RA440 Remote Wireless Modem

This device is the bridge between two worlds - UHF radio and GPRS. RA440 was built for all those cases where a network of UHF measuring stations needs to be built in an area which is not covered by a GSM network and/or which offers no possibility to install a base station (A850 Telemetry Gateway).

Installed within coverage of a GSM network the RA440 feeds data from a number of UHF remote telemetry units (RTUs) through a single GPRS connection back to an A850 Telemetry Gateway. Up to 10 RA440's can be connected to one A850 Telemetry Gateway (for which a license upgrade may be required to support more than one (R)A440).

Depending on the number of sensors per monitoring station and the desired update interval you can connect up to 20 RTUs to an RA440. Power comes from one or two internal batteries, charged by a solar panel, or an external 12V source.

The RA440 accepts standard SIM cards for GPRS data transmission. Ask your Adcon distributor for assistance to calculate the data volumes for your application.

Technical data

Dimensions	227 x 168 x 117 mm (H x W x D)
Weight	3.300 g (incl. antennas)
Ingress Protection class	IP-67
Temperature range	-20°C ... +75°C
Case	powder-coated aluminum
Connectors (all connectors IP67 if properly mated or capped)	1x Binder M9 5-pin to solar cell 1x UTS 2-pin to external 12V DC source
Power supply internal	1 x 6,2 V NiMH battery 3.100 mAh, charged by solar cell; optionally a second battery can be installed
Power supply external (optional)	12V DC, e.g. standard car battery
GSM modem	Motorola G24L
GSM frequencies	800 / 900 / 1800 / 1900 MHz
GSM Tx Output power	max. 2W depending on frequency
GSM antenna	omni-directional, +2dBi, TNC
GSM transmission distance	max. 36km according to GSM standard

UHF Frequency ranges	Band 1: 430 - 440MHz Band 2: 440 - 450MHz Band 3: 450 - 460MHz Band 4: 460 - 470MHz
UHF Channel spacing	10 / 12,5 / 25kHz
UHF Rx Sensitivity	-120 dBm (10 dB S/N)
UHF Tx Output Power	500mW
UHF Transmission distance	max. 20km (depends on topography and type of installation)
UHF Antenna	omnidirectional, +2dBi, with 6m cable and mast mounting kit
Type approvals	R&TTE, FCC Part 15, ACMA Australia, Industry Canada, etc.
Ordering information	
100.440.001 100.440.002 100.440.003 100.440.004	RA440 Wireless Modem Band 1 RA440 Wireless Modem Band 2 RA440 Wireless Modem Band 3 RA440 Wireless Modem Band 4
200.733.522	Solar panel 460mA
800.000.270	Spare battery, 3.100mAh, NiMh
800.440.001	Cable to external 12V battery