



## DUC-1

### DOWN/UP CONVERTER (COAXIAL)



Our StarLink™ GPS Down/Up converter makes it possible for long cable runs up to 450 meters.

The DUC converters are the perfect add-on for L1 GPS installations where long antenna cables are needed and a simple in-line amplifier will not suffice.

A DUC consists of a combined GPS antenna and down-converter and an up-converter at the RF input of the GPS receiver.



The technology phase locks the converter pair to provide high fidelity signal transport. This technique uses the same reference for up and down conversion, eliminating frequency error.

The DUC product is optimized for generic RG-58 cable and can be used for lengths of up to 450 meters.

#### Specifications:

- GPS Frequency: L1 (1575.42 MHz)
- Cable Distance to Antenna: 457.2m (1500 ft)
- Cable Distance to Receiver: 30m (100 ft)
- Coax Cable Type: 50 Ohm

# DUC-1 SPECIFICATIONS



## DOWN CONVERTER

### APPLICATIONS

- Low emissions.
- Replaces long cable runs & high gain antennas.
- Easy installation, since cable length is not critical.
- Decreased susceptibility to lightning strike damage.

### SPECIFICATIONS

- Frequency: GPS L1
- Gain Combined: 35 (min)
- Axial Rate: 3 dB (max)
- Noise Figure: 2.5 dB (max)
- Termination: 50 Ω

### SIZE AND WEIGHT

- Height: 89 mm (3.5")
- Diameter: 114 mm (4.5")
- Weight: < .45 kg (1.0 lbs)

### ENVIRONMENTAL

- Relative Humidity: 0-100% condensing
- Storage Temperature: -55°C to +85°C
- Operating Temperature: -40°C to +65°C
- Altitude: 6,096 m (20,000 ft)

### OTHER

- Connection: TNC, Female
- Packaging: Waterproof (IP67) enclosure
- Mounting: Standard marine mount,  
1" - 14 or 3/4" NPT



## UP CONVERTER

### SIZE AND WEIGHT

- Dimensions: 44 x 130 x 170 mm  
(1.75 x 5.12 x 6.68 in)

- Weight: 0.6 kg (1.3 lbs)

### POWER

- Power Requirements: 9-12 VDC via antenna bias  
or 12 ±10% VDC external
- Power Consumption: < 250 mA @ 12 VDC  
(Both Units)

### ENVIRONMENTAL

- Relative Humidity: 0-95% non-condensing
- Storage Temperature: -50°C to +85°C
- Operating Temperature: 0°C to +50°C
- Altitude: 6,096 m (20,000 ft)

### OTHER

- Connection: BNC connector to down converter,  
TNC to GPS receiver.
- Indications: Power  
Fault for Down converter  
Cable open or short

### ANTENNA CABLE LENGTHS (Max.)

- Copper DUC 450 m (1,500 ft)\*

\*RG-58 cable

US patent 5,999,795

# FORSBERG

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