

SHIV

CX-2200 Convergent Tactical HF/UHF Small Form Factor Transceiver



The SHIV uses unprecedented technology to provide the convergence of state of the art tactical communications and industry leading SIGINT capabilities in a single portable device.

High-performance Transceiver

The CX-2200 is a state of the art dual-channel digital transceiver which utilizes the latest zero-IF technology to provide up to 30 MHz of instantaneous bandwidth per channel.

High Frequency (1.6MHz to 30MHz) operation is standard, with optional UHF (225MHz to 512 MHz) coverage on the second channel.

Lowest SWaP

The CX-2200 delivers the lowest size, weight, and power of any tactical HF radio on the market. At a mere 24 cubic inches, it is approximately 90% smaller than it's nearest competitor (RF-5800H).

Advanced networking protocols and power saving techniques allow operation for up to 1 week on a single battery, greatly reducing mission payload.

Integrated SIGINT capabilities

The SHIV leverages Entropix field proven geolocation algorithms. These algorithms have been successfully deployed in the Corsair HF Direction Finding system and other US SOCOM ground based SIGINT systems.

Integrated SIGINT capability provides the operator with up to the minute situational awareness and threat assessment.

Flexibility

The CX-2200 is a fully software definable radio, allowing rapid upgrade capability and reduced lifecycle costs.



The SHIV provides the most powerful integrated HF networking solution on the market

Cognitive Link Establishment

The CX-2200 utilizes advanced "cognitive" link establishment techniques to provide efficient and reliable communications over even the most challenging links.

Wideband HF Modem Technology

Entropix has developed proprietary wideband HF modem technology which is capable of providing error free data at rates in excess of 76 kbps, channel conditions permitting.

Unlike the competitors wideband technology (i.e. MIL-STD-188-110C), Entropix's wideband waveform is designed with interference mitigation in mind, providing superior performance on congested channels.

ARQ techniques provide guaranteed error free message delivery.

Interoperability

While the SHIV's integrated HF networking protocols provide arguably the best performance available today, some users may require interoperability with existing equipment. Optional MIL-STD-188-110B and MIL-STD-188-141B functionality are offered for this purpose.

Advanced Base Station Processor

At the heart of the SHIV's groundbreaking HF networking solution is the Entropix Advanced Base Station Processor. This multi-channel, massively parallel transceiver provides the signal processing capabilities required to make reliable communications with a low power small form factor device possible.



CX-2200 Product Specifications

GENERAL	
Frequency Range:	2-30.0 MHz 225-512 MHz (option)
Frequency Stability:	$\pm 2 \times 10^{-7}$
Transmit Modes:	J3E(USB, LSB, AME) H3E (AM), A1A (CW) F3E (FM)
RF I/O Impedance:	50 Ohm
Power Input:	12VDC (7.0-18.0VDC)
Data Interface:	USB 2.0 IP based
PHYSICAL	
Dimensions:	3.5W x 1.0H x 6.9D inches
Weight:	1.45 lbs
ENVIRONMENTAL	
Standard:	MIL-STD-810G
Temperature:	-40°C to +70°C

TRANSMITTER	
Power Output:	0.5, 1, 2 watts PEP 5 watts PEP (opt)
Antenna Tuner Option	
RECEIVER	
Sensitivity:	HF SSB -115 dBm UHF FM -120 dBm
IF Rejection:	> 80 dB
Intermodulation Dist.:	-80 dB or better
AGC:	mode dependent
WAVEFORMS	
ALE:	Proprietary "Cognitive" MIL-STD-181-141B (opt)
Data:	Narrowband 75-9600 bps Wideband 300-76,800 bps MIL-STD-181-110B (opt) 75-9600bps
Voice:	VoIP
ENCRYPTION	
AES:	128, 256 bit
H/W:	optional user slot

