06. Motor Drivers, Gate Drivers & Automotive SBC

Motor drivers, gate drivers, relay drivers, Darlington arrays and automotive SBC.

This category targets automotive actuators, smart appliances, meter relays, industrial control and low-power body-control nodes.

Product Positioning

Motor & Gate Drivers

- Covers dual gate drivers, six full bridges, relay drivers and DC motor drivers.
- For automotive actuators, smart appliances, meter relays and industrial control.

Automotive SBC

- Integrates basic automotive system functions for body control and low-power wake-up.
- Can be combined with LDO, DC/DC and signal-chain ICs for automotive subsystems.

Representative Models / Product Lines

Category	Representative Models	Key Specs	Applications
Gate Driver	ICW0121A, ICW0131, ICW0162A/B	200V / 350V / 600V class; dual drivers	High/low-side and power-switch driving
Six Full Bridges	ICW0311A, ICW0321A/B	70V / 200V; input interlock support	Multi-actuator, seat and window motors
Relay Driver	MD7620A	5-40V; typical 400mA; max 800mA	Magnetic latching relays, meters and breakers
DC Motor Driver	MD9927	VM 0-12V; VCC 1.8-7V; 0.5ohm H+L	Low-power dual-channel DC motors
Darlington Array	MD2003A, MD2803C	50V; 7/8 channels; 500mA	Relays, lamps and load driving
Automotive SBC	ICW1160	5V output, watchdog, wake-up and CAN FD passive options	Body control, BMS and automotive nodes

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Applications and Promotion Notes

Typical Applications

- Automotive systems: seat ventilation/heating, sunroof, wiper, door lock, lighting and tailgate.
- Meters and breakers: water/gas/electric meters, data concentrators and ACB/MCCB/VCB.
- Smart appliances and industrial equipment: valves, fans, small motors and actuators.

Promotion Focus

- Motor drivers can be promoted together with PMICs, op amp sensing and interface ICs.
- Relay drivers and Darlington arrays fit meters, breakers and smart-home load control.
- Automotive SBC can be a system-level entry point for body-control nodes.

Customer Discovery Questions

Question	Recommended Direction
Does the customer drive DC motors, stepper/multi-actuators or power MOSFETs?	DC motor driver / six full bridges / gate driver
What are the drive voltage, peak current, dead time and interlock requirements?	Gate driver and bridge driver selection
Is latching relay or multi-channel low-side load driving required?	MD7620A / MD2003A / MD2803C
Is it a body-control or BMS node requiring watchdog, wake-up or CAN-related features?	Automotive SBC ICW1160 and system PMIC solution

Note: Before design-in, verify temperature grade, package, certification status, PPAP support and availability with the latest datasheet.