US Army Corps of Engineers®
Engineer Research and Development Center

Broadband Global Area Network (BGAN) Satellite Terminal Explorer 500 and 700 Units

Purpose

BGAN provides a small, easily transported telephone and Internet capability for use in deployed, remote environments with little or no established communication infrastructure.

Background

USACE personnel and engineer units often deploy into areas where the communications infrastructure is unreliable or nonexistent. To overcome this deficiency, the U.S. Army Engineer Research and Development Center (ERDC) USACE Reachback Operations Center (UROC) provides the Thrane and Thrane BGAN satellite terminal, an off -the-shelf solution, to deployed units enabling Internet browsing, e-mail, phone/fax, audio/video streaming, and file transfer/storage all within the BGAN coverage area.

Facts

The Thrane and Thrane Explorer 500 and 700 BGAN satellite terminals are robust, easy to carry, quick to set up, and simple to use, effectively supporting remote missions when portability is desired.

The Lithium-Ion rechargeable battery for both the BGAN 500 and 700 can provide up to 1.5 hours of continuous transmission at speeds much higher than traditional INMARSAT rates. In stand-by mode, the battery life of the BGAN 500 is 133 hours and the BGAN 700 has 36 hours. The three satellites located in geosynchronous orbit above the equator provide virtually global coverage except for extreme polar regions. In some areas, the satellite footprint coverage overlaps, allowing the user access to two satellites.

With a laptop connected to the unit, the user can access the Internet and browse at speeds up to 492 kbps. In order to reach home-station networks the user may use a VPN client. The BGAN allows the user to browse the Internet and send and receive phone calls and faxes, all at the same time. With the use of a small network hub connected to the LAN port on the BGAN, multiple laptops can be connected to the network simultaneously. The BGAN 700 is equipped with an additional LAN port and two ISDN ports, thus expanding its capabilities. The newer TeleEngineering Communications Equipment Deployable Kits are now being fielded with the BGAN 700 providing ISDN functionality for video teleconference (VTC) capability while leveraging the added benefit of Internet access when needed. There is also a mobile version of the BGAN that is being investigated for on-the-move applications or for instances when a minimal setup time is required.

Point of Contact

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