COMLAB is your ideal partner for professional solutions in the RF sector. Our core business includes broadcasting, PMR and communication systems for railway and road tunnels, as well as building lighting, extensive outdoor radio coverage and specialised solutions.

KEY ADVANTAGES AT A GLANCE

- High degree of technical expertise throughout the entire process
- Comprehensive, complete solutions from a single source
- Reliable systems and components with practical demonstration of MTBF values
- Systems of renowned Swiss quality at attractive prices
- Individual solutions tailored to meet your needs
- Experienced graduate engineers providing personal attention

INTRAIN SYSTEMS
For over thirty years, we at COMLAB have focused on radio frequency (RF) technology. Our involvement includes design, development, production and installation of turnkey high-frequency radio systems. Our considerable expertise and many years of experience mean that we are able to competently support our customers in discovering solutions for all of their problems.

For SOLUTION

Signal penetration loss due to modern carriage design.

The Intrain Repeater System suits the requirements for all multi-operator applications. It is based on the product family RUD19-5.

COMLAB has a flexible supervision concept which allows not only local alarm handling, i.e., integration into the train supervision system but also remote access via a wireless high speed data modem.

FUNCTION

An external antenna picks up the outside provider signals. The onboard digital repeater system amplifies and re-distributes the signal via leaky feeder cables or antennas inside the carriage. Highly flexible digital sub band filtering provides excellent signal quality and flexible configuration for changing requirements. Different frequency bands can be integrated into one unit.

The sub band ALC as well as the DL controlled UL Gain, avoids the uplink desensitization of the base stations and enhances the overall system performance.

SYSTEM PARTS

RUD19-5-25/25 Offair Repeater for Intrain applications
380...2680 MHz
COSweb Client Monitoring Software

– 19” Rack x 455 mm, 4UH fits into common railway carriage hardware compartments
– Up to 5 Digital Radio Modules for different frequency bands in one unit
– Expandable to more bands
– Sub band ALC
– Automatic power control
– Radio Distribution Modules for passive band multiplexing
– GPS receiver
– GPS data based configuration
– High Speed Data Modem
– Power supply DC or AC
– Web based software

TARGET SEGMENT

– Safety and Emergency Organisation
– Army, Border Guard and Civil Protection
– Mobile Network Operator
– Radio and TV Station
– Railway and Subway Operator
– Radio and Network Operator
– Public Authorities, Authority
– Private, Industry, Enterprise

APPLICATION

– Road and Motorway tunnels
– Traffic and Escape routes
– Railway tunnels, Subway lines
– Football stadiums, Malls, Car parks, Stations
– Hospitals, Clinics
– Military and Civil Protection installations
– Intrain, Airports
– Industrial areas, Construction zones

SERVICES

Vehicle integration
On site integration, measurement and approval
After Sales Support (Option)
1st and 2nd Level Support on site on request.

USER GUI

COSweb
Web based configuration and monitoring software

– Remote configuration of provider BTS-RUD relation
– Monitoring of all connected units
– Setting of RUD gain and output power
– Checking of logged data of all units connected to a system

COMLAB’s systems demonstrate excellent MTBF (mean time between failures) values. Optimum product and system quality ensures fewer faults and hence lower life cycle costs.

SPECIFICATIONS

Key Advantages
– Multiple band, multiple operator
– Application modulation independent
– Five bands in one RUD enclosure
– Highest power efficiency
– More than 16 sub-bands
– Software defined radio applied
– Auto setup
– Band specific configuration
– Intrain signal distribution via leaky feeder cables or antennas
– Web based configuration
– Remote control by HSDB
– Best total cost of ownership

Life cycle: 16 year part availability

Frequency range: 380...2680 MHz

Services
TETRA 390
TETRA 410
LTE 850
GSM/LTE 900
EGSM/M/UMTS 1900
GSM/LTE 1800
UMTS/1900
LTE2600

Signal Power
Each band
– 5...10 dBm UL
– 25 dBm DL (Intrain)

Power Supply
18...64 VDC
58.4...37.7 VDC
90...264 VAC

Size
19” Rack 450 mm, 4UH

Weight
28 kg

Enclosure
19” Rack IP20

Environment
-40...+45°C, 95% HU

Cooling
active FAN, horizontal airflow