 PG11 cable glands for cable entry • SMA-Female for GSM antenna.
Restricted operation (deviations from the GSM specification may occur)	-29	-	+70	ºC	
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	C E

Technical data subject to change

For more information:

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