

### Application

The VHF30512DB-HG is a tactical dual-band vehicle antenna designed for use on all modern in-service military platforms, including armoured or soft skin, metal chassis or composite, wheeled or tracked.

The antenna operates over the 30-88MHz and 225-512MHz frequency bands. The antenna is designed as a monopole in the VHF band, with performance similar to an end-fed VHF only antenna. The UHF part is a high gain dipole.

Dual-feed and single-feed bases are available with optional L1 & L1/L2 GPS.

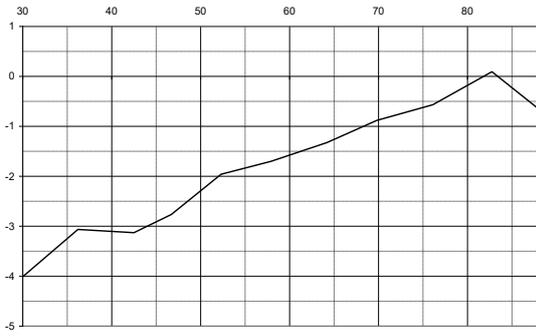
### Electrical Specification

Frequency range	30-88MHz, 225-512MHz
VSWR	< 3.5
Nominal impedance	50 ohm
Power rating	VHF - 100 W, UHF - 50W
Gain	See diagrams
Isolation	< -40dB (VHF/UHF)
Radiation pattern	Azimuth: Omnidirectional
Polarisation	Vertical
Connectors	Dual-feed: VHF - BNC female, UHF - BNC female Single-feed: VHF/UHF - BNC female GPS - SMA female (option)

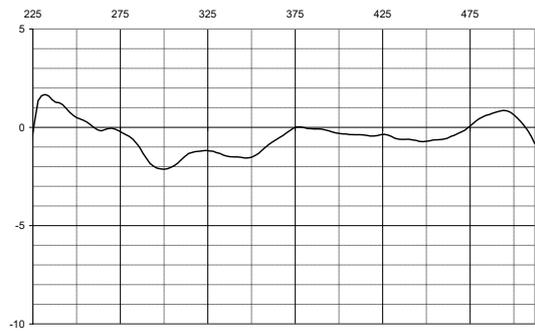
### Mechanical specification

Design	Centre fed dipole for UHF. End-fed whip for VHF. Radiating element completely enclosed in epoxy/fibreglass laminate. Metal parts are plated brass and stainless steel.
Length	Total: 2.38 m (94")
Weight	Complete Antenna: 4 kg (8.8 lbs) Base: 2.8 kg (6.2 lbs) Lower Whip: 1 kg (2.2 lbs) Upper Whip: 0.25 kg (0.6 lbs)
	55 m/s = 125 mph
Finish	Polyurethane lacquer
Colour	Customer Specified
Temperature range	-55 °C, +71°C; -67 °F, +160 °F

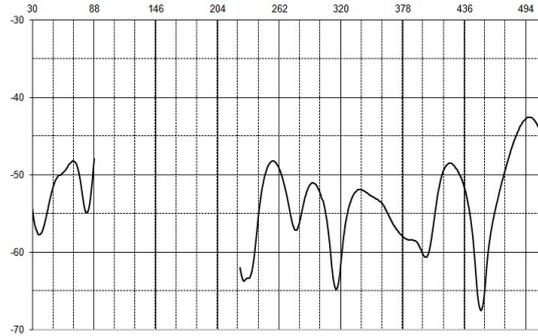
## Gain and Isolation Plots



Typical VHF gain in dB rel.  $\lambda/4$  whips



Typical UHF gain in dBi



Typical isolation between VHF/UHF ports

## Antenna Variants

Description	Antenna Base	Feed	VHF Connector	UHF Connector	GPS Connector
Dual-Band 30-512 MHz	NATO 4 Hole	Dual	BNC Female	BNC Female	
Dual-Band 30-512 MHz with L1 GPS	NATO 4 Hole	Dual	BNC Female	BNC Female	SMA female
Dual-Band 30-512 MHz with L1/L2 GPS	NATO 4 Hole	Dual	BNC Female	BNC Female	SMA female
Dual-Band 30-512 MHz	NATO 4 Hole	Single	BNC Female		
Dual-Band 30-512 MHz with L1 GPS	NATO 4 Hole	Single	BNC Female		SMA female
Dual-Band 30-512 MHz with L1/L2 GPS	NATO 4 Hole	Single	BNC Female		SMA female

## GPS Electrical Specification

	L1 GPS	L2 GPS
Frequency Band	1575.42 $\pm$ 10 MHz	1227.60 $\pm$ 10 MHz
Supply Voltage	2.7-5.5V	2.7-5.5V
Pre-amplifier	26.5 dB @ 5V	26.5 dB @ 5V
Noise Figure	2.5dB	2.5dB
Supply Current	< 60mA	< 60mA
Polarisation	RHCP	RHCP
Connector	SMA female	SMA female