

## iDEN-9000 Cellular Repeater



**The iDEN-9000 is a carrier class cellular extender and repeater for iDEN cellular service.** The unit can expand cellular coverage without adding a new cellular switch. In most applications this can save up to 90% of a new switch installation. Distances of up to 60Km/37 miles\*\* can be obtained.

**Typical applications include filling valleys and shadow areas.** Cellular extension to rural areas, underground tunnels, large buildings, emergency areas and just about any location with limited or non existent cellular reception.

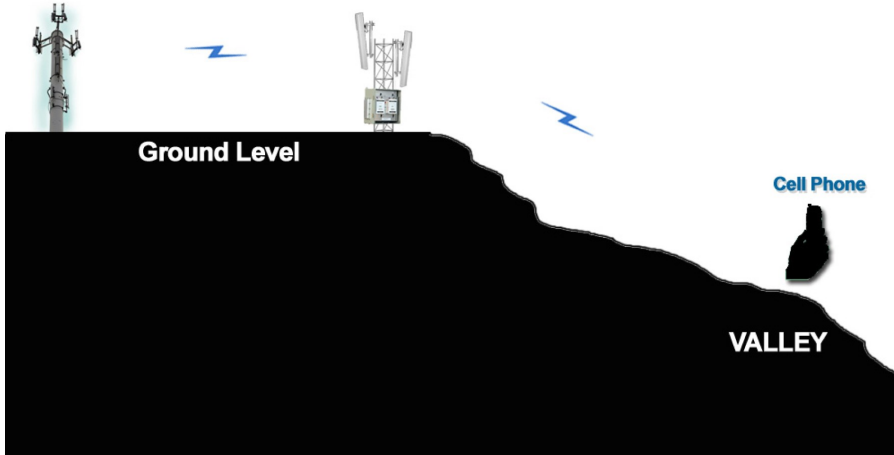
**The iDEN-9000 is proudly manufactured in North America** to the highest engineering and component standards providing the most powerful and reliable cellular repeater in its class.

**With the optional Hybrid feature,** the iDEN-9000 can extend RF over Fiber Optic cable to a fill antenna allowing access around large obstacles like mountains, canyons and hills.

- Extends iDEN cellular service from existing cell towers up to 60Km/37 miles\*\*
- Extends cellular Voice and Data services
- Saves up to 90% of the cost for a new cell tower and switch
- Allows areas with weak or dead spot signals to have full cellular service
- Provides hard to reach service like underground tunnels, parking garages, tall buildings, malls and valleys
- Simple and rapid deployment
- No programming knowledge required
- Separate amplifiers and up/downlink IF boards for reliability and modular design
- Supports 800Mhz SMR iDEN cellular service.
- Power output - +30dBm RMS
- FCC certified
- Hardened NEMA enclosure with AC or DC power supply
- Low power requirements - 50 watts
- Extreme temperature capability / -30 to +60 Celsius
- Power Amplification and SWR Protection
- Simple visual LED indicators for aligning antennas
- Simple attenuation switches for amplification settings
- 2 Year Warranty

\*\* Distance is dependent on cellular timing and terrain

Cell Tower



**The iDEN-9000 can easily address low lying valleys with bad reception or dead spots.**

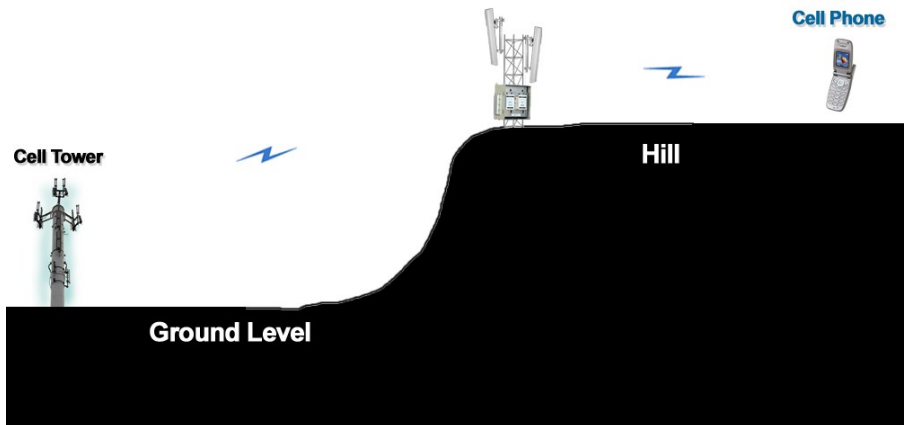
In this example, the cell tower is sitting above the valley where a community or neighborhood may reside. The cellular signal will travel across and over the valley, but unable to travel downwards with a reliable signal, if any at all.

The iDEN-9000 will receive a signal from the cell tower, regenerate to full power and transmit at a downward angle to local users in the valley area.

**The iDEN-9000 can easily address high lying areas or hills with bad reception or dead spots.**

In this example, the cell tower is sitting below the hill where a community or neighborhood may reside. The cellular signal will travel toward the top of the hill, but incapable of traveling horizontal across the top for a reliable signal, if any at all.

The iDEN-9000 will receive the signal from the cell tower, regenerate to full power and transmit at the correct angle to local users at the top of the hill.

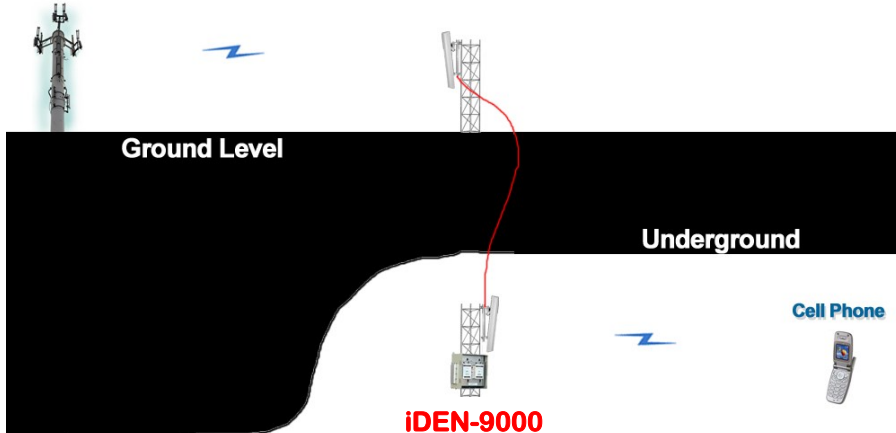


**The iDEN-9000 can easily address underground parking, tunnels and mines with bad reception or dead spots.**

In this example, the cell tower is sitting above ground and unable to penetrate the underlying structure which may be a parking lot, tunnel or mine.

The iDEN-9000 above ground donor antenna will receive a signal from the cell tower, pass underground through a cable, regenerate to full power and transmit with a fill antenna to the underground users.

Cell Tower





**The alternative to Satellite, Wi-Fi and Phone lines.** Providing emergency voice services to rural, underground or hard to reach places can be a challenge. A popular choice is satellite which can be effective in certain applications except for the high cost, complex technical equipment and restrictions not inherent in cellular services. With cellular services, the complex technology is hidden, you only require the cellular signal. The iDEN-9000 regenerates a clear and strong signal.



## Technical Specifications

## 800 MHz

<b>Frequency Range:</b>	824 - 849 MHz (Uplink), 869 - 894 MHz (Downlink)
<b>Overall Systems Gain:</b>	95 dB
<b>Pass Band Ripple :</b>	± 2.5 dB within 3 dB Pass Band
<b>Channel Ripple:</b>	2 dB Max
<b>Absolute Delay:</b>	< 2 $\mu$ s
<b>Rx Noise Figure@Max Gain:</b>	3.7 dB Typical
<b>IMD 2 Tone :</b>	51 dBc Typical
<b>IMD 4 Tone :</b>	48 dBc Typical
<b>Power Output:</b>	+30 dBm RMS
<b>EVM:</b>	< 3%
<b>Antenna Impedance Rx/Tx:</b>	50 $\Omega$
<b>Max SWR (In / Out):</b>	1.5 - 1
<b>Manual Gain Control:</b>	50 dB in 2dB Steps
<b>Spurious Outputs:</b>	55 dBc Max
<b>Power Supply:</b>	24 or 28 VDC@50W, 90-260 VAC
<b>Operating Temperature:</b>	-30°C - +60°C
<b>RF Connectors :</b>	N Type, Female
<b>Unit Size :</b>	14.5 x 16.5 x 11.5" 36 x 41 x 29 cm
<b>Weight:</b>	52 lbs, 23 kg Typical
<b>Enclosure Type</b>	NEMA 4A, 12

### **For more information:**

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