



## Technical Note

# LTE Band 12

## Synergy 2000- Band 12

Connecting the World with Wireless Access Solutions

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## 1. Scope

This document provides a description of the LTE Synergy product.

## 2. Synergy (Base Station)

A base station radio, Synergy 2000, 700 MHz - Band 12, FDD LTE, is a part of a LTE 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 Synergy's transceiver/receiver (up to 64 QAM modulation, data rate up to 75 Mbps) uses OFDM and operating in FDD mode, equipped with a 13.5 dBi external antenna. The maximum total RF output power (not including antenna gain) is 33.68 dBm and it can be reduced by software.

The Synergy is installed outdoors and typically is mounted on a pole. The Subscriber transmits and receives traffic to and from the base station 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 base station reference number, preventing the LTE UE from relocating to another subscriber premises without authorization.

### 2.1. EUT (Synergy 2000) test configuration

The EUT ports and lines description is given in the table below.

Port type	Port description	Connector type	Quantity	Cable length (m)	Indoor /outdoor	Connected to
DC	48 VDC	DC Connector	1	100	Outdoor	DC P.S
Data	Ethernet	RJ 45	1	100	Outdoor	Eth. Switch