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.

RAILWAY AND METRO SYSTEMS

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
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.

SOLUTIONS THAT DELIVER FULL COVERAGE

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FUNCTION

The COMLAB system treats the communication network signals separately in the uplink and downlink path.

The possibility to use the system for frequency-transformation is built in. Provider signals can be treated band- or channel-selective upon request. Automatic power level adjustment and monitoring can be provided for both downlink and uplink.

Redundant system parts and functions will enhance the overall reliability dramatically.

USAGE

COMLAB presents a highly flexible and modular multiband digital repeater system MUD/RUD(19)-5 for a large variety of frequency bands. It supports all kinds of services such as CDMA, TDMA, OFDMA, GSM, UMTS and LTE. All services can be mixed onto the same MUD.

The system is designed to be used as Inline Repeater, Off-air Repeater or Air-link Repeater.

The Remote Units Digital RUD(19)-5 are connected via fiber optical links to the central Master Unit Digital (MUD).

SYSTEM PARTS

MUD
Master Unit Digital
66...1000 MHz, 380...2680 MHz

= 19" Rack x 450 mm, 4HU
= Up to 20 Fiber optic links to RUD per unit
= Auto level functionality
= Power supply DC or AC

RUDS
Remote Unit Digital for outdoor use

= Up to 5 frequency bands
= Up to 3 Fiber optic interfaces
= Sub band ALC
= Automatic power control
= Power supply DC or AC

RUD19-5
Remote Unit Digital for indoor use, rack integration

= 19" Rack x 455 mm, 4HU
= Up to 3 Fiber optic interfaces
= Sub band ALC
= Automatic power control
= Power supply DC or AC

COSSweb
Client Monitoring Software

= Web based software

TARGET SEGMENT

ROAD AND MOTORWAY TOWNS
= Road and Motorway tunnels
= Infrastructure modifications
= Monitoring of all connected units
= Setting of RUD gain and output power
= Checking of logged data of all units connected to a system

APPLICATION

= Engineering, transport, mounting
= Radiation measurement in tunnels or buildings
= Training Administrator, Observer
= On site support
= Maintenance, software updates

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.

SPECIALITYS

Key Advantages

= Multiple band, multiple operator
= Application modulation independent
= Five bands in one RU enclosure
= Highest power efficiency
= More than 16 sub-bands
= Signal distribution inside tunnel via leaky feeder cable or antennas
= Software defined radio applied
= Auto setup
= Band specific configuration
= Web based configuration
= Remote control by HSBD
= Extreme high reliability by system redundancy
= Best total cost of ownership

Life cycle

= 10 year part availability

SPECIFICATIONS

Frequency 66...2600 MHz
RF Power 25...47 dBm each band
Fibre optical loss up to 14 dB WWDM
System up to 64 RUD
Power Supply 18...64 VDC 50...137.1 VDC 90...264 VAC
Size 500x500x300 mm 19" Rack 450 mm, 4HU
Weight 7.8 kg each band
Enclosure Wall mounted IP67 19" Rack IP20
Environment -25...55°C, 95% HU 5...40°C, 95% HU
Cooling passive or active FAN

SERVICES

System integration
MUD/RUD(19)-5 on site integration, measurement and approval

After Sales Support (Option)
1st and 2nd Level Support on site on request.

USER GUI

COSSweb
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