Nextivity’s Cel-Fi SMART Repeater (WCDMA/HSPA), is a cost effective, intelligent solution that dramatically increases indoor voice quality and data throughput (typically more than 4X) for 3G consumers while significantly improving network capacity for Operators. Breakthrough, patented technology enables a fully wireless, indoor coverage solution with plug-and-play, no-touch ease of use and installation, completely obviating support calls to the Operator Help Desk.

BENEFIT TO CONSUMERS

**Improved Voice Coverage** - Allows subscribers to make crystal clear calls throughout homes up to 1,235 m² (13,300 sq. ft).

**Improved Data Throughput** - In weak signal areas, offers data throughput improvements in excess of four fold.

**Improved Battery Life** - The decrease in handset Tx power enabled by Cel-Fi means subscribers enjoy significant improvements in battery life.

**Ease of Installation** - Cel-Fi does not require the installation of external antennas, bulky coaxial cables or complex settings. It is truly a plug and play system. Once installed, Cel-Fi automatically senses and adjusts to changes in the Operator’s network (or installation of other Cel-Fi systems nearby) to provide “No Touch” service throughout the home.

BENEFIT TO OPERATORS

**Reduced Churn**
Fewer dropped calls and higher data rates help ensure customer retention.

**Higher Data Service Usage**
Cel-Fi encourages data service usage by significantly improving data rates in both weak signal areas and most area with good signal areas.

**Decreased Operational Cost**
Lowered cost of indoor coverage and increased capacity of 3G wireless networks.

**Network Safe**
Specifically designed to complement the existing macro network with real time automatic gain adjustment.

**Operator Specific**
Provides enhanced services only to the Operator network through which the products were purchased.

**Self Adjusting**
Automatically selects correct frequency based upon PLMN code (UARFCN), thereby eliminating provisioning effort.
Cel-Fi Cellular Indoor Coverage Solution with IntelliBoost

SMART Repeater Features
- Fully wireless, plug-and-play, digital architecture for supporting WCDMA/HSPA with up to 100dB of system gain.
- Patented 2-unit, 3-hop system allows flexible placement for optimal coverage.
- Processor running advanced digital echo cancellation and channel select filtering algorithm.
- Software-based optimization of integrated antenna coverage pattern which maximizes system gain and provides improved coverage and signal quality.
- Automatic Gain Control (AGC) continuously monitors system path loss and transmit power to deliver maximum gain.
- Intuitive LED User Interface (UI) allows quick and easy installation by end-user.

Network-Safe Features
- Securely provisioned operation with ciphered software which only operates on authorized operator's network.
- Network-Safe software prevents uplink system gain from exceeding path loss, and eliminate unnecessary rise in base station noise level.
- Uplink Muting Mode automatically shuts down uplink cellular transmissions when no active UE is detected.
- Embedded software ensures optimal performance and prevents out of specification operation
- System shuts down upon operator's network command or failure detection.
- Maintains end-to-end cellular communication encryption without additional risk of vulnerability.
- Peaceful coexistence with adjacent Cel-Fi systems, 802.11a, cellular, and Femtocells.

High-Level Specifications
- WCDMA Band I
- Support for HSDPA and HSUPA
- 5 GHz link compliant with ETSI EN301 893 V1.4.1 (2005-08) and European Commission Decision 2005/513/EC
- Up to 100dB path loss between units (approx 20 meters between WU and CU)
- Max EIRP: 18 dBm downlink & 24dBm uplink
- Up to 100 dB system gain
- Availability better than 99.9%

Performance
- Support of 6 simultaneous users at max uplink power (24 dBm)
- Typical improvement of more than +5dB in Ec/Io

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