

## Technical parameters

### Radio parameters

|                                |   |
|--------------------------------|---|
| Frequency bands                | 373.25 – 484 MHz<br>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<br>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<br>DB9F 300-115200 bps     |
| Antenna   | 50 Ohms SMA female               |
| LED panel | Power, Tx, Rx, ETH, 232, Status  |

### Environmental

|                       |                         |
|-----------------------|-------------------------|
| 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<br>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                    |



# 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

# RE400

# Transparent radio modem

## Fully transparent

- 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.
- 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

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

## Security

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

## Coverage

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

## Reliability

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

## Others

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



...the broadest narrowband money can buy

**RACOM** RADIO DATA NETWORKS **RE400** **ECONOMY RADIO MODEM**

|                              | Radio   | RS232                      | Ethernet                     |
|------------------------------|---|----------------------------|------------------------------|
| <b>Product</b>               | <b>Frequency</b><br>MHz kHz Hz<br>410 000 000 | <b>Baud rate</b><br>9600   | <b>IP</b><br>192 168 131 232 |
| <b>Type:</b> RE410           | <b>Channel spacing</b><br>25 kHz / 10.4 kbps  | <b>Data bits</b><br>8      | <b>Mask</b><br>255 255 255 0 |
| <b>Ser No.:</b> 7368807      | <b>RF Power</b><br>Low                        | <b>Parity</b><br>None      | <b>GW</b><br>192 168 131 254 |
| <b>FW ver.:</b> 2.0.49.0     | <b>Fragment [bytes]</b><br>1480               | <b>Stop bits</b><br>1      |                              |
| <b>Diagnostics</b>           | <b>Repeater</b><br>No                         | <b>Idle [bytes]</b><br>10  |                              |
| <a href="#">Ping</a>         | <b>Repeated packets</b><br>Discarded          | <b>MTU [bytes]</b><br>4000 |                              |
| <b>Settings</b>              |   | <b>Handshake</b><br>None   |                              |
| <a href="#">RE400 config</a> |   |                            |                              |

Default Read Save

Save to file

Open file:  Browse...