



**EEC**

**DEFENDER SERIES**

**S-BAND**



**Magnetron & Klystron S-Band**

Single and dual-polarity configurations • up to 850 kW of radiated power

**PROTECTING PEOPLE AND ASSETS®**

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SYSTEM	DEFENDER S850	DEFENDER SK850
Operating Frequency	2700-2900 MHz	2700-3000 MHz
Pulse Width	0.5 - 2.0 usec	0.4 - 4.5 usec
Range Resolution	Minimum 16m	Minimum 16m
Pulse Repetition Frequency	200-2400 Hz, user selectable	200-2400 Hz, user selectable
Range	Minimum 600km	Minimum 600km
Maximum Velocity (unambiguous)	up to 256 m/s	up to 256 m/s
Sensitivity-reflectivity	- 20 dBz at 30 km	- 20 dBz at 30 km
Clutter Suppression Capability	≥ 46 dB	≥ 55 dB
Data Output	UZ, Z, V, SW (dual-polarization moments Zdr, Phv, Φdp, KDP, LDR)	UZ, Z, V, SW (dual-polarization moments Zdr, Phv, Φdp, KDP, LDR)

## ANTENNA/PEDESTAL

Type	Parabolic, Prime Focus Reflector	Parabolic, Prime Focus Reflector
Reflector Diameter	8.5m - other sizes available	8.5m - other sizes available
Gain-Minimum	> 45.0 dB	> 45.0 dB
Half Power Beam Width (typical)	0.95°	0.95°
Polarization	Linear Horizontal/Vertical	Linear Horizontal/Vertical
Angular Positioning Accuracy	≤ 0.05°	≤ 0.05°
Scanning Speed	Up to 10 rpm	Up to 10 rpm

## TRANSMITTER

Type	High-Power Coaxial Magnetron	Klystron
Peak Power	850kW	750kW minimum

## RECEIVER

Type	Superheterodyne, Single or Dual Down Conversion with Image Reject Mixing	Superheterodyne, Single or Dual Down Conversion with Image Reject Mixing
Minimum Discernible Signal	- 114 dBm typical	- 114 dBm typical
Linear Dynamic Range	Up to 105 dB	Up to 105 dB

## DIGITAL RECEIVER/SIGNAL PROCESSOR

Type	16-bit Modular, multi-channel Digital Receiver, Signal Processor	16-bit Modular, multi-channel Digital Receiver, Signal Processor
Maximum No. of Processed Range Bins	up to 8192	up to 8192
Minimum Processing Resolution	15m	15m
Clutter Filters	Time Domain or Spectrum-Based Time Estimation and Processing (STEP) - An advanced adaptive clutter identification, mitigation and noise reduction algorithm	Time Domain or Spectrum-Based Time Estimation and Processing (STEP) - An advanced adaptive clutter identification, mitigation and noise reduction algorithm

## METEOROLOGICAL USER SOFTWARE

Meteorological User Software	Comprehensive Software Package	Comprehensive Software Package
Computer System	Commercial off-the-Shelf PC	Commercial off-the-Shelf PC
Meteorological Products	Over 60 meteorological application products	Over 60 meteorological application products