XP21 technical 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: 230°
- 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

Ordering information

XP21
101-0479

Optional accessories (sold separately)

102-0480 – Arc Surge

101-0483 – XP21 Surge

Contact us

801.734.7200
sales@wavetronix.com
www.wavetronix.com

- 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