

## Wireless Communication Technologies Developed for Agriculture Industry

MTA has developed a range of wireless communication technologies for the agricultural industry capable of meeting the connectivity needs on modern agricultural vehicles.

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Antenna production in MTA Isola Vicentina

Photo Credit: MTA SpA

MTA has developed a range of wireless communication technologies for the agricultural industry. At the heart of the proposal is the great variety of antennas, off-the-shelf and custom made, developed and manufactured in Italy and capable of meeting the connectivity needs on modern agricultural vehicles.



The antennas proposed by MTA are the result of this year's acquisition of the business unit of Calero Antenne S.p.A. and are distinguished by their high quality that allows for the creation of a reception system capable of optimizing the signal inside the vehicle on which they are installed; special attention is paid to the elimination of possible electromagnetic interference, generated inside or in the environment in which it operates, capable of disturbing long-range communication.

For the reception of radio signals, both analog (FM/AM) and digital (DAB), MTA offers for agricultural applications the Flexi, Foil and Shark ranges of antennas, characterized by high standards in the materials used and state-of-the-art manufacturing procedures.

Flexi is a range with antennas of different shapes and sizes and they all share a compact base and an extremely flexible and durable rod, for receiving analog signals. Their geometry and the materials used make them particularly suitable for heavy-duty applications. They also enable the reception of digital signals when combined with an AM-FM/DAB splitter.

Foil antennas, used for the reception of both analog and digital radio signals, are very versatile in shape to match the design of the vehicle; equally important is their ability to be hidden within bumpers or any other plastic or fiberglass element.

The Shark range of antennas, with their recognizable fin-shaped design and first developed by Calearo, are distinguished by their ability to integrate additional features in a modular manner. The offering is distinguished by products that ensure high-quality reception of analog and digital radio signals, and more.

Shark antennas, in fact, also include models capable of supporting the most modern telecommunications systems, for remote positioning and control via GNSS (Global Navigation Satellite Systems) signals; data exchange via 2G/3G/4G networks up to 5G; and dual-band Wi-Fi. All features in line with the productivity optimization needs of the "smart farm."

Shark antennas are characterized by their compact size, robust construction, and materials that ensure reliability and consistent performance over time; they are already available in different configurations or in customized versions, based on specific requests, for direct attachment to the original connectors.

For vehicle tracking and data transmission, when there is no need for radio signal reception, MTA offers several antennas for agriculture applications to be installed inside the vehicle. Lunex Evolution is a combined antenna for 2G/3G/4G cellular communication and GNSS satellite signal reception. NAVI, an antenna for remote control via GNSS satellite, can be mounted inside the vehicle through a magnetic mount or adhesive; NAVI SMALL, with an adhesive mounting, is offered for receiving GPS (Global Positioning System) signals.

Thanks to its state-of-the-art Research & Development department, MTA ensures all stages of product development, from mechanical to electronic and electromagnetic design, through validation in the in-house laboratory and in a dedicated field test facility for in-vehicle validation, to industrialization.

In addition to its wide range of antennas, MTA's offer is completed with car radios, grills, splitters and cabin speakers and a whole range of cables, adapters and accessories for the installation and connection of its antennas.