



ORBITER GROOT SPECIFICATION

LOWEST COST TIMING DETECTOR

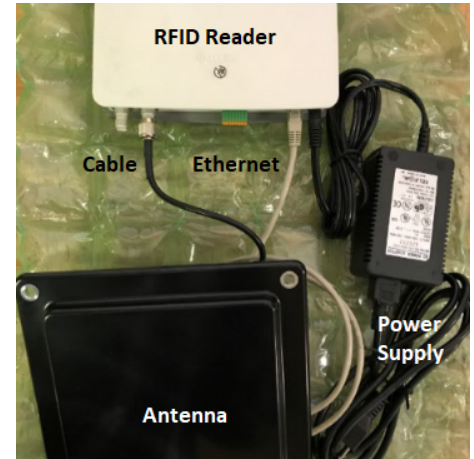
ASSEMBLY REQUIRED

The GROOT SYSTEM is the lowest cost Orbiter Offering. It requires assembly by attaching a cable, antenna, and power supply to the RFID detector. The system competes with other "build it yourself" systems offered in the market place. The GROOT has Superior performance as it uses the same RFID readers as other Orbiter products. The system is powered by AC.

Included is embedded operating software which is the same as that offered with the SPIRE, SLING and SPARKY detectors.

Read range depends on antenna selected. The standard antenna provides 6 ft of read range.

For those that desire a solution that is similar or less expensive than Bar-code systems yet has the convenience and performance of RFID, the GROOT economically works and is high quality.



SLING PHYSICAL CHARACTERISTICS

Dimensions:	22" (H) x 15" (L) x 6" (W). 55.8 cm (L) x 38.1 cm (L) x 12.24 (W)
Weight:	13.4 lbs (6.08 kg) including batteries.
Housing Material:	
Visual Status Indicators:	
Mounting:	
CONNECTIVITY	Proprietary RF communications to application layer. 10/100 Base T
Communications:	Ethernet (RJ45) w POE support, USB Client (USB Type B), USB Hoist Port (Type A). I/O 2 input, 32 outputs, optically isolated (Terminal Block).
General Purpose	POE, POE+ or + 24V DC (UL Approved), 120 and 220 AC Marine Plug.
Power Supply:	Standard Multi Ports connected to Orbiter Phased Detect antenna.
Antenna Ports:	Optional 4 and 8 port models available for connecting customer selected antennas.
ENVIRONMENTAL	Min -23 degrees F (-30.5) Vancouver, BC, Canada, Nov 30, 2015.
Operating Temp –	High 131 degrees F, 55 degrees C, Death Valley, CA, July 2015. 5-95% non-condensing
Humidity	MIL-STD-810G
Shock and Vibration:	
REGULATORY COMPLIANCE	UL 60950-01, UL 2043, IEC 60950-1, EN 90950-1
Safety	FCC Part 15, RSS 210, EN 302 208, ICES-003 Class B, EN 301 489-1/3,
RF/EMI/EMC	MIC school broadcast, regional pre-approval.
SAR/MPE	FCC 47CFR2: OET Bulletin 65; EN 50364
Other:	ROHS, WEEE
HARDWARE, OS AND FIRMWARE MANAGEMENT	
Memory	Flash 512 MP, DRAM 256 MP
Operating System	Linux
Application Code:	Java
Firmware Upgrade	Web-based and remote firmware upgrade capabilities
Management Protocols	RM 1.0.1 (with XML over HTTP/HTTPS and SNMP and NTP
Network Stack	IPv4 and Ipv6
Security	Transport Layer Security Ver 1.2 FIPS 140
Air Protocols	EPCglobal UHF Class 1 Gen2 ISO 18000 BC
Frequency Band	Global Reader 902 MHz – 928 MHz (Maximum, supports countries that use a part of this band) 865 MHz – 869 MHz., 2.4 GHz International Accepted WI-FI band, and Country specific accepted data cellular band.
Transmit Power Output	10 dBm to +31.5 dB, (POE+ 24 volt External DC) +10dBm to +30.0 dBm (POE).
Max Receive Sensitivity	-82 dBm
IP Addressing	Static and Dynamic
HOST Interface Protocol	ORP and LLRP
API Supported	Host Applications – Java EDK and Net C, Embedded Applications Java SDK
Warranty	1 year all parts and labor
RECOMMENDED SERVICES	Annual Service and Support includes all parts and labor warranty extension plus automatic software upgrades for 18% of sale price annually.
Advanced Services	RFID design and world wide deployment including IC tag & antenna design, reader build (LF, HF, NFC, UHF, Microwave, IR), application software for local and cloud scaled for super computers. Global reach with in country technicians to service your needs.