

# RTCU-M10G MAX

## Remote Telemetry and Control Unit

The RTCU-M10G 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 unit is especially suited for mobile tracking applications with its on-board GPS-receiver and advanced power-down modes. The unit is supported by the RTCU IDE development tool that dramatically reduces the time to market..



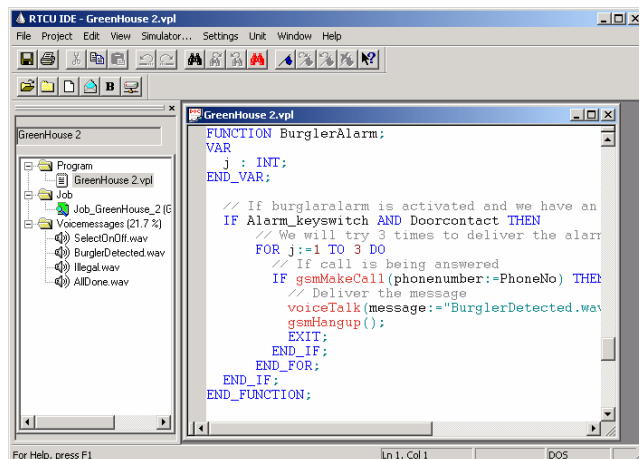
The RTCU-M10G MAX product allows rapid development of custom specified applications combining mobile tracking / control / monitoring / datalogging with advanced communication techniques such as Voice / DTMF interaction (voice response systems), alarm/messages send to / from the unit as SMS (both as SMS and PDU) messages or via data-transfer directly to / from a Windows application. The RTCU-M10G 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-M10G fully supports the RTCU GPRS gateway solution also available from Logic IO. Please see separate product sheet for this product.

The RTCU-M10G 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 accesible, such as: send / receive SMS-messages, receive / initiate GSM calls, GPS, 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:

- ❖ Fleet management system.
- ❖ Mobile datalogging applications.
- ❖ Alarm / Security systems
- ❖ Mobile tracking applications
- ❖ Asset management.
- ❖ *Your applications...*





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 SIM-card reader. 3V
- ❖ Advanced power-saving modes.
- ❖ RS232 Service port / general purpose without control signals
- ❖ RS232 port with all control signals available.
- ❖ Supervision of supply voltage.
- ❖ Real-time clock with battery-backup and wakeup facility.
- ❖ Voice/DTMF with upto 145 seconds of voice-messages.
- ❖ Audio IN/OUT from GSM-module available on PCB pinrow.
- ❖ 4 Digital inputs, galvanically isolated
- ❖ 4 Relay outputs (1A/30V)
- ❖ 4 Analog inputs ( 0..5V)
- ❖ Dual-band GSM module for Voice, Data, SMS, GPRS, etc.
- ❖ 2 User defined LED indicators / 2 system LED indicators.
- ❖ On-board 12-channel GPS-receiver.
- ❖ 256 Kbyte storage for VPL programs
- ❖ 64 Kbyte storage for user variables
- ❖ 16 simultaneous VPL jobs each operating in one of two priorities
- ❖ Full GPRS support.
- ❖ Logic IO GPRS Gateway enabled.
- ❖ Option: Support for backup battery.
- ❖ Option: RS485

Analog inputs		Min		Max		Resolution is 10 bits. All inputs are protected against transients and lowpass filtered.
		0	-	+5	VDC	
Digital inputs		Min	Typ	Max		All inputs are protected against transients and lowpass filtered. All inputs are optically isolated
	Logic "High"	8	12	40	VDC	
	Logic "Low"	-5	-	3	VDC	
Digital outputs (Relay)		Min		Max		Normally open contacts.
		-	-	30	Volt	
		-	-	1	Amp	
Power supply		Min	Typ	Max		
Operating Voltage		8	-	36	VDC	Protected against wrong polarity.
Unit Active with GSM/GPS off			85		mA	@ 12 VDC supply voltage. .
Unit Active with GSM on			100	360	mA	
Unit Active with GPS on			180		mA	
Unit Active with GSM/GPS on.			195	460	mA	
Unit in Sleep with GSM/GPS off			40		mA	
Unit in Powerdown			0,8		mA	
Storage temperature		-40	-	+90	°C	External connections: <ul style="list-style-type: none"> <li>• SUB-D9M for RS232 port 1 (service-port)</li> <li>• SUB-D9M for RS232 port 2 (general)</li> <li>• SUB-D25M for power, digital, analog and RS485.</li> <li>• SMA-Female for GSM antenna.</li> <li>• SMB-Male for active (3V) GPS antenna.</li> </ul>
Operating temperature (According to GSM 11.10 specification)		-25	-	+55	°C	
Restricted operation (deviations from the GSM specification may occur)		-29	-	+70	°C	
Humidity (non condensing)		5	-	90	%	
Weight		0.4			Kg	
External dimensions		W* 172 x H 110 x D 31 mm			*W 202 with mounting flanges	
Ingress Protection (IP)		IP44 , Aluminum enclosure				
Approvals		EN-50081-1 Emission EN-61000-6-2 Immunity			 10R-024063	

Technical data subject to change

**For more information:**

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