

Subject: Client Functional Overview

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1. RADIO SUMMARY

The Telular On-Demand Protocol allows a host unit to communicate to several client units. The physical layer is a point to multipoint wireless radio communication scheme operating in the ISM band. The LAN used is a Texas Instruments CC1200 Wideband Transceiver. Each LAN has a built in antenna which is at the top of the Printed Wiring board. It is a Helix type with a gain of .8dB. The Transceiver has a Bandwidth greater than 500kHz operating under FCC Part 15.250. Modulation type is FSK. The crystal that operates the LAN is 40mHz and all other components are passive. The units operate on one of eight frequencies between 903 and 925mHz.

Since the units are battery operated most of the time they remain asleep. They awaken at preprogrammed intervals, typically, once per day or three times per day. Upon wakeup the Host will send a wakeup packet to the Clients. After a short interval the Host will send a packet of data to one or more Clients. The Client will respond with the data requested which is about an 8ms packet. While the Clients sleep the receiver also sleeps. At programmed intervals the receiver is awakened to "sniff" for a wakeup signal from the Host.