Functional Description

The Model ASC300Ku-I Beacon Receiver is a high performance self contained unit that is designed to real time track the power density of a satellite beacon and output a DC voltage that is linearly proportional to the beacon power by utilizing a true, RMS-responding power detector. The ASC300Ku-I will tune over any of the three primary Ku band satellites (10.7-11.70 GHz, 11.70-12.75 GHz) by utilizing an internal block down converter. The frequency band must be customer specified. The applications for the ASC300 Ku-I are for antenna tracking controllers and uplink power control system.

Systems Specifications

**Input Frequency** ........................................ Customer Specified
**Internal Block Converter (See below bands)**
**Pre-detection Bandwidth** .................................. 60 kHz
**Input Level** .............................................. -90 dBm, min.; -30 dBm max.
**Frequency Tuning** ........................................ 10 kHz Steps
**Frequency Adjust** ........................................ Front Panel or Remotely
**AFC** .......................................................... +30 kHz
**Threshold** ................................................. <45 dB-Hz (C/N0) for acquisition
**Input Impedance** ........................................... 50 Ohm
**Input Connector** ............ Type-N, Female (SMA Optional)
**Output Impedance** .................. 100 Ohm, single ended
**Output Connector** .............. Terminal plug and BNC Female
**Tracking Gradient** ................................. 0.5 V/Db, Std
**Tracking Response** ................................. 0 to +10 VDC for a 20 dB input level change
**System Level Adjust** .............. 0 to 60dB, 0.5dB Steps
**Frequency Stability** ............................. <1 ppm, 0°C to +50°C
**Frequency Reference** ....................... 10 MHz (Internal)
**Phase Noise** ....................................... >75 dBc-Hz, 1 kHz from Carrier
**Alarms** ................................................... Unit Lock
**Alarm Relay** ............................................... Form-C
**External LNB Power** ................................. None
**CDS (Optional)** .......................................... DB-9, RS-232
**Front Panel Display** ............................... Vacuum Fluorescent
**M&C Connector** ......................................... DB-9, Female
**Ethernet 10/100 Base T (Optional)** .... RJ-45 Connector

**Physical Characteristics**

**Size** .................................................. 1.75"H X 16.00"D X 19.00"W
**Weight** .................................................. 9 lb. (4.09 kg)
**Primary Power** ........................................ 90 - 264 VAC 47 - 63Hz, 1.4 A
**Frequency Reference** ............................... Auto-Sensing

**Environmental Specifications**: Operating Temperature ............... 0°C to +50°C
**Storage Temperature** .............................. -40°C to +70°C
**Humidity** .............................................. 95% RH @ 40°C

Band 1 ........................................ (10.7 to 11.70 GHz)
Band 2 ........................................ (11.70 to 12.75 GHz)

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* CDS Continuous Digital Streaming

The streaming option associated with the ASC300 series of beacon receivers provides a continuous, two byte, data stream running at 9600 baud that contains ten bits of signal strength level indication as well as lock or alarm condition of the unit. A female DB9, interface connector on the rear of the unit is specifically dedicated for this option.