# STP A0RT

- Predisposition for housing in SmarTeckPole structure
- 4D Advanced Doppler Radar 66 - 77 GHz
- Synthetic orientation of the working lobe for quick adaptation to street installation
- Integrated 2Mpixel Color Camera to support vehicle tracking - people in the scene
- 2 lane coverage
- Single or two-way detection
- On-board neural algorithms for video tracking validation associated with radar tracking
- Speed measurement from 20 to 250 Km/h
- Speed Accuracy <+/- 1% or <+/- 0.28m / sec (greater than)
- Range Accuracy <+/- 2.5% or <+/- 0.25m / sec (greater than)
- Operating distance 15-30m
- Working frequency 66GHz
- Vehicle classification in 4 radar classes + 6 room classes (daytime)
- Length of vehicles
- Counting by lane
- Occupancy statistic by lane
- Real-time video streaming H264 ONVIF S profile
- On-board memory up to 2GB
- POE power supply

## DESCRIPTIONS

STP A0RT is the device designed to be integrated into SmaTekPole, belonging to a brand new family of multi-technological products dedicated to applications in the traffic world that combine the technological capabilities of the latest generation radars and those of digital cameras with high resolution.

Everything is analyzed and managed by specific artificial intelligence algorithms aimed at guaranteeing absolutely reliable and timely object recognition and tracking functions. STP A0RT mounted on the pole SmaTekPole allows to operate traffic detection installations on 2 lanes with single or double traffic directions.

The latest generation synthetic radar allows an extremely more accurate definition of the 3D image than that made available by traditional 24GHz devices. The opening and orientation of the lobe are managed synthetically via software and allow the device to be perfectly adapted to the installation scenario in which it is used.

The camera allows you to validate the radar tracking, the classification of vehicles and also allows you to eliminate the noise of the scene (echo) that sometimes disturbs the radar making it inaccurate both approaching and moving away. The accuracy of the speed detection of vehicles passing through the scene is less than 1% up to 250 KM / h.

The combined union of the two technologies present in the STP A0RT device allows to significantly improve the reliability of the detections compared to traditional installations, thus obtaining solid and effective applications.

EN ISO 9001:2015
ISO/IEC 27001:2022
ISO/IEC 27017:2015
ISO/IEC 27018:2019
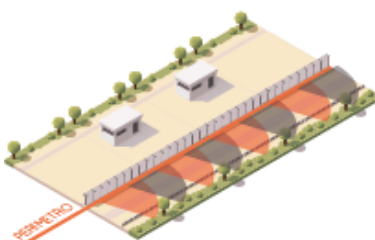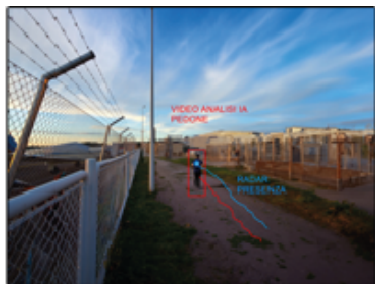
## TECHNICAL FEATURES

### HW features

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|---|---|
| **Processor** | QuadCore ARM 1,2GHz |
| **Neural** | Neural graphic co-processor |
| **Memory** | Ram 4GB, Flash 8GB |
| **Transmit frequency** | 66 - 77 GHz |
| **Bandwidth** | Selectable from 1-250 MHz |
| **Output power (EIRP)** | EIRP Adjustable P.out 8 -20 dBm |
| **Phase noise** | @1KHz -63 dBc/Hz |
| **Noise figure** | @100KHz SSB 11 - 17 dB |
| **Antenna** | System Antenna Pattern (10dB) |
| **Azimut** | +/-12 - +/-15 deg. |
| **Elevation** | +/-7 - +/-10 deg. |
| **LAN and ports** | Ethernet Port, RS485 Port |

### Optical group

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|---|---|
| **Camera** | Integrated 2 Megapixel colour 60fps |
| **Lens** | Fixed S type |

### SW features

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|---|---|
| **Streaming** | Configurable real-time H264 ONVIF S profile |

### General characteristics

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|---|---|
| **Dimensions** | (h/l/w) 120x180x90 mm |
| **Weight** | 0,7 Kg. approx. |

### Power Supply

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|---|---|
| **Power Supply** | 9-36 Vdc - 5W or POE |

### General characteristics

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|---|---|
| **Operating temperature** | -20° + 60°C |
| **Protection** | IP67 |
| **Certifications** | ETSI 300/440 compliant with 50MHz bandwidth |