

# Connect Your People and Data Where Other Technologies Cannot



Real Time Two Way  
Voice and Data

Transmits Through  
Rock, Concrete and  
Urban Street Infrastructure

Proven to Work in the  
New York Subway

Integrates with Audio  
and Data Systems

Vital Alert Communication Inc.

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# Vital Alert Through-The-Earth Communication

The Vital Alert C1000 Through-The-Earth (TTE) system uses magnetic induction, advanced digital techniques and very low frequency transmission to wirelessly provide reliable two way voice, text and data links through rock, concrete and city streets.

With no expensive cables to install or maintain the C1000 system connects you where others cannot. Unlike wireless mesh, it does not rely on line-of-sight so it survives underground disasters where others fail.

The system leverages TTE patents held by Los Alamos National Security LLC for which Vital Alert holds the exclusive global license for mining and urban applications. (U.S. patent numbers 7,149,472,7,043,204, and 6,263,189). Vital Alert has combined these patents with advanced signal processing techniques, a software based programmable radio and robust hardware design to create the C1000 system. Vital Alert also filed patents on a Portable TTE Radio backpack system, expected to launch late in 2011.



- Range up to 1000 ft. (varies with local environment noise & strata composition)
- Supports many headsets, speakers & radio interconnects for Push To Talk or full-duplex voice
- Interfaces include RS-485, RS-422, Ethernet, Wi-Fi, Bluetooth, and USB
- Duplex data throughput up to 1kbps, with voice supported via SPR voice codec at 800bps+
- On-board Linux platform and customer API enables the addition of application specific features and programs such as text messaging or text to speech
- Operates from external AC, DC or back up battery with 24+ hours battery operation time
- Operating temperature -10 to +40 degrees C, Humidity 15-95% condensing
- Vibration 2-9Hz 3mm, Shock 250 m/s/s, 6ms duration
- Small size terminal - 11 lbs, 15.75"L x 9.455"W x 3.782"H

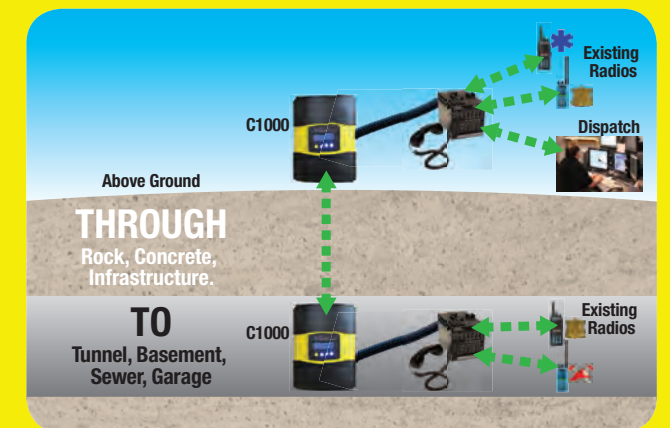
## SAFETY

Keep underground emergency responders in touch with dispatch & street-level support teams

Support multiple standard radio systems at once

Remove the need to go above ground for contact

Install at key points on platforms and in tunnels



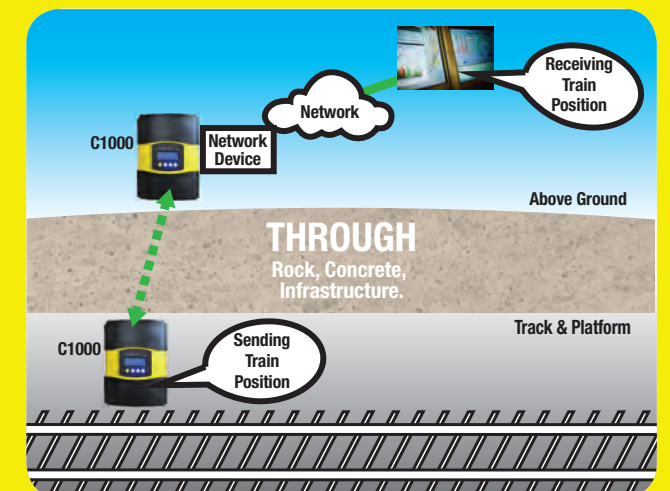
## EFFICIENCY

Increase efficiency by transmitting train dwell time to your operations center in real time

Optimize with visibility to train dwell time

Interconnect with your choice of RFID systems

Leverage for other apps like monitoring underground equipment in real time



## SECURITY

Maintain radio contact in the tunnel even if your leaky feeder or mesh gets damaged

Protect against loss of comms due to network vandalism and natural disasters

Connect personnel on either side of the break via wireless TTE link

