



Smarteq Wireless – Automotive partner for reliable multi-functional external and internal antenna solutions

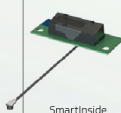
Smarteq Wireless is a Swedish specialist development and delivery partner of high performing, robust and reliable antenna solutions for Vehicles, Energy and Industry applications since more than 40 years. Our product development and R&D resources are all based in Stockholm.

Our products are designed to meet the highest demands. Our customers today include some of the most technically advanced companies.

- Antennas for Automotive (OEM, Tier 1 and Tier 2) have been a core business for Smarteq since the founding of the company. For decades, Smarteq has delivered high performing antennas to, for example, Scania and Volvo trucks. Our project team has extensive automotive experience.
- For unique customer demands, we can quickly adapt our existing antennas with different cables, connectors and installation configurations. We also provide completely customized solutions and deliver complete development projects - from initial concept study, product design, prototyping and testing to serial production and supply.
- One area of expertise is completely concealed, embedded antenna solutions for Automotive. Our references include Bentley (all currently produced models), VW Touareg, VW Phaeton, SDARS antennas for SIRIUS/XM and more. Other customers include system integrators and telematics companies.
- We have a large standard product assortment of advanced combination antennas – built for high performance and reliability in harsh environments – for buses and off-road vehicles. We also develop and deliver low-profile combination antennas.
- We know how to fulfill the extremely high demands within Automotive. We have the experience, product development competence, certifications (IATF 16949, ISO 14001 and logistics processes in place to deliver.
- We are also an active antenna partner in research programs in Sweden related to V2X and 5G, such as ChaseOn at Chalmers University.

KATHREIN

Smarteq also owns the rights to market and sell the Kathrein after market assortment for Automotive.

PRODUCT OVERVIEW		            												
Vehicles		SmartInside (embedded)	LPCA	LPCA MIMO	AllDisc	SmartDisc	Base 128, 1123, 1131, 2500	MaxiMag MidMag	MiniMag	MiniWing	SmartWing	SmartBlade	ANT	GPS/GNSS HG
Characteristics / Radio System		• Custom made and optimized according to request • High performance	• Combination antenna • Extremely rugged • Low profile	• 2G/3G/4G MIMO functionality • Combination antenna • Extremely rugged • Low profile	• Low profile • Rugged • High performing • Different configurations available	• Low profile • Rugged • High performing • Different configurations available	• Selection of antenna bases to be used with rod according to system / frequency of interest • Base 128 with swivel functionality	• Selection of antenna bases with high magnetic strength able to handle long rod according to relevant system / frequency	• Small antenna base with high magnetic strength	• Strong adhesive • Flexible installation	• Combination antenna • Ideal for fleet management • Strong adhesive • Flexible installation • Embedded	• Strong adhesive • Flexible installation	• Combination antenna • Extremely rugged • Low profile • Can be fitted with rod according to relevant system / frequency	• Small size • Strong adhesive • Flexible installation
IP classification		Customized	IP67	IP67	IP6K9K	IP67	IP67	(IP67)	IP67	IP67		IP67	IP67	IP67
Mounting	Hole	Customized	●	●	●	●	●						●	
	Magnetic							●	●					
	Adhesive					●				●	●	●		●
Frequencies	Optional rod selection CB / VHF / UHF / FM						●	●	●				●	
	ISM 433/444MHz	●					●	●	●				●	
	LTE450 / TETRA 450-470MHz	●	●	●			●	●	●				●	
	ISM 868MHz / LoRa / SigFox	●	●	●	●	●	●	●	●	●	●	●	●	
	Cellular 2G/3G/4G	●	●	●	●	●	●	●	●	●	●	●	●	
	Cellular 4G 700MHz	●			●		●	●				●		
	Zigbee/WiFi 2.4/5GHz	●	●	●	●	●			●	●	●	●		
	GPS / Glonass	●	●	●	●	●					●		●	●

CASE



Concealed and embedded antenna solutions for Bentley

Smarteq currently supplies antennas to all Bentley models.

Challenges

- Need for high performing antennas for tracking, positioning, infotainment, telephone, satellite radio Sirius/XM (US market).
- Due to car design objectives, antennas had to be completely concealed and customized.
- Bentley required a specialist development partner to fulfill their connectivity needs

Solution

- Smarteq has developed antennas for Bentley since 2005.
- Smarteq has taken an active part as development partner to optimize connectivity performance and cost. This includes implementing the antennas in dashboard, boot lid, inner lining roof top and car windows.
- Smarteq developed and delivers concealed antennas in 2G/3G/4G 698-960/1710-2690MHz) combined with GNSS and Sirius/XM antennas.

CASE



Low profile, extremely robust combination antennas

For forestry machinery and off road vehicles.

Challenges

- A need for improving the conditions for communication to and from heavy vehicles working in remote forest areas with poor connectivity.

Solution

- Smarteq developed the LPCA antenna to solve this – with low profile, extremely robust and ground plane independent configurations. This antenna is unique

since it is multi-functional. The mechanical design also ensures that it cannot be damaged by trees and branches like ordinary rods can.

- The antenna was developed in collaboration with the Royal Institute of Technology in Stockholm, John Deere, Skogforsk, Stora-Enso, Sveaskog, SP Statens Forskningsinstitut.
- John Deere, Komatsu Forest, Ponsse and Eco Log are some of our customers with this solution.