DRIVING
MACHINES
TO A SMARTER
TOMORROW





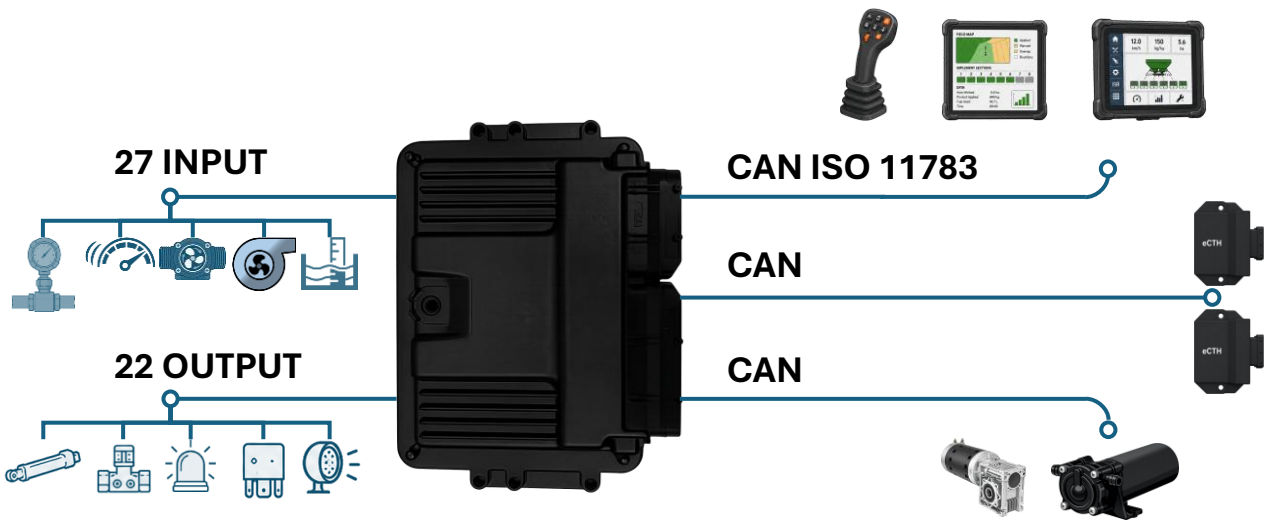
Flexible Control Platform for Mobile Machinery

ag1ECU

Programmable ECU

ag1ECU is a high-performance programmable ECU designed for agricultural machinery, implements, off-highway vehicles and heavy-duty applications. Its extensive I/O allows direct acquisition of analogue, digital and frequency sensors and control of DC motors, electrohydraulic actuators, solenoid valves, relays and other machine loads. An ARM Cortex-M7 microcontroller up to 550 MHz supports complex applications.

ag1ECU integrates a Hardware Secure Module for cybersecurity support and a hardware supervisor for power monitoring, watchdog management and output shutdown on fault. Development supports C/C++ or MATLAB Simulink auto-generated code. Available software libraries support SAE J1939, CANopen, ISO 11783, UDS and KWP2000, simplifying vehicle integration.



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ag1ECU | Flexible Control Platform for Mobile Machinery

Agriculture • Off-Highway • Heavy-Duty Applications

Key Benefits

Easy development
Ready-to-use libraries, open-source and royalty-free compiler toolchains.

Flexible and scalable
3 CAN buses, extensive I/O and configurable functions for varied applications.

Field firmware updates
USB drive, standard UDS over CAN and ISO 11783-13 File Server.

Rugged design
IP67 die-cast aluminium enclosure, electrical protection, output diagnostics and supply/temperature monitoring.

Power supply	**8–16 VDC; 20 A max.**
Dimensions	206 × 148 × 40 mm
Enclosure	Die-cast aluminium
Weight	630 g
IP rating	IP67 (connector fitted)
Operating temperature	−40 °C to +85 °C
Standards	ISO 14982; ISO 13766; ISO 24882
Microcontroller	ARM Cortex-M7, up to 550 MHz
Memory	1 MB internal Flash; 64 KB EEPROM; 1 MB external Flash
Communication	3 × CAN/CAN-FD; 1 × USB 2.0 Host
Inputs	15 digital/frequency; 12 analogue (0–10 V / 4–20 mA)
PWM outputs	8 H-bridges or 16 HSD (2 A nominal)
Auxiliary outputs	2 HSD at Vsupply; 4 HSD at 5 V
Safety	Output-disabling watchdog; HSM
Connector	TE Connectivity AMP, 121 pins

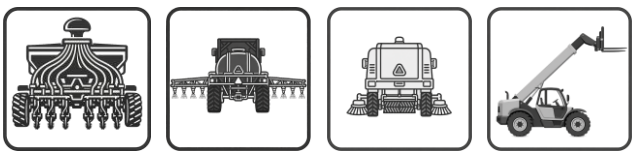
Applications

ag1ECU is designed as a main implement ECU or an auxiliary controller for distributed cabin and machine loads.

AGRICULTURE
- Seed drills and sowing machinery
- Sprayer booms and section control
- Vineyard and orchard machinery
- Fertilizer spreaders and application equipment

OFF-HIGHWAY & SPECIAL VEHICLES
- Telehandlers and earthmoving equipment
- Construction and road maintenance machinery
- Special vehicles and heavy-duty applications

ag1ECU is available as a C/C++ programmable platform or with application firmware developed to machine specifications.



Models*

Code	Description
AG1AAA	ag1ECU with 15 NPN digital inputs
AG1BAA	ag1ECU with 14 NPN digital inputs + 1 key input

*Custom NPN/PNP inputs, sensor voltages and hardware configurations available on request.