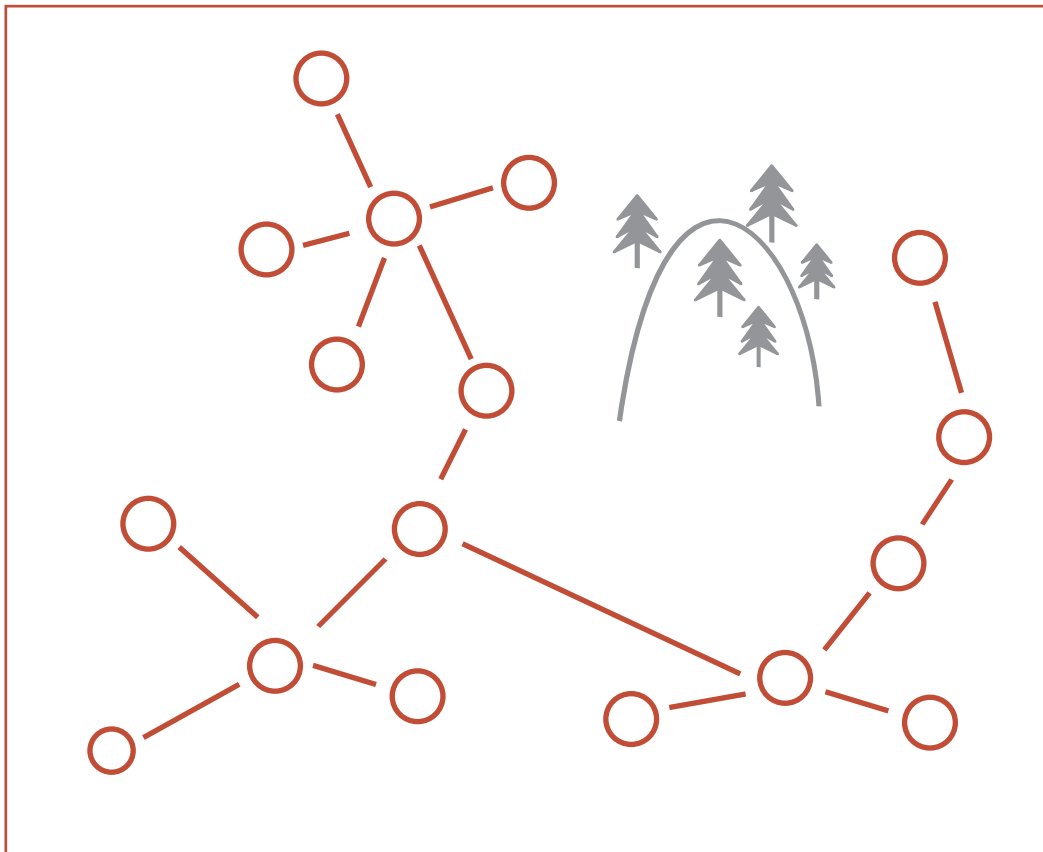


**Flexible protocol** is primarily designed for extensive networks with **unlimited tree topology** and with any number of repeaters and branches. **Each radio** can work as a **base station**, a **repeater**, a **remote**, or all of these **simultaneously**, with **no limits to the number of repeaters** and **way of communication** - any radio can directly communicate with any other.

Thanks to unlimited number of repeaters on the way, **Base stations** strategically positioned at **high points** for maximum footprint coverage are **not needed**. The **communication** can run in **parallel along valleys** with minimal interference which **increases total network throughput**.

Flexible protocol is anti-collision, i.e. **collisions** may occur but are **automatically resolved** by the protocol itself. Flexible protocol is suitable for all types of applications: master or even **multi master-slave polling** and **report by exception** from remotes **concurrently**.

Latest versions of Flexible protocol from RACOM are the result of over **20 years experience** developing anti-collision protocols for narrowband networks. It is the **most effective anti-collision protocol on the market** where proprietary combinations of LBT, CSMA and TDMA are used for Radio channel access. Since **each packet** is transferred as an **acknowledged unicast**, Flexible protocol provides **extreme reliability**.



## FEATURES

- Tree topology with unlimited repeaters and branches
- Standard IP routing
- Collisions automatically resolved
- Bi-directional packet acknowledgement
- Hybrid networks – any IP network can interconnect RipEX units
- (Multi) master-slave polling and report by exception concurrently



- 1.1 Mbps / 200 kHz / 256QAM
  - 4×ETH,1×SFP,1×COM,1×USB
- RADIUS**

- 0.1–10 watts, -40 to +70 °
- Solar ready
- Wifi management
- Customized protocols
- Fast remote access
- IPsec



- 166 kbps / 50 kHz / 16DEQAM
- 1× ETH, 2× COM, 1× USB

## RipEX networks

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

## NOMADIC MODE

**Nomadic mode** is an extension of the Flexible protocol, used for **easy expansion** of an existing network by adding a remote unit (Nomadic Remote). **Routing tables** are updated **automatically** in both, Nomadic Remote and Nomadic Centre.

**Nomadic Remote(s) can be transferred** to any place within radio coverage and it automatically reconnects to Centre.

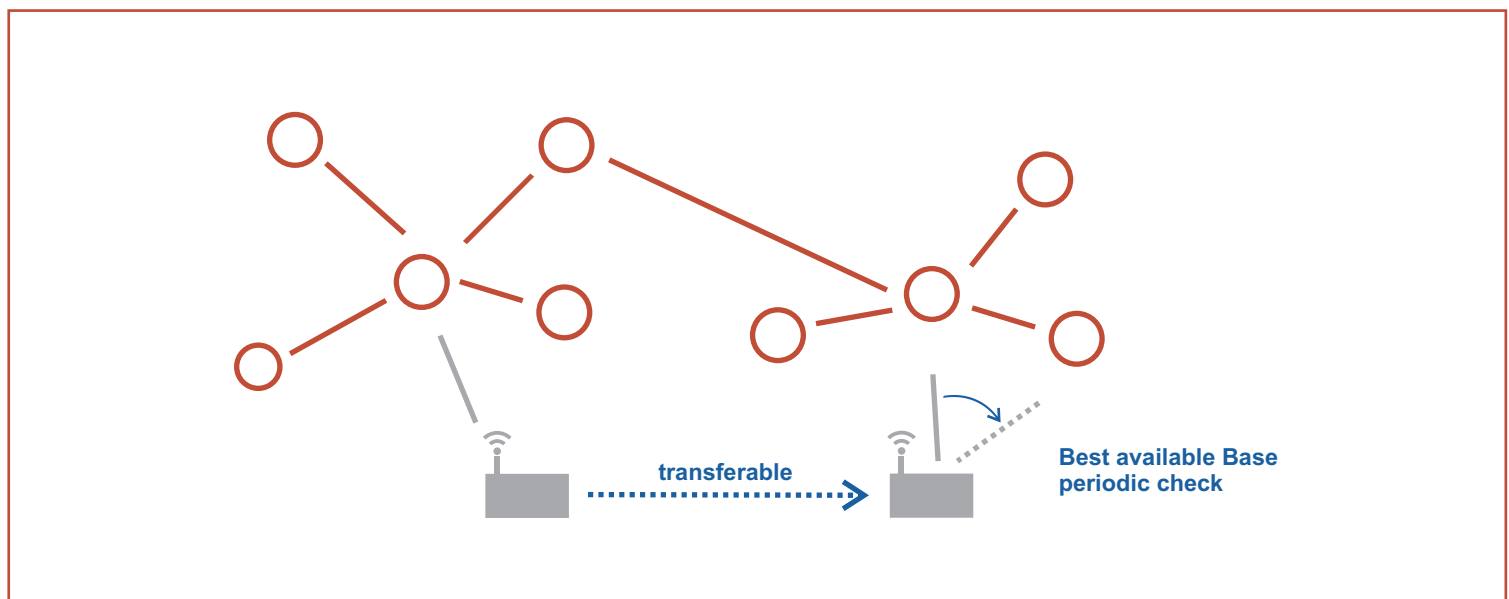
**Any unit** in existing static network can be configured as **Nomadic Base**. Any Nomadic Remote finds **best available** Nomadic Base and **automatically logs** in to Nomadic Centre. Logically, the Routing between Nomadic Base(s) and Nomadic Centre must be set in both directions.

Based on the log in packet, Nomadic Centre automatically updates its Routing table for backward routing and an **IP tunnel** between the Nomadic Centre and Nomadic Remote is created.

The **connection** between the Nomadic Remote and Nomadic Centre is very **stable** and **reliable**; all links between Nomadic Remotes and Nomadic Bases are **periodically checked** and if a better Nomadic Base exists, it is selected.

In case of any problem, e.g. Nomadic Base is out of order, Nomadic Remote automatically switches to the next best available Nomadic Base.

Communication between Nomadic Remote and any other unit is possible via Nomadic Center.



## FEATURES

- Automatic routing between Nomadic Centre and Remotes
- Any existing static unit can work as a Nomadic Base station
- Nomadic Remotes automatically (re)connect to the best available Base
- All packets on Radio channel are acknowledged
- Up to 64 Nomadic Remotes under one Nomadic Base

### Network expansion

- Easy network expansion by adding Nomadic remote
- Automatic update of routing table in the Centre.

### Portability

- Nomadic remote can be transferred
- Automatic connection to next Base within a few minutes

### Easy example

- Bi-directional acknowledged Star
- Centre acts as Base
- Simply set default gateway