

BA Blu30 Robotics Communication

About Commit Embedded

Commit Embedded, part of the Commit group, specializes in designing and delivering customized, fully integrated solutions for smart devices and IoT applications, from initial analysis and design to final deployment and ongoing support.

Commit is a global tech services company with offices in the US, Israel, UK and Europe. Founded in 2005, it has over 700 multi-disciplinary innovation experts who serve a broad range of customers, from small start-ups to large enterprises across multiple business sectors. Commit specializes in advanced technologies and applications, with dedicated practices in Embedded & IoT, Cloud, Software, AI, Cyber, Big Data, Collaboration, and more.

Overview

BA Microwave, subsidiary of Commit, is a leading DTC integrator and reseller in Israel, renowned for its extensive expertise in integrating and operating numerous platforms with the BluSDR Family of radios. This experience uniquely positions BA to deliver innovative communication solutions tailored to the Israeli defense and homeland security sectors.

Introducing the BA Blu30 Radio

The BA Blu30 is specifically designed for Unmanned Vehicles (UxV), incorporating a proprietary waveform that significantly enhances radio immunity and reliability. This exclusive feature differentiates the Blu30 in the Israeli defense and homeland security market.

The Blu30 family, integrated in COMMx wireless™ solutions, supports a wide range of UxV applications, providing seamless communication over distances of up to 30 kilometers. Built on a Software-Defined Radio (SDR) architecture and delivering a robust 2x1W of output power, the Blu30 includes MANET IP Mesh capabilities, enabling the creation of self-healing networks with up to 144 nodes. This is made possible through DTC's industry-leading architecture and advanced security features.

The radio is available in three configurations—Clamshell (OEM version), Plain, and Robust—providing flexibility in integration and expediting time-to-market.

Features and Benefits:

- ✓ 2x1W COFDM transceivers, 2W total
- ✓ Ideal for medium range applications up to 30km
- ✓ USB-C power option compliant with USB PD (Clamshell and Plain variants)
- ✓ RNDIS support for Ethernet over USB
- ✓ Ethernet and RS-232 data connectivity
- ✓ MeshUltra™ MANET waveforms included to support up to 144 nodes in a self forming self healing Mesh network
- ✓ Optional AES128/256 encryption (accredited to FIPS140-2 for MeshUltra™ waveforms)
- ✓ USB support for peripherals such as 3G/4G/Wi-Fi dongles
- ✓ 128GB built-in storage
- ✓ Compact packaging with EMC screening included
- ✓ Low power consumption, typically 7W IP Mesh
- ✓ Small size and weight



Clamshell Core



Robust



Plain

Product Code	
BAB30CWF0xxxxyy	OEM unit 2x1W with original cable set
BAB30CWF0 xxxyyy -NC	OEM no cables with an option for customized cables
BAB30PWF0xxxxyy	Plain boxed unit, indoor 2x1W
BAB30RWF0xxxxyy	Robust, outdoor unit 2x1W
xxxxyy denotes frequency range as specified in frequency	
COFDM Transceivers	
Power	1W (+30dBm) max per output, 2W total
Power step	0.25dB incremental control
Tuning step	125kHz
Bandwidth	1.25, 1.5, 1.75, 2.5, 3.0, 3.5, 5.0, 6.0, 7.0, 8.0, 10.0MHz (all modes) 12.0, 14.0, 16.0, 20.0MHz (MeshUltra only)
Mesh capacity	Up to 87Mbps MeshUltra
Carrier modulation	BPSK/QPSK/16QAM/64QAM (adaptive)
FEC rate	FEC1/2, FEC2/3 (adaptive)
Receive sensitivity	-98dBm (BW 2.5MHz/QPSK 1/2)
Audio	
Interface	Analogue microphone/headphone with bias
Data	
Data configuration	1k2 to 115k2, 7/8 bit, no/odd/even parity
Data interface	RS-232 or USB peripherals
Encryption	
Standard	DES
Licensed	#AES128/256 (subject to export control)
Storage	
Medium	Internal microSD 128GB
Power	
DC input	8V to 17V overvoltage protected up to 30V
Power consumption	7W IP Mesh typ
Environment	
Temperature range	-20°C to +55°C with additional cooling
Humidity	Less than 85% non-condensing
Sealing (Robust boxed)	IP68
Frequency	
120170	1.20-1.70GHz
178229	1.78-2.29GHz
198270	1.98-2.70GHz
440500	4.40-5.00GHz
550600	5.50-6.00GHz
Storage	
Medium	Internal microSD 128GB
Physical (Clamshell Core)	
Dimensions	95mm x 60mm x 15mm
Weight	110g
Physical (Plain Boxed)	
Dimensions	150mm (160mm incl. connectors) x 75mm x 24mm
Weight	462g approx.
Physical (Robust Boxed)	
Dimensions	157mm (165mm incl. mounting) x 75mm x 21mm
Weight	430g approx.