Next Gen IoT Solutions for Commercial Vehicles
About Taoglas

IoT to market on time, the first time. No matter what your IoT need - from component to fully deployed solution - Taoglas can help get you there.

We design and manufacture advanced IoT solutions and components for commercial vehicles. With our heritage in RF and antennas for IoT we have developed a wealth of experience and expertise working on thousands of successful IoT projects globally. 16 years, over 300 employees, 10 facilities across the globe delivering superior products for the winners in IoT.

Components
• Antennas
• Filters
• Connectors
• Cables
• Speakers
• System On Modules (SOMs)

Services & Solutions
• Full hardware design & Manufacture
• Firmware Design
• Part hardware or module design
• Custom RF or antenna design
• Device Certification support and testing
• Security
• Cloud and mobile applications
• AI Machine Learning

Products built for Major Worldwide Automotive Manufacturers

North America | UK | Germany | Sweden | Taiwan

South Africa
Taoglas End-to-End Solutions for Commercial Vehicle Connectivity

Design
Our highly experienced engineers with years of experience of designing automotive antenna products have helped us to become the market leading supplier for commercial vehicle antennas.

Validation
Our cost effective products are designed to meet the challenging conditions that commercial vehicles are subjected to. We are able to accomplish this due to:

Design Verification/Product Validation: We have a vast experience in electrical, mechanical, and environmental test requirements for automotive and commercial vehicles. We utilize accredited test labs with a long track record of automotive and commercial vehicle products testing. Our products are tested in the environment in which they are used by in-house design field testing setups.

Production
All our antenna products are manufactured in IATF 16949 certified facilities. Our suppliers are experts in the automotive and commercial vehicle products manufacturing processes.

Frequency Bands:
AM/FM and Weather Band
Satellite Radio (Sirius XM)
GPS/GLONASS/BeiDou
5G/4G
Wi-Fi
C-V2X

Antenna Types:
Permanent Roof-Mount Antennas
Concealed Antennas
Adhesive Film Antennas
Through-Glass Antennas
Rail-Mount Antennas

[Images of various antenna types and products]
New for 2019

Introducing Taoglas’ new range of antennas specifically designed for commercial vehicles. These include the **MA1044 Sharkfin**, a next-generation 4-in-1 antenna which meets the strictest OEM commercial vehicle standards. Taoglas are continuously at the forefront of wireless antenna technologies and our range of antennas are all designed specifically for the demands of heavy duty equipment and commercial vehicles. Also new for 2019, our range of true-sound speakers, all designed for the rugged environment of commercial vehicles.

**MA1045**
Supercombo Permanent Mount
5-in-1 Antenna
2*GPS Antenna: FAKRA Code C Blue
1*LTE with fallback to 3G/2G
1*SDARS
1*AM/FM
Cable: 300mm RG-174
IP67 Rated Waterproof
TS16949 Approved
Dimensions: 165*96*61mm

The Taoglas MA1045 Supercombo antenna is the world’s smallest next generation 5-in-1, vehicle roof permanent mount solution. The MA1045 is IP67 waterproof with a robust ABS+PC enclosure. It supports the following bands: GPS/GLONASS/Galileo/BeiDou, LTE (4G/3G/2G), SDARS, and AM/FM/WB.

**MA1044**
MA1044 – Up to 7-in-1 Sharkfin Antenna
GNSS/LTE/Wi-Fi, AM/FM & SDARS
2*LTE
2*Wi-Fi
1*GNSS
1*SDARS
1*AM/FM
Cable: 300mm RG-174
IP65 Rated Waterproof
TS16949 Approved
Dimensions: 183*80*77mm

The MA1044 Sharkfin antenna is a next-generation 4-in-1, vehicle roof permanent mount solution. It is IP67 waterproof with a robust ABS+PC enclosure. The antenna is approved for use on commercial vehicles and meets the strictest OEM commercial vehicle standards. It supports the following bands: GPS/GLONASS/Galileo/BeiDou, LTE (4G/3G/2G), SDARS, AM/FM/WB and Wi-Fi (2.4/5.8GHz).

**MA2330**
3-in-1 Headliner GNSS, Wi-Fi & AM/FM Adhesive Antenna
ASA+PC Housing with FM Metalized Film Antenna
GNSS: FAKRA Code C Blue Connector
Wi-Fi: FAKRA Code I Beige Connector
FM/WB: FAKRA Code A Black Connector
IP21 Waterproof Rated
TS16949 Approved
Dimensions: 664*84*15mm

The Taoglas MA2330 Headliner antenna is a next generation 3-in-1, embedded solution for vehicles. It incorporates a robust ABS+PC enclosure and metalized film. It supports the following bands: GPS/GLONASS/Galileo/BeiDou, Wi-Fi (2.4/5.8GHz) and AM/FM.
The **MA5022** is a GNSS & SDARS 2-in-1 rail mount antenna. It is IP67 rated waterproof with a robust ABS+PC housing. This antenna has been designed for mounting around a mirror rail/pole with its 31.5mm through hole this is the perfect solution for use in Automotive applications. It supports the following bands: GPS/GLONASS/Galileo/BeiDou, and SDARS.

The **MA2220** is a thin film antenna is a next generation 2-in-1, embedded solution for vehicles. It’s made with robust ABS+PC housing and metalized PET film. It supports AM/FM, and DAB band III.

The **GPSDSF.35** is a passive 35x35mm ceramic stacked patch antenna with both SDARS and GNSS capabilities. This dual-feed patch assembly provides world-class performance for both SDARS and GNSS services, with nearly 70% efficiency at 2332.5MHz for SDARS and 70-80% efficiency at GPS/GLONASS/ Galileo frequencies. Using one patch for both services results in the most economical and space-efficient solution for demanding applications requiring both dual connectivity. At just 7.15mm in height, the GPSDSF.35 is also extremely low-profile.
# Taoglas Speakers

Taoglas' slim design, full-range, coaxial speakers are easy to install. Requiring just two cables and with multiple mounting hole patterns, it allows them to be easily attached on various car or commercial vehicle door panels. All Taoglas speakers are designed for the rugged environment of commercial vehicles.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Details</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPKR.10.4.A</td>
<td>4 Ohm 10 Inch Round Subwoofer Speaker 80W</td>
<td>4 Ohm Impedance 80W High Sensitivity &amp; Distortion Free Connector: Packard Electric 12052832 Dimensions: Ø:244*116mm</td>
<td>Our 4 Ohm High power 10 inch diameter subwoofer is a high sensitivity speaker series. It delivers a distortion-free, high fidelity audio and it can handle power burst in excess of 200 W (over a short period).</td>
</tr>
<tr>
<td>SPKR.6.8.A</td>
<td>8 Ohm 6 Inch Round Dual Cone Speaker 30W</td>
<td>8 Ohm Impedance 5 Ohm Impedance 30W High Sensitivity &amp; Distortion Free Connector: Packard Electric 12052832 Dimensions: Ø:160*64mm</td>
<td>Our 8 Ohm 6 inch round dual-cone, full range high sensitivity speaker series provides distortion-free audio, high fidelity, high power handling and is a low-cost solution for car, truck, and RV applications. It is also primed for IoT applications such as Smart Home in which the use of speakers is becoming more commonplace.</td>
</tr>
<tr>
<td>SPKR.6.4.A</td>
<td>4 Ohm 6 Inch Round Dual Cone Speaker 30W</td>
<td>8 Ohm Impedance 4 Ohm Impedance 30W High Sensitivity &amp; Distortion Free Connector: Packard Electric 12052832 Dimensions: Ø:160*64mm</td>
<td>Our 4 Ohm 6 inch round dual-cone, full range high sensitivity speaker series provide distortion free audio, high fidelity, high power handling (30W RMS) and is a low-cost solution for heavy-duty applications such as Transportation, Truck and RV applications.</td>
</tr>
<tr>
<td>SPKA.46.8.A</td>
<td>8 Ohm 4 x 6 Inch Coaxial Speaker 25W</td>
<td>8 Ohm Impedance 25W High Sensitivity &amp; Distortion Free Dimensions: 158x107x56mm Connector: Delphi 12052832 Dimensions: 158<em>107</em>56mm</td>
<td>Our 8 Ohm 4x6-inch Coaxial Speaker, full range high sensitivity speaker provides distortion free audio, high fidelity, high power handling (25W RMS) and is a low-cost solution for heavy-duty applications such as Transportation, Truck and RV applications.</td>
</tr>
<tr>
<td>SPKA.46.8.B</td>
<td>8 Ohm 4 x 6 Inch Coaxial Speaker with Foam Gasket 25W</td>
<td>8 Ohm Impedance Foam Gasket 25W High Sensitivity &amp; Distortion Free Connector: Delphi 12052832 Dimensions: 158<em>107</em>56mm</td>
<td>Our 8 Ohm 4 x 6 inch coax-speaker series are perfect and cost effective solutions to reproduce a full range sounds in your car or home Hi-Fi audio system. The SPKA.46.8.B unlike the SPKA.46.8.A model comes with a spongy foam gasket making it the perfect solution for installation location where rattle noise through vibration can be problematic.</td>
</tr>
</tbody>
</table>
Multiple IoT technologies can be employed to track shipments, optimize delivery and shipping routes, increase efficiencies, and reduce costs. With this in mind, Taoglas provides an extensive range of antennas designed for a wide variety of vehicle applications. Listed below are a selection of Taoglas vehicle antennas by mounting option.

### Embedded Commercial Vehicle Antennas

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>DSRC</th>
<th>4G</th>
<th>5G</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>Wi-Fi 2.4GHz</th>
<th>Wi-Fi 5.8GHz</th>
<th>SDARS</th>
<th>AM/FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>GGBLA.125.A</td>
<td>GPS L1/L2/L5/L6, GLONASS, BeiDou Ceramic Loop Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>DCCP.25A.07.0150E</td>
<td>5.9GHz 4.2dBi DSRC/C-V2X Patch Antenna Ceramic Patch Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>ADCP.12A</td>
<td>Active 5.9GHz DSRC Patch Antenna. 5G850MHz to 5925MHz band.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

### Magnetic Mount Combination Commercial Vehicle Antennas

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>DSRC</th>
<th>4G</th>
<th>5G</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>Wi-Fi 2.4GHz</th>
<th>Wi-Fi 5.8GHz</th>
<th>SDARS</th>
<th>AM/FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA.175 Magma X</td>
<td>GPS L1/L2 &amp; GLONASS L1 Band Magnetic Mount Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

### Wall & Adhesive Mount Combination Commercial Vehicle Antennas

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>DSRC</th>
<th>4G</th>
<th>5G</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>Wi-Fi 2.4GHz</th>
<th>Wi-Fi 5.8GHz</th>
<th>SDARS</th>
<th>AM/FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA910.A Guardian</td>
<td>2-in-1 2*Wi-Fi MIMO 2.4GHz/5.8GHz MIMO Low-Profile Adhesive Mount Combination Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA244 Genesis</td>
<td>4-in-1 Combination High Temperature (Up to 85°C) GNSS, 2*Cellular, Wi-Fi Low-Profile Adhesive Mount Combination Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA284</td>
<td>4-in-1 GNSS, 2*LTE MIMO &amp; Dual Band Wi-Fi Low-Profile Adhesive Mount Combination Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA961 Guardian</td>
<td>4-in-1 2<em>LTE MIMO 698-3600MHz, 2</em>Wi-Fi MIMO 2.4GHz/5.8GHz Low-Profile Adhesive Mount Combination Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA950 Guardian</td>
<td>5-in-1 1<em>GNSS, 2</em>LTE MIMO 698-3600MHz and 2*Wi-Fi MIMO 2.4GHz/5.8GHz Low-Profile Adhesive Mount Combination Antenna. Worldwide-4G Bands.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA285 Compact</td>
<td>5-in-1 GNSS, 2<em>LTE MIMO &amp; 2</em>Wi-Fi MIMO Low-Profile Adhesive Mount Combination Antenna. GPS/GLONASS/BeiDou Adhesive Mount Combination Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA931 Guardian</td>
<td>6-in-1 1<em>GNSS, 2</em>LTE MIMO 698-3600MHz and 3*Wi-Fi MIMO 2.4GHz/5.8GHz Low-Profile Adhesive Mount Combination Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA9088 GuardianX</td>
<td>8-in-1 1<em>GNSS, 4</em>5G/4G 600MHz-6GHz MIMO &amp; 3*Wi-Fi MIMO 2.4GHz/5.8GHz Low Profile Wall Mount Combination Antenna. Sub 6GHz 5G NR/FRL.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>MA9099 GuardianX</td>
<td>9-in-1 1<em>Active GNSS &amp; 8</em>LTE MIMO Low Profile Wall Mount Combination Antenna. 8<em>LTE MIMO 698-3600MHz, 1</em>GNSS.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>GSA.8842.A.105111</td>
<td>I-Bar Wideband 5G/4G/3G/2G /GPS /Wi-Fi Combination Adhesive Antenna. Cellular, ISM and Wi-Fi Antenna covering 617-6000 MHz Spectrum.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

### External Commercial Vehicle Antennas

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>DSRC</th>
<th>4G</th>
<th>5G</th>
<th>L1/L2</th>
<th>L5/L6</th>
<th>Wi-Fi 2.4GHz</th>
<th>Wi-Fi 5.8GHz</th>
<th>SDARS</th>
<th>AM/FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raptor I MA1060</td>
<td>4-in-1 LTE, GNSS, Dual Band Wi-Fi &amp; AM/FM Antenna 4G Sharkfin Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Raptor II MA1130.A</td>
<td>6-in-1 Dual Fin External Antenna with GNSS, LTE MIMO, Dual Band Wi-Fi MIMO &amp; AM/FM Sharkfin Antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>Raptor III MA1270</td>
<td>7-in-1 Shark Fin Antenna with Whiptail, GNSS, 2<em>Wi-Fi MIMO, 2</em>LTE MIMO, AM/FM and 300-400MHz whip antenna.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

### Fully Customized Antennas & Cable Assemblies

Shipped in as Little as 2 Days

Custom Cables & Antennas

Order and customize your antenna and cable assemblies the way you like it. Your goods will be manufactured and then shipped worldwide to your address.

www.taoglas.com/antenna-builder
www.taoglas.com/cable-builder
Contact us for quick and professional support from our senior engineering team to manage and develop your next IoT project.

www.taoglas.com