

# MULTISPECTRAL SOLUTIONS, INC.

*A Tradition of Excellence in Innovation*

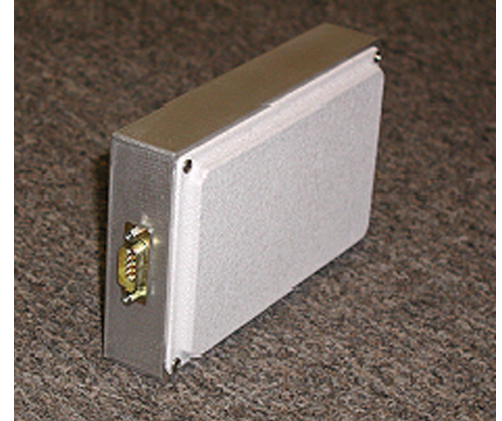
## SPIDER-650

### *Theory of Operation*

*Spider-650* is a lightweight, portable RADAR device which utilizes ultra wideband (UWB) short-pulse technology to determine the presence of, and the precise distance to, a target by measuring the round-trip time-of-flight of the transmitted pulse to the target and back.

*Spider-650* can accurately determine the range to targets within a 50 foot distance from the unit, with a measurement accuracy of  $\pm 1$  foot.

*Spider-650* provides a simple RS-232 or RS-485 interface for external control and monitoring.



## Features

- OPERATES AT 6.35 GHZ UNDER NEWLY APPROVED FCC PART 15 SUBPART F
- SIMPLE ASCII CONTROL AND MONITORING INTERFACE
- UNIT IS PORTABLE AND LIGHTWEIGHT. WEIGHS ONLY 16 OUNCES.
- USES INDUSTRY STANDARD RS-232 OR RS-485 COMMUNICATIONS LINK.
- ACCEPTS WIDE RANGE OF DC INPUT POWER OPTIONS (3.0 TO 30.0 V).

## Specifications

RADIO TECHNOLOGY	ULTRA WIDEBAND (UWB)
FREQUENCY OF OPERATION	6.35 GHZ
INSTANTANEOUS BANDWIDTH	700 MHZ
PULSE REPETITION RATE	30 HZ
TRANSMITTER OUTPUT POWER	FCC PART 15.511 & 15.513 COMPLIANT
RECEIVER SENSITIVITY	NOMINAL -72 DBM @ 6 DB SNR
RANGE	50 FEET
RANGE RESOLUTIONS	1 FOOT
ANTENNA	+14 DBI DUAL WIDEBAND PATCH
OPERATING VOLTAGE	3.0 VDC TO 30.0 VDC
CURRENT CONSUMPTION	250 MA @ 5.0 VDC
OPERATING TEMPERATURE RANGE	0 TO +70°C
DIMENSIONS	6.375 X 3.625 X 3.5 INCHES (162 X 92 X 89 MM)

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