

MTA and **STM** develop agricultural fuse box

MTA and ST Microelectronics have formed a technical-commercial partnership to support the evolution of the electric and electronic architecture of tractors and agricultural machines with intelligent components for power management and distribution.

The first product from the collaboration is a smart fuse box control unit that uses STM's STi2Fuse.

The fuse box was developed for off-highway use and can drive, protect, diagnose and monitor, through the STi2Fuse, up to 30 electric or electronic loads such as ECUs, adas, equipment, lights, heating, air conditioning, and analogue and digital signals and loads via the

vehicle's Can bus.

Compared with traditional fuses, STi2Fuse has advantages such as being resettable, safer and more reliable over time, with intervention times 100 times faster. It can diagnose the health of the load it drives.

A characteristics of the fuse is that the nominal current, as well as the tripping curve, are programmable; the nominal current is optimised according to the load and not the size of the fuse, an aspect which leads to a consequent optimisation of the dimensions of the wiring.

The box, combines in one unit the fuse and relay functions. It does not require maintenance, even in the event of a load

fault, since the electronic fuse can be managed remotely and is resettable via software.

Through the electronics, in the presence of current peaks, it is possible to manage the on-board loads more accurately, and the system diagnostics allows health monitoring and predictive maintenance algorithms

that reduce vehicle downtime.

The hardware and software architecture of the box satisfy functional-safety and cyber-security requirements.

OEMs can develop their application and customisable diagnostic policies based on a low-level software layer supplied by **MTA** and certifiable.



Smart fuse box from **MTA**