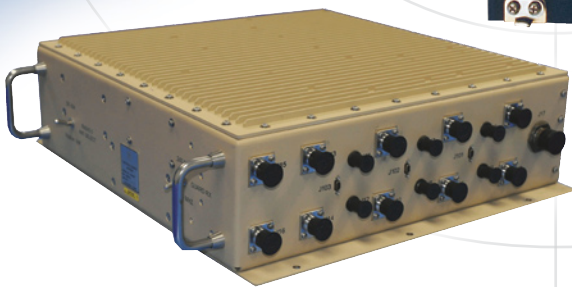
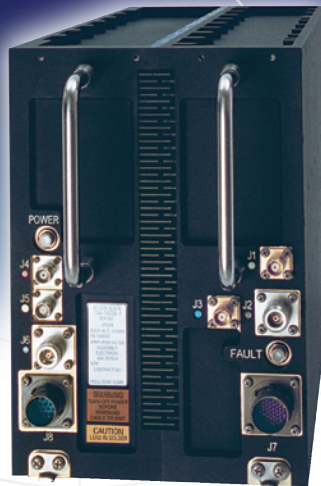


# Integrated Cosite Equipment

*Solutions to radio communication interference challenges*



[www.polezero.com](http://www.polezero.com)



# Integrated Cosite Equipment (ICE)

Pole/Zero is the premier provider of solutions for communications challenges arising from RF interference. Our products enable military platforms to simultaneously operate multiple radios on the same platform without degradation in performance, range or compromises in con-ops. Our Integrated Cosite Equipment (ICE) line of products are incorporated between your radios and antennas to enable simultaneous operation of all your communications, radar, SIGINT/COMINT and other RF systems.



Cosite Communications interference effects occur in your application via many complex mechanisms:

<b>Transmit mode</b>	<b>Receive mode</b>
Broadband noise	Desensitization
Spurious emissions	Intermodulation distortion
Reverse Intermodulation distortion	Reciprocal mixing, Cross modulation

Pole/Zero offers a comprehensive software analysis and simulation service to analyze these effects and, more importantly, develop mitigation strategies against them. Without mitigation, the dynamic interaction of these parameters can severely limit communications range and hinder the warfighter's ability to execute his or her mission!

**Contact Pole/Zero today to ensure optimum performance on your platform!**

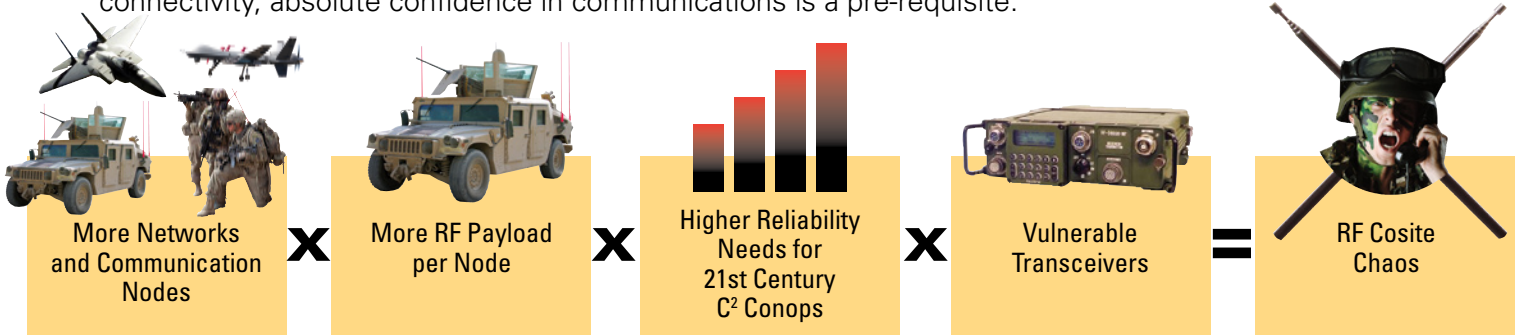
## An Example of Receiver Performance Improvement with ICE

Receiver Performance Before ICE	ICE Enhancement	Cosite Enhanced Performance With ICE
<div style="display: flex; align-items: center;"> <div> <p><b>Before ICE</b></p> <p>Transceiver</p> </div> </div>		<div style="display: flex; align-items: center;"> <div> <p><b>After ICE</b></p> <p>Integrated Cosite Equipment</p> <p>Transceiver</p> </div> </div>
Noise figure = 12 dB	8 dB	Noise figure = 4 dB
IF BW = 38 kHz		IF BW = 38 kHz
Sensitivity = -106 dBm	8 dB	Sensitivity = -114 dBm
<b>Max Interferer Level</b>		<b>Max Interferer Level</b>
(5% removed) = -23 dBm	32 dB	(5% removed) = 9 dBm
(10% removed) = -23 dBm	56 dB	(10% removed) = 33 dBm

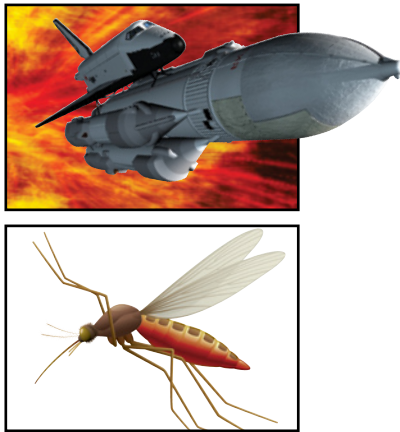


# Integrated Cosite Equipment (ICE)

Armed forces are experiencing a dramatic rise in the demand for information in the battlefield. This increase has resulted in new radios, new waveforms, networking, and new ways of managing the battle. In a world of increased reliance on coalition forces and a command chain relying on unit-to-unit connectivity, absolute confidence in communications is a pre-requisite.

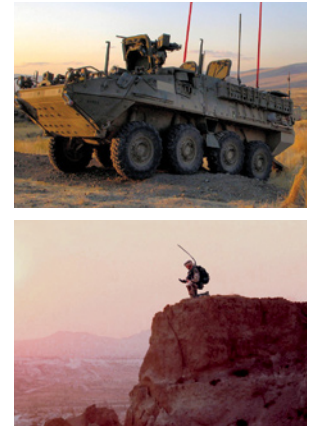


Incorporate Pole/Zero ICE to solve this RF Clutter equation, and enable your systems to operate with clean, reliable, full-range links.



## Ratio of Power Analogy

The ratio of transmitted to received RF power on a C2 type platform is extremely large. In fact, the power ratio between a floating mosquito and a launching shuttle is the same as the power ratio between a received signal and a transmitted signal on a C2 type platform. Pole/Zero routinely manages such high dynamic range RF situations and ensures your 'mosquito' signals are received faithfully and reliably.



The best way to solve your cosite problems:  
email [Support@PoleZero.com](mailto:Support@PoleZero.com) or call Pole/Zero 513.870.9060

## ICE has you covered from 2 MHz to 2 GHz!

Models for all applications

Continuous Coverage 2MHz to 2GHz

ICE1004  
ICE4004  
ICE5002

PSEL1002  
PSEL1003

VHF/UHF Multiband

ICE3008

VHF

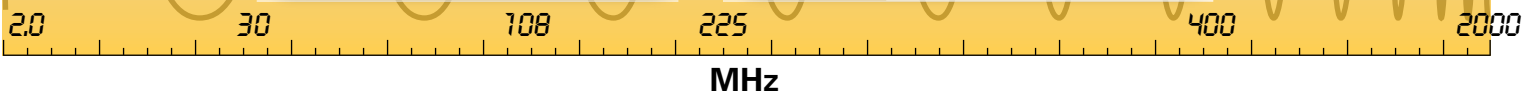
ICE3004  
ICE3005  
ICE4001  
ICE4003

SATCOM

ICE3006  
ICE4002  
ICE5001

ICE1005  
ICE3001  
ICE3002  
ICE3003  
ICE3007

UHF



## Conclusions

- Multiple radios together = cosite environment
- With mitigation, critical communication links can be assured

Use Pole/Zero Integrated Cosite Equipment (ICE) to resolve interference in your communication/data links. Protect your receivers and purify your transmitters in order to recover the range required for your missions. Determining the right ICE model for your application is easy and straightforward with the additional Pole/Zero capability to conduct a cosite analysis to achieve an optimal communication system.

**POLE/ZERO IS AN INDUSTRY LEADER  
IN HIGH DYNAMIC RANGE RF COMMUNICATIONS SOLUTIONS  
WITH OVER 20 YEARS OF EXPERIENCE.**

**Cosite Communication Solutions**  
**CCS**



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