RAFAEL
ADVANCED DEFENSE SYSTEMS LTD.

BNET Family™

Broadband IP Software Defined Radio

The Future of Tactical Communications

The BNET family is an advanced Broadband IP MANET (Mobile Ad-hoc NETwork) Software Defined Radio for tactical operations. It supports the modern digital battlefield's needs with high-speed, low delay, reliable connectivity for data, voice and video on-the-move. Modular, multi-band and multi-channel, BNET is a net-centric, spectrum aware, system for vehicular and airborne platforms, headquarters, and dismounted soldiers. Delivering unprecedented network capacity in terms of data rates, number of users, and minimal delay, BNET enables all radios of land, sea and air units to participate in a single, seamless, scalable MANET network.

Benefits

- High Scalability +1000 Users
- Multi-Band, IP, Software Defined Radio S.C.A. 2.2.2 Compliant
- Multi-Channel Reception MANET Waveform
- Ultra-High Capacity
- High-Speed, Low Delay
- Efficiency and full utilization of the limited spectrum resource
- Operational simplicity and ease of operation
- Simple maintenance and logistic survivability
- Open architecture using IP technology, allowing smooth, cost-effective integration with existing and future applications.

Main Capabilities

- Diverse wideband voice, video & various IP data services, transmitted over seamless wireless networks
- Communication continuity in all conditions, and system survivability
- Support for delay-sensitive applications (i.e., closing sensor-to-shooter cycles)
- Support for "flat" networks with thousands of members in changing traffic and variable link conditions (mountainous, alpine, urban, hilly, sub-alpine, forested, etc.)
- Interoperability between branches and between military and para-military forces ("blue light" forces)
- Fast network forming and healing
- Networking ECCM capabilities; frequency hopping spread spectrum techniques.

BNET-AR
Airborne SDR

BNET-HH
Hand Held SDR

BNET-MPS
Manpack SDR Radio

BNET-V
Vehicular SDR

The Challenge

Today's battlefields are undergoing far-reaching changes that affect the operational needs of land, air and sea forces. Solutions must take into account both the requirements of small forces fighting in dense urban areas, often populated by civilians - as well as fighters facing massive forces head-on in open battlefields. Voice communications and static maps and pictures transferred in minutes are no longer sufficient. Communications systems need to be agile, deployed in real time, scalable, and robust even during the chaos of battle. While there is clearly a need for high throughput of large quantities of information, the speed of battlefield communications - information collection, communication, analysis, and action - will likely determine the outcome of future battles.

BNET Family	BNET-HH	BNET-MPS	BNET-V	BNET-AR
	Hand Held	Manpack Soldier	Vehicular	Airborne
RF Head	1	2	Up to 3	Up to 3
Tx Power (Max)	5w	5w/20w	50w per Ch	50w per Ch. (V+U+L)
Weight (Including Battery)	1.2kg	6kg	13Kg	10Kg
Freq. Range [MHz]	NB-30-88, 225-512 (108-174 optional) WB- 225-512 (L-band, S-band optional)			
Supported WF's	NB 25/50KHz, WB 1.25/5MHz SC, WB 1.25/5MHz OFDM, AM/FM Other WF can be supported			