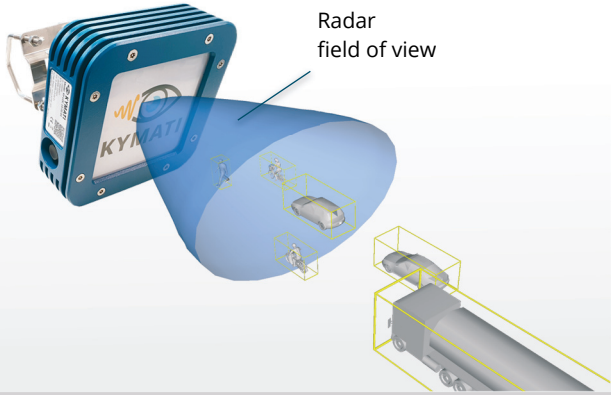
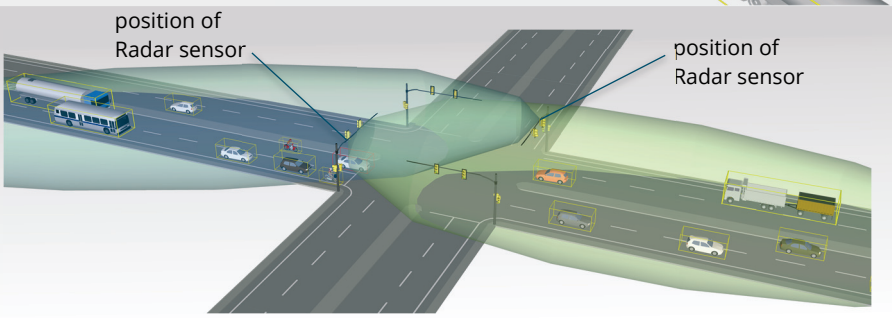
DATA SHEET

KY-RAY 3D.02.04



- High resolution primary 3D radar to simultaneously detect multiple traffic objects in the field of view.
- Maintenance-free tunnel and outdoor operation.
- High frequency radio based, no interference with WiFi and mobile networks.



3D TRAFFIC MONITORING RADAR

The KY-RAY 3D.02.04 Radar is designed to recognize static and moving traffic objects in the 3D field of view. The Radar qualifies typical traffic objects in classes like trucks, cars, motorcycles, and vulnerable road users (VRU) like pedestrians and cyclists.

Various surveillance zones can be preset. Per each zone, statistical data like entry or exit counting of objects can be collected by the sensor device. The detection range is depending on the Radar Cross Section (RCS) of Radar targets within reach. The table below provides a basic indication. KY-RAY 3D.02.04 does not require/allocate any WiFi or mobile communication frequencies and is also not affected by such radio signals.

TECHNICAL DATA: KY-RAY 3D.02.04	
Measurement range[1)], depending on RCS	2 m ≤ x ≤ 150 m (truck); ≤ 50 m (person)
Field of view (3 dB line)	horizontal ± 45°, vertical ± 15°
Absolute distance accuracy to object[1)]	± 20 cm
Range resolution (spacing between objects[1)]	0,3 m
Speed resolution (separation of objects)	0,3 m/s
Update rate	up to 15 Hz
Protection	IP 66, IP66k and IP68 (cntd. plugs, 24h@1m)
Operating temperature	-30 ... +75 °C; -22 ... 167 F
Weight, dimensions LxWxD	1060 g; 138x138x43 mm (without support)
Voltage, power consumption (M12, 5 pin, male, A-coded)	9 ... 36 V DC or PoE (802.3af), 5 W
Frequency	61 GHz (ISM band)
Interface (M12, 8 pin, female, X-coded)	Ethernet (100Base-Tx), PoE (802.3af)

1) Values may vary with radio regulations applicable

KY-RAY 3D.02.04- Quick Facts

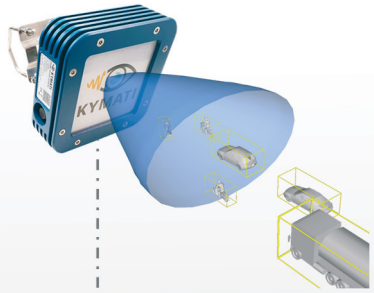
- 3D Radar to detect static or moving traffic objects.
- Identification of traffic object class, speed, lane position, heading, traffic density, object count in selected zone.
- Use cases: Smart City traffic flow control, speed enforcement, stop line detection, autonomous vehicle´s environment perception.
- No ground loop required, easy to install, adjustable mounting bracket included.
- No interference with WiFI or mobile communication.
- Multiple KY-RAY units can operate in parallel.
- Operates maintenance-free under all weather conditions and in complete darkness/tunnels.

www.kymati.com, +49 89 515 759 900

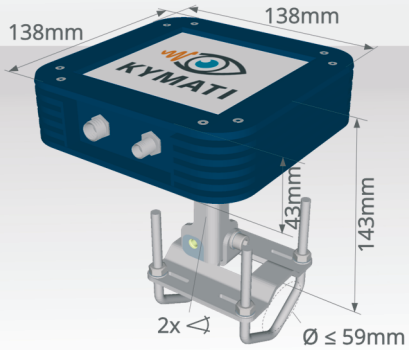
KYMATI
WAVES ARE OUR VISION

DATA SHEET

KY-RAY 3D.02.04



Mechanical Interface

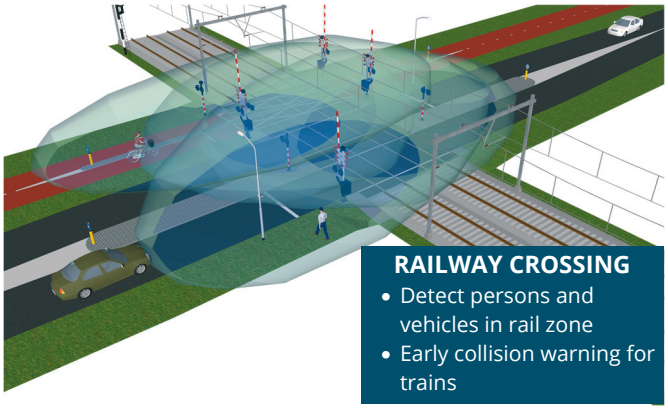


Electrical Interface

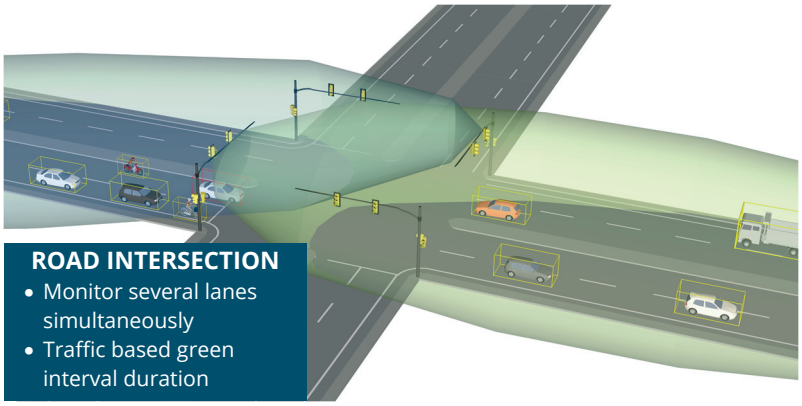
- Data interface: Ethernet
- Power: separate power supply or PoE

- PC or PLC based client application for traffic control
- Interface converter KY-XTRA B.01.01 enabling: Profibus, Profinet, Ethernet IP, Modbus, CAN

APPLICATION EXAMPLES

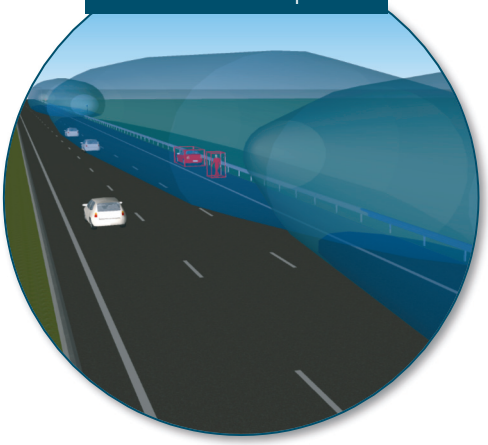


RAILWAY CROSSING
- Detect persons and vehicles in rail zone
- Early collision warning for trains

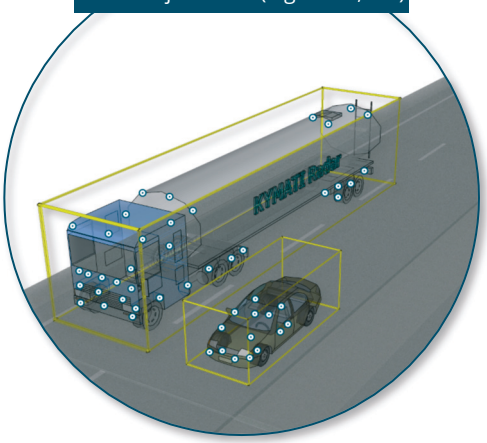


ROAD INTERSECTION
- Monitor several lanes simultaneously
- Traffic based green interval duration

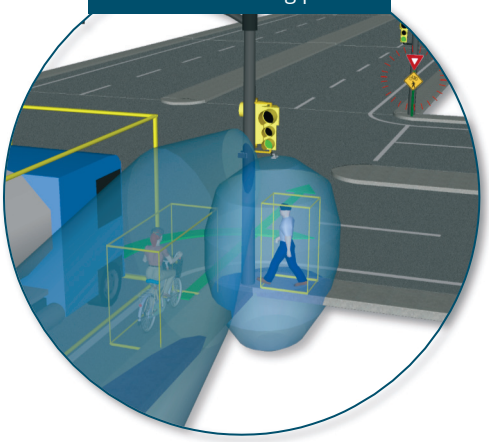
SHOULDER MONITORING
- Detect persons and vehicles in shoulder area
- Road side assistance called with exact position



OBJECT QUALIFICATION
- Each object creates a typical radar target pattern
- Pattern allows qualification as object class (e.g. truck, car)



BLIND SPOT SAFETY
- Assisted turns at inter-sections with blind spots
- Avoid serious accidents when overseeing persons



www.kymati.com, +49 89 515 759 900

KYMATI
WAVES ARE OUR VISION