
Technical Note

# WipLL 1.9 GHz

Wireless IP-Based Local Loop System

**Connecting the World with Wireless Access Solutions**

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# Contents

# 1. Scope

This document provides a description of the WipLL 1.9 GHz product.

# 2. SPR

A subscriber premises radio, SPR 1.9 GHz FDD Ext., is part of a WipLL broadband fixed cellular wireless access system. The system provides a radio link between an end-user (a subscriber) and a network to give high-speed data access. The SPR's transceiver/receiver (FSK digital modulation, data rate up to 4 Mbps) uses TDM and operating in FDD duplexing mode (1,850 to 1,910 MHz Tx and 1,930 to 1,990 MHz Rx range), equipped with a 15 dBi gain external or 12 dBi internal antenna. The maximum RF output power (not including antenna gain) is 30 dBm and it can be reduced by software.

The SPR is installed outdoors and typically is mounted on a pole. The SPR transmits and receives traffic to and from the base station (i.e. BSR) respectively. The transceiver provides subscribers with "always-on" Internet, high speed data only, or data and voice (VoIP) services and is configured with a unique BSR reference number, preventing the SPR from relocating to another subscriber premises without authorization. The SPR has the same PCB components as the BSR, and differs only in the software and chassis dimensions.

The SPR is powered via a subscriber data adapter (SDA), which provides 48 VDC power.

# 3. BSR

A base station radio, BSR 1.9 GHz FDD Ext., is part of a WipLL broadband fixed cellular wireless access system. The system provides a radio link between an end-user (a subscriber) and a network to give high-speed data access. The BSR is a transceiver/receiver (FSK digital modulation, data rate up to 4 Mbps), using TDM and operating in FDD duplexing mode (1,850 to 1,910 MHz Rx and 1,930 to 1,990 MHz Tx range), equipped with a 16 dBi gain external or 11dBi internal antenna. The maximum RF output power (not including antenna gain) is 31dBm and it can be reduced by software.

The BSR is installed outdoors and typically is mounted on a pole. The BSR transmits and receives traffic to and from the end-user (i.e. SPR) respectively. The BSR provides subscribers with "always-on" Internet, high speed data only, or data and voice (VoIP) services.

The BSR is powered via a subscriber data adapter (SDA), which provides 48 VDC power.