XP21 Stop Bar Detector

Wavetronix

The XP21 is a first-of-its-kind stop bar detector capable of detecting traffic in an entire small intersection by itself. Accompanied with an Arc and the Expanse software, you can see and configure all your detection zones from your computer.

Description

The XP21 Stop Bar Detector:

- Uses radar to get the most accurate stop bar data for an entire intersection
- Part of the Expanse system: connect it to an Arc and use the Expanse software to take advantage of all the great features of the system
- Native IP device: put it on your network and use the software to interact with sensors on your system
- Field-replaceable surge card means you can easily replace the surge protection in the field after a surge event
- Employs Wavetronix' industry leading radar technology for the highest quality high-definition detection
- Features a GPS receiver for georeferencing the sensor
- All-weather, all-condition performance
- Built-in heater prevents snow from blinding the sensor

Specifications

Physical properties

- Weight: 9.4 lbs (4.26 kg)
- Dimensions: 12.25 in. (31.1 cm) high × 9 in. (22.86 cm) diameter
- Enclosure:
  - Lexan EXL polycarbonate
  - Resistant to corrosion, fungus, moisture deterioration, and ultraviolet rays
  - Outdoor weatherable: UL 746C
  - Withstands 5-ft. (1.5-m) drop
  - Housing withstands wind loads exceeding 120 mph` Watertight by NEMA 250 standard
  - Connector: M12 T-code male connector
- GPS receiver for georeferencing/locating sensor

Detection area

- Detection range: 120 ft. (30.4 m) across intersection ⬜ Number of approaches: 4
- Number of lanes: 3 per approach
- Field of view: 230º
- Any lane spacing is supported
- Detection over barriers is supported
- Flexible lane configuration support including:
  - Curved lanes
  - Islands
  - Medians

Measured quantities

- Real-time presence data across a 120-ft. (30.4-m) range ⬜ Maximum number of lanes: 12
- Maximum number of channels: 12

Power

- Power consumption: 15–20 W (without heater)
- Power consumption: 50 W (with heater)
- Operating voltage: 37.2–60 VDC
- Onboard, field-replaceable surge protection
- Resumes vehicle detection automatically after resumption of power

Communication

- Native IP device
- Ethernet speed: 100 Mbps
- Comm cable lengths:
  - Expanse S Cable: 1500 ft.
  - Expanse Cable: 600 ft.
- In-field and remote upgradable
- Fail-safe mode for outputs if communication is lost WX-500-0400
- Configuration and verification without disrupting detection communications
- Communicates to cabinet via Ethernet over single twisted pair

Configuration

- Graphical user interface with traffic pattern display ⬜ Sensor reconfiguration without detection disruption supported ⬜ Supported operating systems:
  - Windows 7
  - Windows 8
  - Windows 10
  - Windows 11
- Software-supported functionality:
  - TCP/IP connectivity
  - Sensor configuration backup and restore

- Virtual sensor connections for demonstration and training
- Sensor configuration backups can be viewed and edited
- Local or remote sensor firmware upgradability
- User-selectable stop bar mapping

Manufacturing

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

Operating conditions

- Ambient operating temp: -29.2°F to 165°F (-34°C to 74°C)
- Humidity: up to 95% RH (non-condensing)
- Accurate performance in:
    - Rain up to 1 in. (2.5 cm) per hour
    - Freezing rain
    - Dry snowfall and moist snowfall
    - Wind
    - Dust
    - Fog
    - Changing temperature
    - Changing lighting (even direct light on sensor at dawn and dusk)
    - Ice and dry snow buildup up to 0.2 in. (0.5 cm) on sensor front

Maintenance

- No cleaning or adjustment necessary
- No battery replacement necessary
- No recalibration necessary
- Mean time between failures: 10 years (estimated based on manufacturing techniques)

Support

- Training and tech support available
- Wavetronix training includes:
    - Knowledgeable trainers offering classroom and in-field instruction
    - Use of presentation materials
    - Installation and configuration instruction to ensure accurate performance
    - Instruction in use of computer and other necessary equipment
    - Virtual configuration
- Technical support includes:

- Technical representatives available for installation and configuration
  - Ongoing troubleshooting and maintenance support
- Documentation:
  - Comprehensive user guide
  - Quick start guide
- Documentation available upon request:
  - Certification documentation

Warranty

- Two-year warranty against material and workmanship defect

For more information: 1 800 363-5913

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