LEXYCOM TECHNOLOGIES

MINI EVA SOFTWARE DEFINED RADIO

APPLICATIONS

- **Military Defense**
- **Unmanned vehicle activities**
- **Robotics**
- **Multi-service communications**

SDR WITH SSA

Collaborative Technology

NASA SBIR Project

Miniature Software Defined Radio and Self Structuring Smart Antenna

EVA SDR (board level)

EVA SDR (enclosure) IP65

Self Structuring Steering Beam Antenna

Vest with antenna

PRELIMINARY SPECS

Frequency band of operation	2.4 GHz; incl. frequency hopping for noise/interference immunity
RF channel throughput	Flexible high speed data rate (8 kpbs-1.2 Mbps, capable of 6.5 Mbps)
Multiple Data Types	Voice, Data, Video (High Definition and Standard)
Operating Range (LOS conditions)	Voice only, Slow data: up to 8,000 km MidRate data: up to 30 km HighDef Video, HighRate data: up to 5km
Network Topologies	Variety of Network types; incl. Hybrid Mesh (allows for end node to end node direct communication)
Data encryption, integrity validation	AES, SHA, variety of CRCs.
Reconfigurable/ Interoperable	On-board firmware bank provides the user with a variety of firmware options
Scalable Comm. Platform	Easily upgradable; can change the wave-form on-the-fly
Adaptive Power Management	Power Efficient; 3W average power @ supporting HighDef Video
Robust	Spread spectrum (frequency hopping or direct sequence)
Sensitivity	-123 dBm @ BER 10^-6, 8 kbps -110 dBm @ BER 10^-6, 130 kbps -96 dBm @ BER 10^-6, 6.5 Mbps
Input voltage range	4.5…32 VDC.
Operating temperatures	-40 … + 85 deg C.
Output power	Programmable @ 1 dB steps, up to 1 Watt; dynamically scales based on QoS
Dimensions	1.60” x 3.00’’ x 0.50’’ (board level) 2.05” x 4.72” x 0.83” (enclosure) IP65
Weight	Less than 4 ounces (board level) Less than 6 ounces (enclosure)
RF connector	MCX (board level) SMA (enclosure)

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Innovative technology at work
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