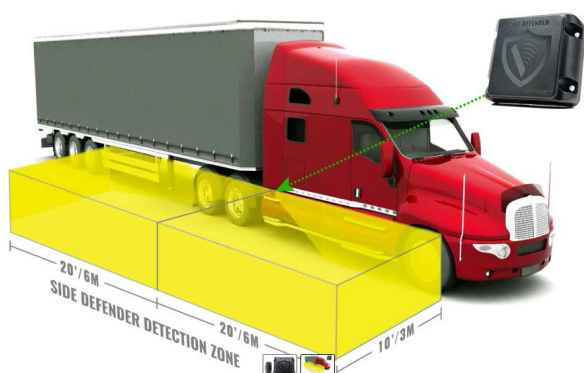


# PREVIEW® SIDE DEFENDER

## An Advanced Side Object Detection Solution

**PRECO**<sup>™</sup>  
ELECTRONICS



### Tech Specs

#### Measuring Performance

Range	20' (6.1m) forward & aft of sensor (10dBsm target)
Range Accuracy	3m (Adjacent lane)
Azimuth Field of View	±75 degrees (10 dBsm target)
Elevation Field of View	±8 degrees (10 dBsm target)
Angle Accuracy	±2° @ ±10° FOV, ±5 @ ±30° FOV, ±10 @ ±75° FOV
Velocity Range	0.2 meter/sec (0.5 mph)
Target Resolution	1.4m for static targets, approaching 0.3 meters for dynamic targets
Cycle Time	120ms (A CAN bus target message is provided in every cycle.)

#### Operating Conditions

Frequency	24.00 – 24.25 GHz
Power Supply	9 – 33 VDC, Reverse polarity and over-voltage protected
Current	<0.5 A
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +105°C
Shock	50G
Vibration	25G, random, all three axis
Protection Rating	IP69K

### Description

PreView Side Defender, the industry's most advanced side object detection solution, has been developed specifically for the over-the-road (OTR) markets including trucking, municipalities, waste and recycling. According to independent research, the incidence of highway and urban collisions are rising by almost 10% per year. PRECO believes that this is unacceptable and is driven to design technology that assists heavy duty vehicle operators to mitigate these avoidable accidents. The Side Defender system actively warns operators with audible and visual alerts, in order for them to take the appropriate actions to mitigate collisions.

Additionally, it has the ability to integrate with telematics applications, vehicle control systems, vision systems or other sensors using industry standard communications. Industry standard CAN bus integration allows PreView Side Defender to read the vehicle's speed messages. Through this integration, the radar can operate intelligently in different detection modes:

**Highway Mode:** The system alerts operators of vehicles in the side blind zones while ignoring stationary objects such as guardrails to reduce nuisance alerts.

**Slow-Speed Mode:** PreView Side Defender is positioned to play an integral role in the emerging side turn assist applications, aimed specifically at reducing the incidence of collisions with pedestrians and cyclists in urban environments.

### Features and Benefits

- Frequency: 24Ghz
- Detection range (fore/aft): 20'/6M forward and 20'/6M back/aft
- Detection width: 10'/3M to 8M)
- Current Draw: Less than .25 AMP
- Operating Temp: -40 F/ +185 F (-40 C to +85 C)
- Sensor Dimensions: 4.9"H x 4.06"W x 1.28"D
- Display Dimensions: 1.0"H x 2.3"W x 2.0"D
- Built to meet rugged J1455 Specs
- Utilizes standard CAN communication protocols (J1939, ISO 11898).

### Applications

Trucking, municipalities, waste and recycling

#### Operating Modes

Target Detection Time	300 ms
Power On to Active Time	300 ms

#### Communications Interface

J1939 CAN Bus	250Kbits/sec, un-terminated
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LED Interface	Switch to ground, sink up to 1A, over current protected
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#### Physical Characteristics

Sealing	IP69K
Housing Material	Polycarbonate radome
Dimensions	4.90" (w) x 4.06" (h) x 1.28" (d) (12.4 cm x 10.3 cm x 3.25 cm)
Weight	1.0 lb (0.45 kg)
Mounting	Four 0.22" (5.6 mm) diameter mounting holes

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