



# RTUCOM

RTU with integrated modem



# RTUCOM Compact Outstation Rtu Data logger



TYPE	UCR-10IO/Rczxx.Dx	UCR-10IO/Rczxx.Px	UCR-4DIO/RCzxx.P1	UCR-4DI/RCzxx.P1	CABLES, SOFTWARE & COMPATIBLE ACCESSORIES
<b>INPUTS/OUTPUTS</b>					<b>DESCRIPTION</b>
Digital inputs	4 (2 DI can be used as counter inputs).	4 (2 DI can be used as counter inputs).	4 (2 DI can be used as counter inputs).	4 (2 DI can be used as counter inputs).	<b>CABLES</b>
Digital outputs	4	4	4	-	Null-modem, 9-pole female/female, 3m.
Counter inputs	2 50 compliant (max. 60Hz).	2 50 compliant (max. 60Hz).	2 50 compliant (max. 60Hz).	2 50 compliant (max. 60Hz).	Modem, 9-pole female/25-pole male.
Analogue process signal input	2	-	-	-	Modem cable shielded 9 pole/9 pole 0,5m
Pt100 sensor input	-	2	-	-	Modem cable shielded 9 pole/9 pole 1,5m
Galvanic isolation	Optocoupler/switched capacitor.	Optocoupler.	Optocoupler.	Galvanic isolation-optocoupler	Modem cable std. 9pole/9 pole 1,5m
Terminals	Screw connector type.	Screw connector type.	Screw connector type.	Screw connector type.	GSM modem cable 9 pole/15 pole
<b>COMMUNICATION</b>					<b>SOFTWARE</b>
Protocol	ModbusRTU, EN/IEC60870-5-101 (slave).	ModbusRTU, EN/IEC60870-5-101 (slave).	ModbusRTU, EN/IEC60870-5-101 (slave)	ModbusRTU, EN/IEC60870-5-101 (slave)	Windows based IEC1131-3 programming
Data transmission	Integrated GSM or PSTN modem and serial cable.	Integrated GSM or PSTN modem and serial cable.	Integrated GSM or PSTN and serial cable	Integrated GSM or PSTN and serial cable	Object oriented programming.
Speed	Max. 19200 Bit/sec.	Max. 19200 Bit/sec.	Max. 19200 Bit/sec.	Max. 19200 Bit/sec.	Drivers and tools, incl. DDE/DLL support.
Data formats	8, 1, None.	8, 1, None.	8, 1, None.	8, 1, None.	<b>COMPATIBLE PRODUCTS</b>
Security	Password and Dial Back.	Password and Dial Back.	Password and Dial Back.	Password and Dial Back.	ZenOn (Copa Data) • B. V. Electronic
Log capacity	480 Kbytes - resizeable 5-100%	480 Kbytes - resizeable 5-100%	480 Kbytes - resizeable 5-100%	480 Kbytes - resizeable 5-100%	Citect • Factory Link • iFIX • IgSS • InTouch
Dial-up	Yes.	Yes.	Yes.	Yes.	InControl • Kepware • Labtech Notebook •
SMS	Yes, with GSM modem.	Yes, with GSM modem.	Yes, with GSM modem.	Yes, with GSM modem.	Labtech Control • LabWIEW •
<b>BUILT-IN MODEM</b>					Microsoft Excel • Microsoft Access •
GSM	Dual band 900/1800 MHz.	Dual band 900/1800 MHz.	Dual band 900/1800 MHz.	Dual band 900/1800 MHz.	Microsoft Visual Basic
PIN code	Yes, selectable.	Yes, selectable.	Yes, selectable.	Yes, selectable.	<b>MODEMS</b>
PSTN	Dial-up modem V.32+.	Dial-up modem V.32+.	Dial-up modem V.32+.	Dial-up modem V.32+.	Brodersen UCM-8x • LASAT Safire 560 •
Modem config	Yes. Standard AT Hayes compatible.	Yes. Standard AT Hayes compatible.	Yes. Standard AT Hayes compatible.	Yes. Standard AT Hayes compatible.	LASAT Unique • US Robotics Sportster •
<b>CONFIGURATION / PROGRAMMING</b>					Westermo TD-32 (industrial modem) •
Programming interface	RS232 via RJ11 Modular plug.	RS232 via RJ11 Modular plug.	RS232 via RJ11 Modular plug.	RS232 via RJ11 Modular plug.	Westermo TD-23
Config.software, EN61131 programming	IOTOOL32Pro.	IOTOOL32Pro.	IOTOOL32Pro.	IOTOOL32Pro.	<b>GSM MODULE</b>
I/O database, log upload	IOTOOL32Pro.	IOTOOL32Pro.	IOTOOL32Pro.	IOTOOL32Pro.	Brodersen UCM-91/92 • Wavecom
Max. program size	23 Kbyte.	23 Kbyte.	23 Kbyte.	23 Kbyte.	<b>RADIO</b>
<b>POWER SUPPLY</b>					Brodersen UCW-5x
Power save mode	Yes, controlled via application program.	Yes, controlled via application program.	Yes, controlled via application program.	Yes, controlled via application program.	PASCALL Wireless 500 • SATEL 2ASX
<b>MOUNTING</b>					<b>VARTA BATTERIES</b>
DIN rail	35 mm symmetrical.	35 mm symmetrical.	35 mm symmetrical.	35 mm symmetrical.	ACCU CF12V/3AH • ACCU CF12V/6,5AH
Housing	Anodized aluminium.	Anodized aluminium.	Anodized aluminium.	Anodized aluminium.	ACCU CF12V/12AH0
Size	80 x 162 x 62 mm.	80 x 162 x 62 mm.	80 x 162 x 62 mm.	80 x 162 x 62 mm.	Tested by Brodersen
<b>/RS OPTIONS (/RSzxx)</b>					Tested by Brodersen
Modem option (z)					Tested by Brodersen
RC1xx	Modem GSM Dual band 900/1800mhz	Modem GSM Dual band 900/1800mhz	Modem GSM Dual band 900/1800mhz	Modem GSM Dual band 900/1800mhz	Tested by Brodersen
RC2xx	Modem PSTN dial-up V32+	Modem PSTN dial-up V32+	Modem PSTN dial-up V32+	Modem PSTN dial-up V32+	Tested by Brodersen
<b>Power supply options (xx)</b>					Tested by Brodersen
RCz00	PS (12VDC), no isolation	PS (12VDC), no isolation	PS (12VDC), no isolation	PS (12VDC), no isolation	Tested by Brodersen
RCz10	PS (110-240V)	PS (110-240V)	PS (110-240V)	PS (110-240V)	Tested by Brodersen
RCz40	PS (12VDC), Battery/solar panel controller	PS (12VDC), Battery/solar panel controller	PS (12VDC), Battery/solar panel control	PS (12VDC), Battery/solar panel control	
RCz50	PS (24-60VDC)	PS (24-60VDC)	PS (24-60VDC)	PS (24-60VDC)	
<b>Analogue inputs Dx/Px:</b>					
D1	0-10V		-	-	Tested by Brodersen
D2	4-20mA		-	-	Tested by Brodersen
D6	0-20mA		-	-	
P1		Pt100 -50 - 100 °C	-	-	
P2		Pt100 -50 - 300 °C	-	-	



# RTU data logger



## Telemetry / Remote Data Logging

### CONCEPT

Broderson µRTU RTU-COM allows you to convey plant condition in terms of process signals, logged data, intelligent alarms, SMS messages etc. from remote/isolated sites to a central control room (PC/Server) via the telephone network (PSTN) or by mobile telephone network (GSM, GPRS etc.).

The remote site could be just a few kilometres away or in another country, or indeed, another continent. It does not matter - telemetry can span the globe. Telemetry can be just as effective if the remote site is only a couple of hundred metres away, across a road or railway line.

With its 480 Kbytes memory, the RTU-COM Micro Outstation offers data logging facility and real-time clock for time stamping of data. Its user-friendly software and low cost now makes it an ideal choice for many applications within water, gas, railways, electricity, traffic and environmental telemetry systems.

The extended SMS functionality provided with the RTU-COM enables your mobile phone or email server be used to receive alarm messages. Indeed, even control function can be performed via SMS with a simple syntax. Only your imagination limits the use of the RTU-COM.

### POWER MANAGEMENT

A wide range of AC/DC power options are possible with the RTU-COM including the Power Save option. When mains power is not available, a solar panel fitted with battery and charger can be used instead. This makes the RTU-COM an ideal choice for environmental monitoring, pipeline monitoring and metering applications.

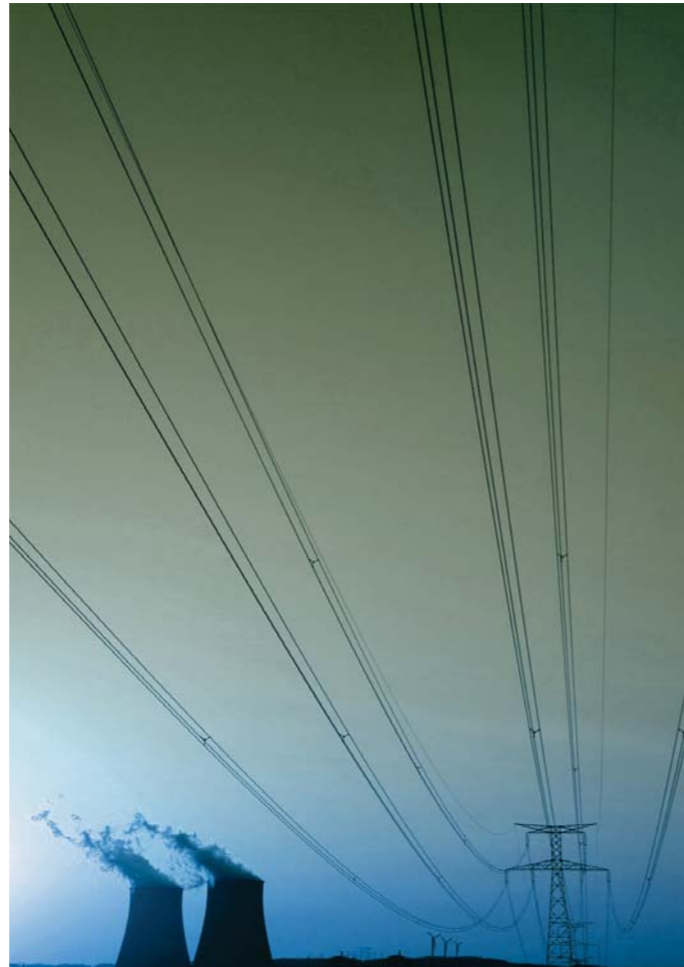
### PRINCIPLE

The communication to the RTU870 uses on the utility protocol EN/ IEN60870-5-101 which is based on a master/slave principle where a main station (master) can communicate with a large number of RTU870s (slaves).

A typical installation consists of an RTU870 Compact Outstation connected to meters (flow, electricity, etc.), sensors, electricity switching devices or other utility devices. The RTU870 communicates with a larger outstation or main station via serial interface or modem (Leased line V23, dial-up connection via PSTN or GSM). The communication protocol settings in each case is pre-defined at the design of the application, partly defined in the protocol interoperability settings.

At the central main station, all the data (I/O status, alarms, counter values, meter data, etc.) are used to provide the user with the necessary information. The real time stamping on the data given by the RTU870 ensures useful and consistent data are logged.

Locally the RTU870 handles simple tasking such as monitoring temperature levels, safe shut down functions etc. which can work independently of the main station or other sub-stations.



## Telemetry / Remote Data Logging

### RTU-COM INSTALLATIONS

#### Independent site alarm application.

Many sites with critical or high cost related operations must be monitored by an independent alarm and monitoring system. In these applications the RTU-COM offer the function as a stand-alone module for alarm monitoring in case of main controller failure. And added with a UPS supply like UCS-58 and two redundant Master PC stations, the RTU-COM alarm system will meet most requirements.

#### Water Supply/Treatment.

In this application, the RTU-COM is monitoring an unmanned pumping station which pumps ground water from boreholes to the treatment plant. Data, such as the amount of water pumped, running time of pumps, condition of filters etc., can all be monitored and logged. All data can be transferred to the control centre and, in the event of a failure, the RTU-COM will contact the PC and report the problem. In addition it can send the local service engineer an alarm SMS message, and damage control is quickly established.

#### Plant Monitoring and Fault Diagnosis – Remote Service Engineer.

A piece of plant can be fitted with an RTU-COM to monitor and log its performance. In the event of a fault, a diagnosis can often be made by connection to the RTU-COM, without the need of a service engineer to attend the site. Such applications using the RTU-COM include filtration plants, stand-by generators and waste water treatment.

Applications

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Brodersen Systems has for more than 30 years designed and produced industrial process components including remote outstations, data loggers and data communication systems for the process and automation industry.



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