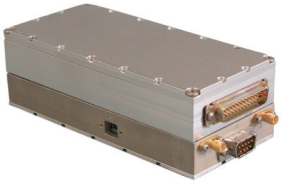
PROTRAK SCORING SYSTEM

Projectile tracking



Product description

Parker Meggitt Defense Systems Division' ProTrak provides a cost effective solution for projectile tracking and scoring requirements.

The ProTrak product line is a highly flexible projectile tracking system that can be configured via the use of modular hardware and embedded software for a wide variety of air-to-air, surface-to-air and air-to-surface projectile tracking applications. It can be used for applications such as bullet counting, scalar miss distance indication (MDI), sector scoring or vector scoring. The radar scorer can be programmed based on customer requirements for any dead zone or scoring volume in excess of 40 meters.

In its baseline radar configuration, the ProTrak target set is a small ultra-lightweight, low-cost scorer consisting of one RF module, a telemetry transmitter, radar and telemetry antennas along with associated cabling. This configuration, when paired with a suitable remote processing station such as our GSQ-109 or GSQ-110, provides scalar miss distance scoring for supersonic as well as subsonic rounds of all types. P or L band telemetry is available.

Another variant of the radar configuration includes a ProTrak Digital Signal Processor (DSP) which can be directly mated to the RF module. In this configuration it is possible to determine the miss distance of fused weapons within the selected scoring volume even when the projectile does not pass the target as often occurs with a detonating warhead weapon. Use of the ProTrak DSP module permits additional system options such as on-target scoring and low band width data link configurations. Additional, non radar, sensors can be integrated with the DSP module for special customer requirements. Contact Meggitt Defense Systems for more information regarding system configuration options.

Key features and benefits

- Operates on airborne, ground or surface target platforms
- Compatible with reduced size tow target requirements
- Programmable scoring range to 40 m (131.2 ft)
- Operating frequency 3245 MHz
- Relative velocity 244 to 1829 m/s (800 to 6000 ft/s)
- Multiple drone capability

Applications

- Projectile tracking for training and evaluation missions

Parker Defense Systems

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Projectile tracking

Specifications	
Performance	
Weapon types	missiles and projectiles (5.56 mm and larger)
System configurations	scalar, sector or vector (Contact MDSI)
Scoring range	0-40 m (0-131.2 ft) Max range depends on projectile size
Accuracy Range	 10% of range
Closing velocity	1% of velocity
Closing velocity range	244-1829 m/s (800-6000 ft/s)
Electrical Characteristics	
Radar operating mode	pulsed doppler, non-cooperative
Operating frequency	3245 MHz
Power (peak pulse)	1 watt
Pulse repetition frequency	Up to 5MHz (configurable)
Telemetry	
Power	5 watts
Modulation	
RF module only	analog FM
RF + DSP modules	analog FM or PCM
Frequency	
RF module only	P band
RF + DSP modules	P, L or S band
Input voltage	12-32 vdc
Power dissipation	14 watts
RF module only	28 watts
RF + DSP modules	
Mechanical	RF module: 0.5 kg (16.9 oz)
Weight	DSP module: 0.5 kg (16.9 oz)
Length	RF module: 16.3 cm (6.375 in) DSP module: 16.3 cm (6.375 in)
Width	RF module: 7 cm (2.75 in) DSP module: 7 cm (2.75 in)
Height	RF module: 2.9 cm (1.16 in) DSP module: 2.9 cm (1.16 in)

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Note: Due to continuous process improvement, specifications are subject to change without notice. TCO Review # 52