

Communication ground base station range

What is direct air to ground communication?

Direct Air to Ground Communication envisages a set of Base Stations suitably placed at the ground and directly communicating with airborne object, which may be an aircraft or any other aerial vehicle. These base stations transmit the radio waves to the airborne object that crosses the range of the base stations.

What is a base station in radio communications?

In radio communications, a base station is a wireless communications station installed at a fixed location and used to communicate as part of one of the following: a wireless telephone system such as cellular CDMA or GSM cell site. Base stations use RF power amplifiers (radio-frequency power amplifiers) to transmit and receive signals.

How high should a ground station antenna be?

The ground station antenna should be at least 15 feet above the ground--20 feet is better and 30 feet even better. If roof mounted, the antenna should be mounted near the highest point on the roof. Range figures stated here assume an antenna height of 20 feet above the ground, in gently rolling terrain with low hills.

What VSWR should a ground station have?

The antenna standing wave ratio (VSWR or SWR) should not exceed 1.5 for the ground station or 2.0 for the airborne station. The airborne antenna should be one of the standard widely used vhf aircraft antennas. A gain antenna may be used at the ground station to increase communications range.

What is a base station & Radio Access Layer?

The system includes base stations (BTS) on the ground connected to PSTN, Internet and airborne terminals with interfaces to other on-board devices such as wireline hubs, Wi-Fi routers, pico-cells, among others. The radio access layer provides the radio access functions between the BTS and airborne terminals.

Does increasing base station transmitter power increase radio range?

Increasing base station transmitter power will nearly always increase the communications range, but usually by less than anticipated. For aircraft at altitudes below 8000 feet agl, even a relatively low power transmitter will reach the radio horizon with an acceptable signal level.

Overview Land surveying Computer networking Wireless communications See also Base station (or base radio station, BS) is - according to the International Telecommunication Union's (ITU) Radio Regulations (RR) - a "land station in the land mobile service." A base station is called node B in 3G, eNB in LTE (4G), and gNB in 5G. The term is used in the context of mobile telephony, wireless computer networking

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