

# Requirements on surface radio communication system

## 1. Basic specifications and parameters

- **digital technology** - to ensure constant high quality of voice transmission across the entire air base area without interference with flight control systems,
- **trunk technology** - a system with dynamic channel assigning to ensure maximum capacity even at peak times,
- **support of wide range of services at all stations: voice communication, telephone calls, short data messages, transfer of any data format, support of user groups** , redirecting of individual terminals into groups (based on individual preparedness levels) from the central console, setting of call priorities and their assigning to individual users, including „emergency“, the highest priority
- **data communication** - transmission of status messages, short text messages (equivalent of SMS's) and any data files,
- **duplex communication** - duplex communication between radio stations and during telephone calls,
- **concurrent data and voice transmissions,**
- **reliable operation during short-term power outages,**
- **modular architecture** - scalability depending on customer's needs,
- **integration into existing systems** - to ensure communication with the SVSS (Stationary Military Communication Network) of the Czech Army (ALCATEL - 1st PCM order frame 30/32, transmission speed 2,048 kbit/s, eight digit encoding), the PS2000 command set and the FREQUENTIS system (the E1-G.703/G.704 interface),
- **recording of voice communication** - recording of selected call groups,
- the technology must ensure **reliable coverage across the entire airfield**, including the administrative buildings,
- **interoperability of technology** between the surface radio communication system and mobile terminals of at least three different makes.

The customer will provide power sources - 230 V + UPS, but uninterrupted power supply will not be guaranteed.

## 2. Communication parameters

### 2.1 Operator communication

- group calls,
- minimum capacity: 90 caller groups,
- individual calls, including full duplex operation,
- minimum capacity: 2,000 individual addresses,
- emergency signalling and emergency calls,
- direct mode calls without infrastructure use,
- central mode and monitoring from a single (and/or back-up) location.

Terminal devices enabling communication in several caller groups, supporting the Late Entry function (including of a station into an ongoing group call when another communication is ended or the station is switched on).