INTAS-S4

Antenna Coupler, VHF/UHF, Four Transceivers - One Antenna, 10-400 MHz

Control Systems, Couplers and Diplexers

The INTAS-S4 passive antenna combiner allow four transceivers to be connected to a single antenna. Reducing the number of antennas on a platform reduces the visual impact and can improve the radiation pattern due to the reduced effect of co-site interference.

Successful integration of multiple antennas onto ground and shipboard platforms poses many challenges. Platform features impact antenna performance by blocking, reflecting or re-radiating energy, and co-site interference can impair the effectiveness of multi-antenna installations.

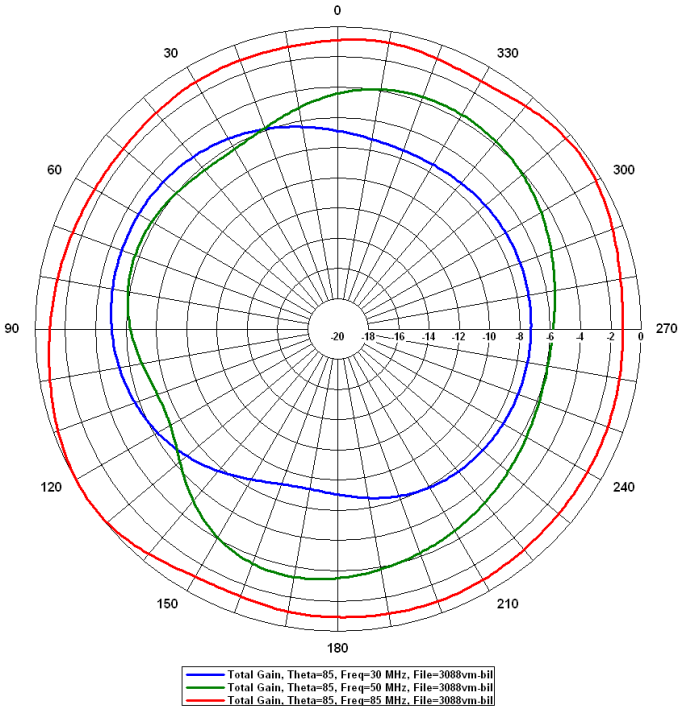
The ideal solution would be to reduce the number of antennas to one per frequency band. This solution is not feasible as proper functioning of the individual radios could then no longer be ensured under all conceivable operating conditions. The consequence would be a mutual frequency band "clog up" of the individual sets. To overcome this problem Comrod has developed the INTAS-S4 intelligent antenna system which has been designed to permit optimum use of a single antenna. As a result of this, co-site interference is reduced and the transmission quality of the system is maintained both through an increase average range and through appropriate communications procedures.

An emergency loop-through is provided for connecting any radio directly to the antenna.

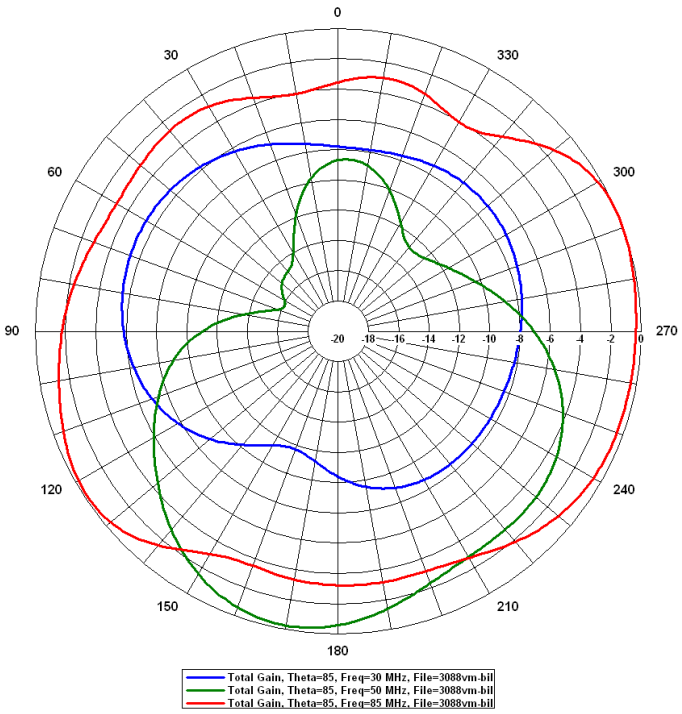
Specifications

Frequency Range	10-400 MHz
Channel Spacing	Any spacing (equipment defined)
Radio Bit Rate	Any rate (Equipment defined)
Transmitting Power	4 x 50 W maximum
Insertion Loss	Less than 6.8 dB through multi-coupler Less than 0.1 dB through emergency loop
Impedance	HF inputs: 50 Ω HF ouputs: 50 Ω
Interoperability	Operation with radio system within a frequency range of 10-400 MHz
EMC	Per MIL STD 462
NEMP	Per AEP4/STANAG 4145
Environmental	Per MIL STD810/DIN 58390
Operating Temperature Range	- 35°C to + 63°C
Dimensions	Approximately 235 x 251 x 77 mm
Weight	Approximately 3 kg
Connectors	BNC female, or customer specified

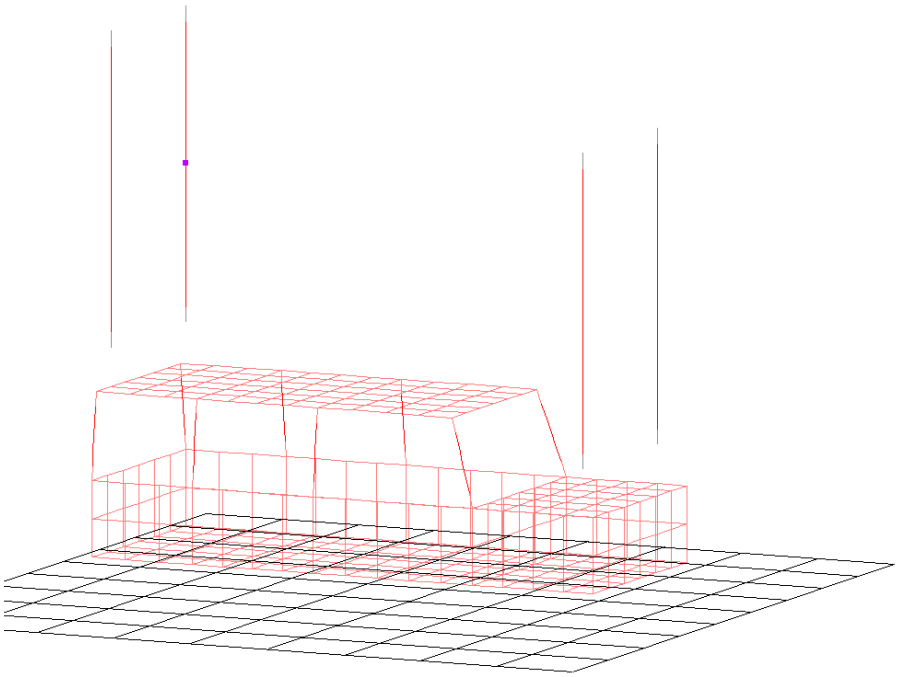
The system reduces the number of antennas on the vehicle, this has a beneficial effect on the radiation pattern as can be seen below:



Azimuth radiation pattern with INTAS-S4



Azimuth radiation pattern with four separate antennas



NEC Model of Vehicle

Partnered Supplier

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