



- Onboard surge protection

Communication Ports

- Two half-duplex RS-485 com ports support:
 - Dedicated detection comms
 - Configuration, verification or traffic display without disrupting detection comms
- Firmware upgradability over any com port
- User configurable:
 - Response delay
 - Push port

Radar Design

- Operating frequency: 24.0–24.25 GHz (K-band)
- Matrix of 16 radars
- No manual tuning to circuitry
- Transmits modulated signals generated digitally
- No temperature-based compensation necessary
- Bandwidth stable within 1%
- Printed circuit board antennas
- Antenna vertical 6 dB beam width (two-way pattern): 65°
- Horizontal field of view: 90°
- Antenna two-way sidelobes: -40 dB
- Transmit bandwidth: 245 MHz
- Un-windowed resolution: 2 ft. (0.6 m)
- RF channels: 8
- Self-test for verifying hardware functionality
- Diagnostics mode for verifying system functionality

Configuration

- Automatic and manual configuration of lanes, stop bars and zones
- Lane positioning increment: 1 ft. (0.3 m)
- Four-sided zones of any shape and size
- Overlapping zones supported
- Sensor reconfiguration without detection disruption supported
- Graphical user interface with traffic pattern display
- Counting and Pulsed channels supported
- Windows Mobile®-compatible software
- Supported operating systems:
 - Windows Mobile v5.0 or greater (Socket Mobile 650-M)
 - Windows XP
 - Windows Vista
 - Windows 7
- Software-supported functionality:
 - TCP/IP connectivity
 - Sensor configuration back-up and restore
 - Backed-up sensor configurations can be viewed and edited
 - Real-time traffic visualization for performance verification

and traffic display

- Zone and channel actuation display
- Virtual sensor connections for demonstration and training
- Local or remote sensor firmware upgradability

Operating Conditions

- Accurate performance in:
 - Rain up to 1 in. (2.5 cm) per hour
 - Freezing rain
 - Snow
 - Wind
 - Dust
 - Fog
 - Changing temperature
 - Changing lighting (even direct light on sensor at dawn and dusk)
- Ambient operating temperature: -40°F to 165°F (-40°C to 74°C)
- Humidity: Up to 95% RH (non-condensing)

Testing

- Tested under FCC CFR 47, part 15, section 15.249
- FCC certification on product label
- FCC regulation-compliant for life of the sensor
- Tested under IEC 61000-4-5 class 4
- Tested under NEMA TS 2-2003
 - Shock pulses of 10 g, 11 ms half sine wave
 - Vibration of 0.5 g up to 30 Hz
 - 300 V positive/negative pulses
 - Stored at -49°F (-45°C) for 24 hours
 - Stored at 185°F (85°C) for 24 hours
 - Operation at -29.2°F (-34°C) and 10.8 VDC
 - Operation at -29.2°F (-34°C) and 26.5 VDC
 - Operation at 165.2°F (74°C) and 26.5 VDC
 - Operation at 165.2°F (74°C) and 10.8 VDC

Manufacturing

- Manufactured in the USA
- Surface mount assembly
- IPC-A-610C Class 2-compliant
- Operational testing:
 - Sub-assembly test
 - 48-hour unit level burn-in
 - Final unit test
- Unit test results available

Support

- Training and tech support available from Wavetronix
- Wavetronix training includes:
 - Installation and configuration instruction to ensure accu-