Base Driven Protocol

TCP/IP protocols finally solved!

Info sheet

RipEX

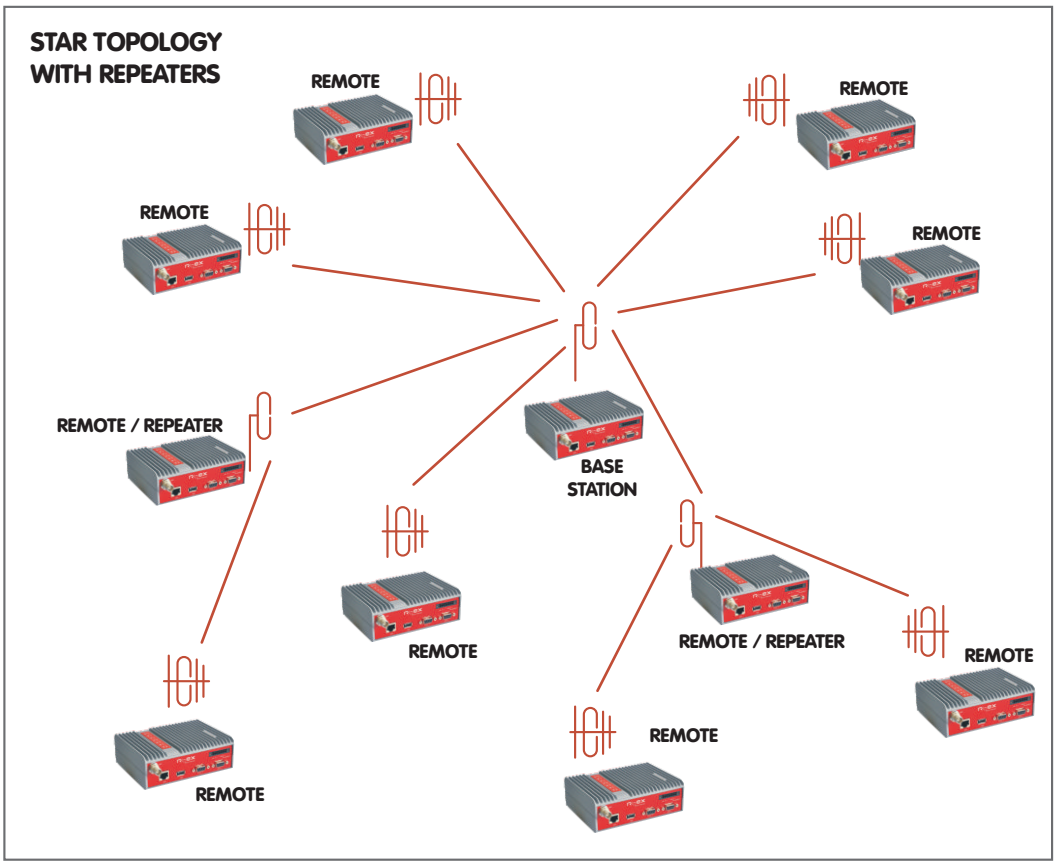
RACOM has found a solution the market has been requesting for years:

Base Driven protocol, which is primarily optimized for **TCP/IP (IEC104)**, is also suitable for collision networks when a remote is not be heard by other remotes and/or different Rx and Tx frequencies are used. All packet transmissions are managed by the local base station and distributed uniformly even when a high number of remotes are connected.

This protocol originates from **20 years of RACOM** experience developing protocols on the Radio channel within narrowband networks to meet market requirements. To complete the protocol took two years of dedication from our world leading software developers in co-operation with Technical University in Prague.

Features

- **More than 90% of Radio channel capacity dedicated for user data**
- **Designed for Star topology, Repeaters and Hidden remotes supported**
- **Traffic managed and optimized by Base station**
- **There are never collisions in the network**
- **Up to 255 remotes under one Base station**
- **Stable response times with minimum jitter**
- **Fair distribution of channel capacity among all remotes**
- **High reliability - acknowledged unicast packets on Radio channel**



Radio modem & Router

- **166 kbps**
- **1× ETH, 2× COM, 1× USB**
- **0.1–10 watts, -40 to +70 °**
- **Sleep & Save modes**
- **Wifi management**
- **Fast remote access**
- **SW feature keys**
- **Native IP device**

RipEX networks

- **Future proofed**
- **Exceptional Data throughput**
- **Three Radio protocols**
- **Unlimited RF design**
- **Backup routes**
- **Native IP environment**
- **3 year warranty**

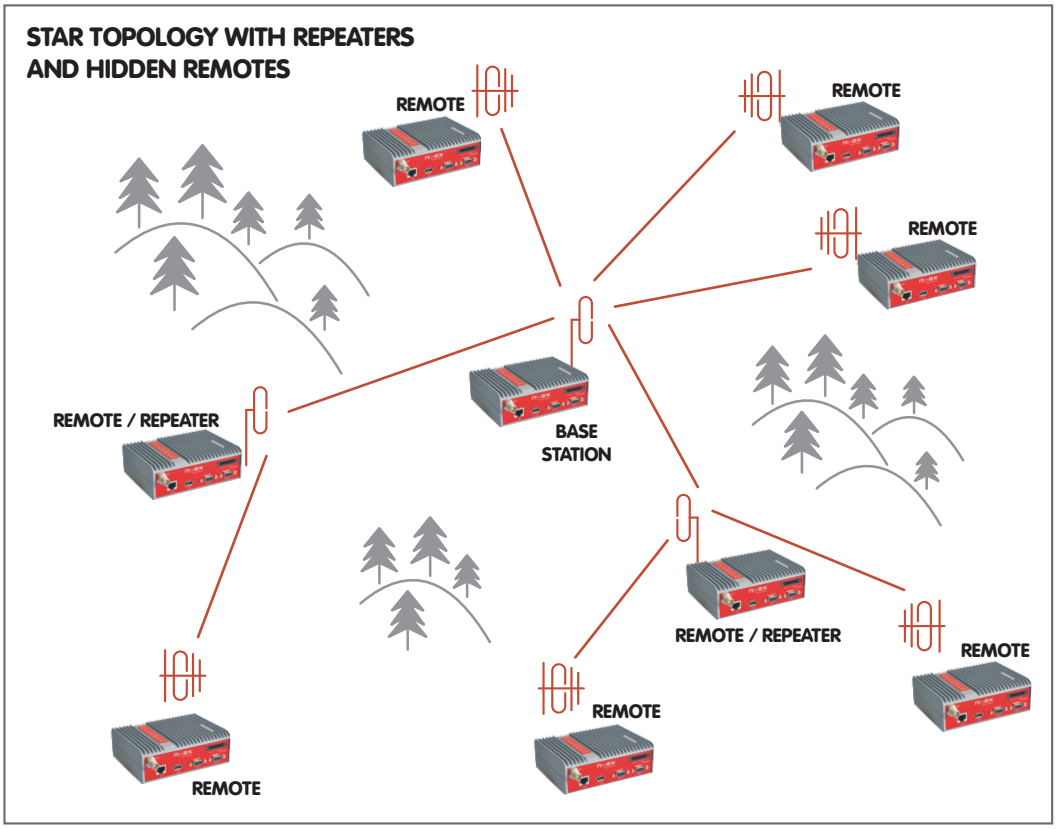
RACOM
www.racom.eu

TCP/IP – IEC104

TCP/IP protocols like IEC104, used by modern RTUs, have historically created challenging problems because of limited throughput within narrowband radio data networks. Hence the reason RACOM has developed Base Driven protocol to solve the problem.

- **TCP/IP transparent**
- **Optimized for IEC104**
- **No TCP errors**
- **No TCP disconnections**

Tests confirm that the new RipEX 'Base Driven' protocol handles 5-10x more remotes under one base station and with higher reliability compared to others.



HIDDEN REMOTES

'Hidden remote' is a radio modem that is not heard by his neighbours. Modern SCADA networks are using more and more report-by-exception protocols, so 'hidden remotes' are creating problems, because common protocols on Radio channel are mostly based on Listen Before Transmit or Carrier Sense Multiple Access principles. Different Rx and Tx frequencies create the same issue in the network. RACOM **Base Driven solves** these problems.

- **No collisions even in difficult terrain**
- **Suitable when different Rx and Tx frequencies are used**
- **Fair access to Radio channel for all remotes**
- **Channel capacity distributed fairly amongst all remotes**

RipEX Base Driven protocol is revolutionising narrowband radio networks! Total user data throughput is significantly higher, creating much improved levels of stability and reliability !

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