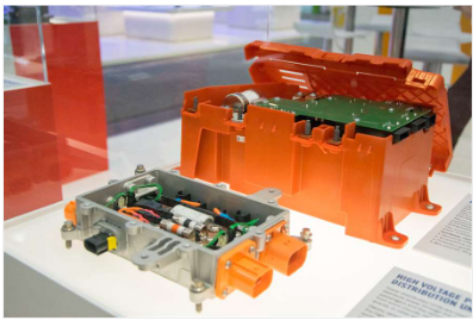
POWERPROGRESS.COM
September 1, 2024
Link

Distribute, Charge, Connect and Display

01 September 2024
4 min read

SPONSORED CONTENT



Electrification and connectivity: MTA oversees emerging mobility trends

The Italian company of electrical and electronic components, exhibiting at IAA Transportation 2024, manufactures a series of products indispensable for OE manufacturers of heavy vehicles, both electric and fuel, such as power distribution units with fuses, on-board chargers, antennas and dashboards.

Identifying current mobility trends for the near future is quite easy. The direction taken, in fact, goes towards the electric of propulsion and connectivity, whether it is passenger or heavy duty vehicles. MTA, multinational company operating in the global automotive sector through two divisions - Electrical and Electronics - is perfectly positioned within these emerging trends thanks to its products always at the forefront, the result of important investments constantly dedicated to Research & Development.

Proof of this is the presence of MTA at the IAA Transportation 2024 in Hannover (Hall 22, Stand A13), where visitors' attention is focused on solutions designed for electric commercial vehicles. MTA has developed power distribution units (PDUs) specifically dedicated to electric platforms of the main OEMs, on-board chargers, wireless communication technologies designed for the truck world and a wide range of dashboards for on- and off-highway applications.

Protect and Distribute

High Voltage (HV) PDUs are built with complex manufacturing technologies and systems. An example of this approach is the use of die-cast aluminum for the housing, containing a high percentage of recycled raw material, in place of the typical plastic of low voltage products; this material guarantees greater strength, insulation from external agents, optimal heat dissipation and proper EMC shielding. In addition, being lighter than the copper usually used, aluminum is also used for the construction of busbars.

HV PDUs developed by MTA offer the great advantage of modularity, which allows them to be adopted on different platforms. Furthermore, these HV PDUs are equipped with integrated systems for active cooling.

Another example of a PDU developed and produced by the Italian company for heavy and medium vehicles with zero emissions from a well-known German-American manufacturer is the pyro module. This module, which is placed in the vehicle cab, consists mainly of a circuit breaker and a squibb connector; Its function is to disconnect the electrical system immediately in the event of an accident involving airbag activation.

Charge

MTA develops and manufactures on-board battery chargers under EDN brand for a wide range of plug-in hybrid electric vehicles or pure electric vehicles, such as for example buses, trucks and vans, boats, underground vehicles and more. The OBCs supplied by MTA cover voltages up to 1000 V, are easy to be integrated in the vehicles, and deliver prime durability, scalable and sealed solutions. They are built to resist hard environments and can be installed in any rugged application.

The BHP, top-of-the-line of MTA's OBCs, is proposed in the power classes of 19.2 kW for the US market and 22 kW for the European market. Light, compact and with high power density, the BHP has bidirectional functionality: it can, in fact, obtain efficient recharging of the vehicle's batteries from the network, but it is also capable of transferring energy to the network itself or to other devices, respectively through the Vehicle-to-Grid (V2G) and Vehicle-to-Load (V2L) applications.

All power components of the BHP are liquid cooled, a solution that ensures optimal operating temperatures, to the benefit of vehicle safety, and to obtain the best levels of efficiency and power density.

MTA's BHP also has the capability of fast charging in direct current, which significantly reduces charging times, and offers an electric power take-off (ePTO) This allows the energy to be used to drive external systems such as a hydraulic pump: an interesting feature especially for off-highway applications.

Connectivity

In the field of connectivity, MTA is launching its new range of wireless communication technologies for the truck world, designed both for the original equipment and the aftermarket. MTA's offer in this trend of the automotive industry is the result of the acquisition, at the beginning of 2024, of a business branch of Calearo Antenne S.p.A., company that has almost 70 years of experience in the production of antennas, amplifiers and cables.

The high quality of MTA antennas allows for optimized signal reception in the vehicle, with features such as mobile 5G, V2X (Vehicle-to-X) connectivity, high-precision GNSS (Global Navigation Satellite Systems), Wi-Fi up to 6 GHz and Bluetooth. In addition, the company receives analogue, digital and satellite radio signals.

Operation is guaranteed through a multifunction antenna, installed on the roof of vehicles or placed inside windscreens, bumpers or rear-view mirrors, so as to respect the original style. MTA antennas are developed in Italy, in the laboratory of Isola Vicentina (Vicenza), responsible for all phases of product design, development and field testing; production takes place in the MTA plants of Isola Vicentina and MTA Mexico, to provide support also to the NAFTA market as well as the European.

Several OEM's in the truck world rely on MTA antennas for the initial equipment of their vehicles; among them, also an American manufacturer who, for some time now, has been requesting MTA to supply various types of antennas. Recently, the Italian company also won a major contract from a global manufacturer regarding the supply, starting from 2027, of three Bluetooth antennas with Wi-fi, intended for new truck platforms of various brands of the Group.

Advanced Automotive Solutions

Display

MTA dashboard and displays have a range of looks, sizes, numbers of LEDs, inputs and outputs, as well as different screen types to meet all the needs of the off-highway world. Round, square, rectangular, oval or ovalized, the dashboard and display shapes meet today's OEM demands, with dimensions ranging from extremely small to the high-end 12" display. The types range from LCDs (segment or dot matrix) to TFTs (3.5" up to 4.3") and are coupled with analogue needle indicators, up to full colour 8" or 12" TFTs. Some models have video inputs that can connect to cameras and power outputs to drive external functions, allowing the dashboard to replace electronic control units.

Each dashboard, display and ECU is equipped with at least one connection to the CAN network State-of-the-art components, advanced treatments and materials guarantee high resistance to temperatures and vibrations, as well as an IP66 or IP67 degree of protection. Most of these products can feature both a 12V and a 24V power supply.