ViSight-5

AUTOMOTIVE RADAR SENSOR HEAD

ViSight-5 Sensor Head is a compact, high-performance W-band imaging radar for advanced automotive and autonomy applications. It sets a new standard in automotive radar performance with a cost-effective design architecture. ViSight-5's automotive Ethernet and GMSL interface options provide system integration flexibility.

Electronic Control Unit Processing

Raw radar data is sent via Ethernet or GMSL to the Electronic Control Unit (ECU) for processing. Centralized ECU processing reduces sensor cost and enables OTA updates to take advantage of the latest radar processing methods, providing feature upgrades over an extended lifetime.

Downstream Processing

ViSight-5 includes ECU software that generates radar images, radar point clouds, and target tracks on ECUs provided by Veldar or the end user. User applications can be added to the processing chain.

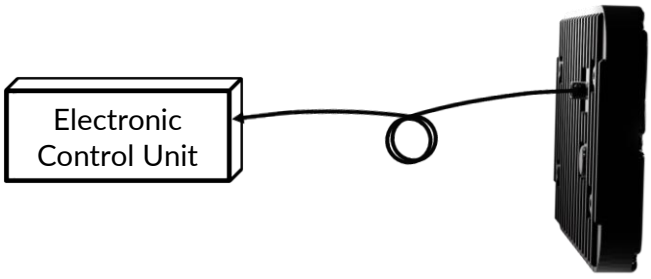
Two Interface Options

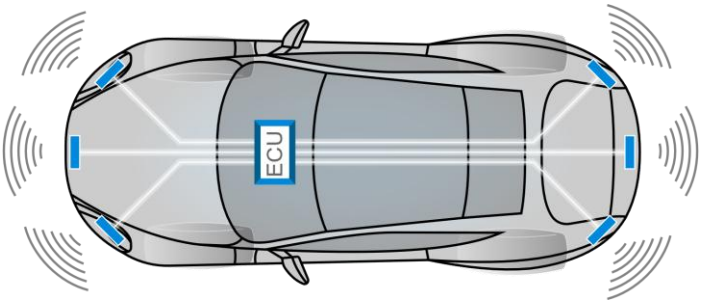
Auto Ethernet

- 1000BASE-T1
- PoDL option
- M8 SPE connector
- PTP synchronization

GMSL2

- Coax cable
- PoC option
- FAKRA connector
- Precise time sync





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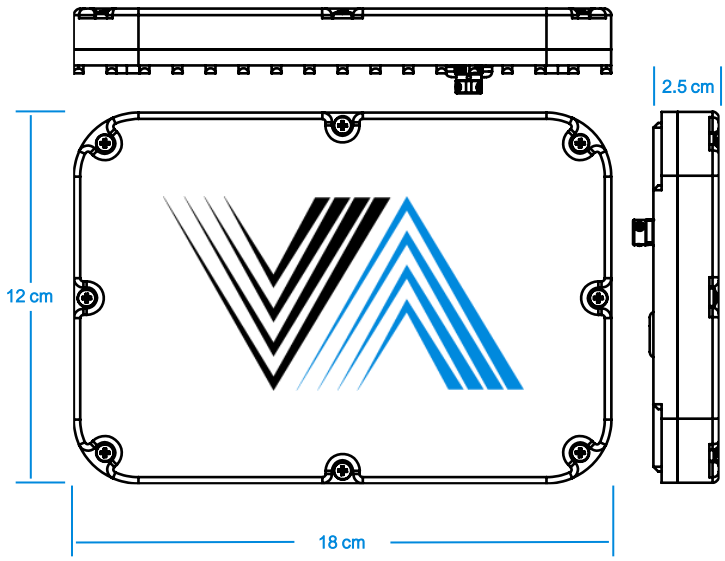
PERFORMANCE

Range Resolution	0.1 - 2.5 m (selectable)
Azimuth Resolution	1.0 deg
Elevation Resolution	3.0 deg
Velocity Resolution	0.5 - 2.5 m/s (selectable)
Azimuth FoV	90 deg
Elevation FoV	15 deg
Frame Rate	10 - 16 fps

PHYSICAL & ELECTRICAL

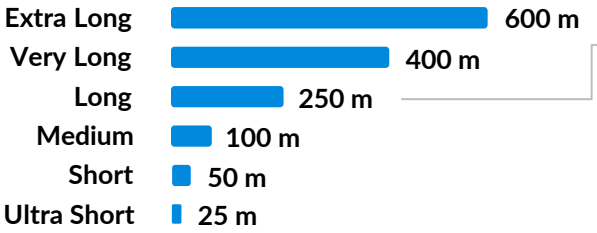
Dimensions	18 x 12 x 2.5 cm
Weight	< 650 g
Power Consumption	< 16 W
Input Voltage	9 – 36 VDC
Data Interface	ETHERNET or GMSL



FLEXIBLE CONFIGURATIONS

Users can select the range, resolution, and frame rate combination that best matches their application. Six range options are provided as default modes.

RADAR RANGE MODES



DETECTION PERFORMANCE

Traffic cones	(-15 dBsm)	150 m
Pedestrians	(-5 dBsm)	300 m
Small cars	(10 dBsm)	600 m

4D IMAGING

ViSight-5 delivers range, azimuth, elevation, and velocity data for all points in the radar point cloud.

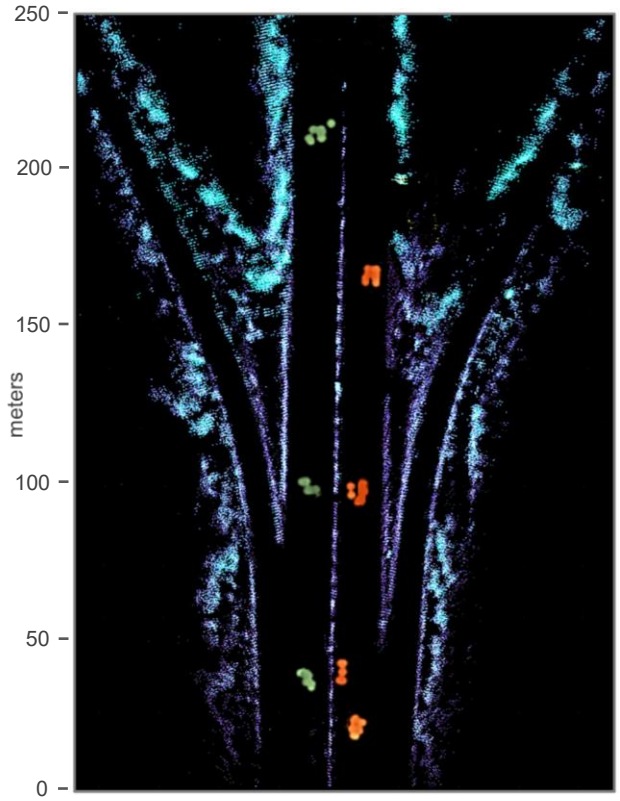
ALL-WEATHER OPERATION

Vehicle and pedestrian imaging and obstacle detection in degraded visual environments (DVE) including low light, fog, smoke, rain, and snow.

ENVIRONMENT

Dust and Water	IP67
Operating Temperature	-40 to +85 deg C
Vibration	High vibration environments

VISIGHT-5 POINT CLOUD



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