RE400

Transparent radio modem

- **400 MHz**
- **6.25, 12.5, 25 kHz**
- **11 kbps / 25 kHz**
- **2W**
- **1x ETH, 1x RS232**
- **PoE or 10 – 30 V DC**
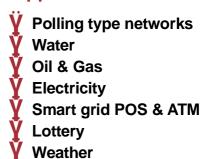- **Transparent bridge**
- **Plug and play**

General

RE400 is the "easiest" radio modem in RACOM product range. It gets very close to being a true Plug-and-play device, as close as ever possible in private radio networks. The minimum settings necessary are all accessible from one simple web browser screen.

RE400 works as a standard IP network bridge, i.e. it is fully transparent. Every unit can serve as the central master or as a remote terminal and it can also simultaneously operate as a repeater.

The modern digital solution of the radio part (Software Defined Radio) of the RE400 radio modem allows for a wide frequency range a SW configurable channel spacing.

Applications

- **Polling type networks**
- **Water**
- **Oil & Gas**
- **Electricity**
- **Smart grid POS & ATM**
- **Lottery**
- **Weather**

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RE400

Fully transparent

Ÿ Standard IP network bridge functionality is implemented in the RE400 radio modem, i.e. the ETH interfaces of all the radiomodems in a network are interconnected according to bridge principles.

Ÿ When a COM interface is used, every frame received over a COM is simply broadcast to COM interfaces of all units in the network.

Easy to configure and maintain

Ÿ Web interface
Ÿ All configuration parameters within one page
Ÿ Basic IP knowledge is sufficient
Ÿ CLI via SSH

Security

Ÿ Licensed radio bands
Ÿ FEC, interleaving, proprietary data compression
Ÿ CRC32 data integrity control on Radio channel
Ÿ Password-protected access, https web interface

Coverage

Ÿ 400 MHz band
Ÿ Line of sight is not required
Ÿ Carrier output power adjustable 0,5 or 2W
Ÿ Exceptional data sensitivity
Ÿ High resistance to multipath propagation and interference
Ÿ Any unit can work simultaneously as a repeater

Reliability

Ÿ Every single unit tested in a climatic chamber as well as in real traffic
Ÿ Military or industrial components
Ÿ Industrial rugged die-cast aluminum case

Others

Ÿ Local and remote diagnostics
Ÿ DIN rail mounting
Ÿ L-bracket, flat-bracket, direct mounting
Ÿ CE approval

Transparent radio modem

RACOM
RADIO DATA NETWORKS

RE400

ECONOMY RADIO MODEM

	Radio		RS232		Ethernet	

Product

Type: RE410

Ser No.: 7368807

FW ver.: 2.0.49.0

Diagnostics

Ping

Settings

RE400 config

Radio	
Frequency	MHz 410 / kHz 000 / Hz 000
Channel spacing	25 kHz / 10.4 kbps
RF Power	Low
Fragment [bytes]	1480
Repeater	No
Repeated packets	Discarded

RS232	
Baud rate	9600
Data bits	8
Parity	None
Stop bits	1
Idle [bytes]	10
MTU [bytes]	4000
Handshake	None

Ethernet	
IP	192 168 131 232
Mask	255 255 255 0
GW	192 168 131 254

Default   Read   Save

Save to file

Open file: Browse…

Technical parameters

Radio parameters

Frequency bands	373.25 – 484 MHz
	Models: 373-402; 400-420; 417-447; 435-466; 462-484 MHz
Channel spacing	6.25 / 12.5 / 25 kHz
Frequency stability	+/- 1.0 ppm
Modulation	2CPFSK
RF Data rate	10.4 kbps / 25.0 kHz
	5.2 kbps / 12.5 kHz
	2.6 kbps / 6.25 kHz
FEC (Forward Error Correction)	No

Transmitter

Carrier Output power	0.5 or 2 W
Duty cycle	50%
Rx to Tx Time	< 1.5 ms

Receiver

Sensitivity	better than -107 dBm

Electrical

Primary power	10.8 - 30 VDC or PoE (38-57 VDC)
Rx	430 mA; 145 mA/48 V
Tx	0.5 W: 700 mA /13.8V; 230 mA/48 V
	2.0 W: 950 mA/13.8V; 310 mA/48 V
Sleep mode	No

Interfaces

Ethernet	10/100 Base-T Auto MDI/MDIX RJ45
COM	RS232
	DB9F 300-115200 bps
Antenna	50 Ohms SMA female
LED panel	Power, Tx, Rx, ETH, 232, Status

Enviromental

Operating temperature	-25 to +55 °C
Humidity	5 to 95% non-condensing
Storage temperature	-35 to +85 °C

Mechanical

Casing	Hard aluminium
Dimensions	31 H x 96 W x 137 D mm
Weight	0.3 kg Mounting DIN rail, flat-bracket

SW

Operating modes	Bridge
Data integrity control	CRC 32
Encryption	No

Diagnostic and Management

Radio link testing	Ping + RSS

Approvals

Radio	CE
	ETSI EN 300 113-1 V1.6.2 (2009-11)
EMC (electromagnetic compatibility)	ETSI EN 301 489-1 V 1.6.1
Electrical Safety	EN 60950-1 ed.2 :2006