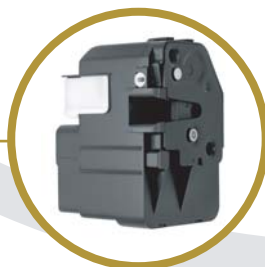
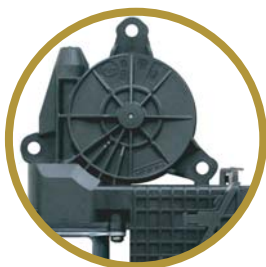
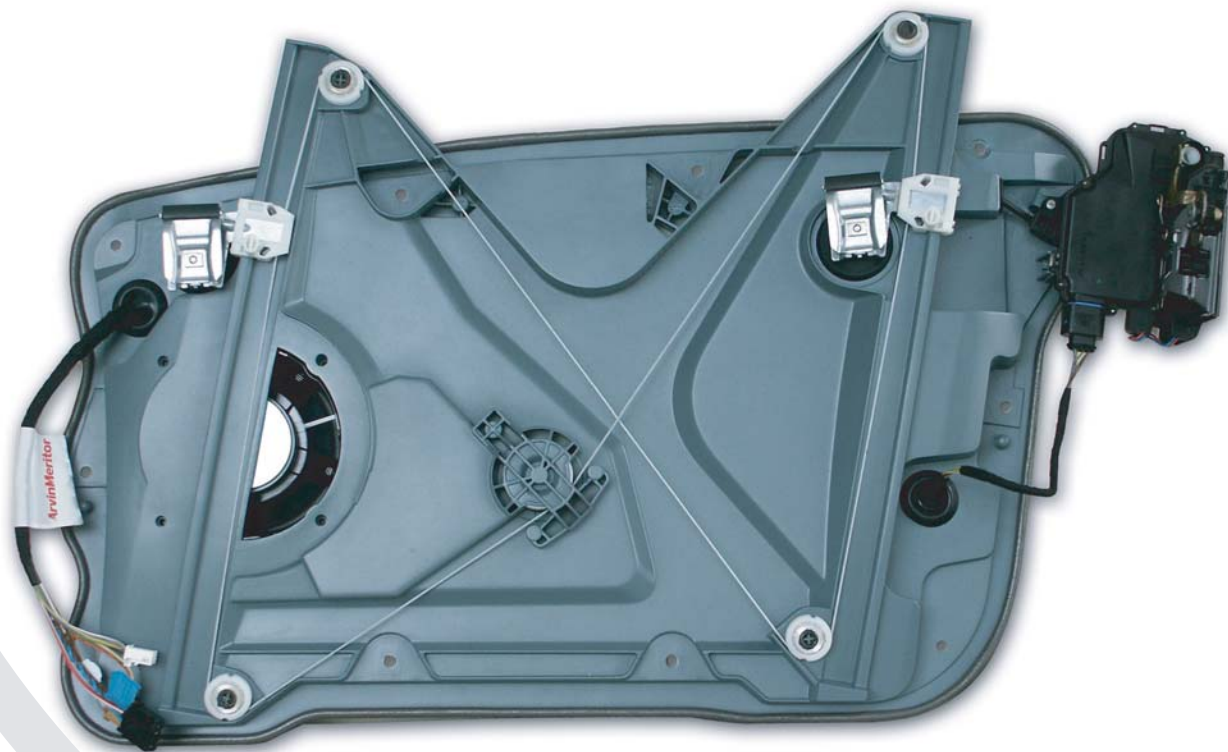


# door systems

A Complete Portfolio of Electronic, Mechanical and Modular Technologies



ArvinMeritor Door Systems is a world leader in the design and manufacture of window, door and access control components and modules.

Headquartered in Sully-sur-Loire, France, with facilities in 13 countries, ArvinMeritor Door Systems is world renowned for its expertise via 35 years of experience in mechanical door systems, more than 70 years in automotive latching, and as the producers of the world's very first automotive door module in 1968.

By leveraging these competencies with an extensive electronics capability,

ArvinMeritor delivers innovative, systems-integrated solutions that continue to exceed OEM expectations, add real value to the end user, and drive toward ever-improving levels of vehicle safety and passenger comfort.

## Products & Services

As an automotive door systems integrator, ArvinMeritor is unique in having a complete portfolio of component proficiencies upon which to develop industry leading modular solutions.

A design leader in each of its disciplines, in a single year, the ArvinMeritor Door

Systems group produces 25 million manual and electric window regulators; 15 million electric motors complete with advanced electronic functionality, such as anti-squeeze and comfort closing; 25 million door, hood and trunk latches; and 4 million full door modules.

These products are designed and assembled to exceptional quality levels and shipped Just-in-Time and Just-in-Sequence if required, to the majority of the world's vehicle manufacturers in every geographical region.

**ArvinMeritor**<sup>™</sup>



New Generation Motor



Electronic Door Control Module



Low Energy Release Door Latch

## Innovative, systems-integrated solutions

### Research & Development

ArvinMeritor's Door Systems engineering group is strategically organized into four centres of expertise, perfectly structured for systems integration and advanced product development. The group has dedicated R&D, engineering and test resources for each of the Access Control Systems, Electric Motors, Electronics, and Door Modules & Systems disciplines.

This structure has allowed the Door Systems group to create a number of significant new products that are set to bring real advancements to the light vehicle industry.

### Electronic Door Control Module

The Electronic Door Control Module (EDCM) combines ArvinMeritor's leading door system product lines with the latest electronics technology to deliver additional functionality with reduced complexity for the OEM.

The product integrates all the control functionality for the window operation (including express, anti-squeeze and comfort closing capabilities) with that of the electric memory door mirror, indicator, courtesy lights and complete latch electronics into a single unit.

Developed completely in-house, ArvinMeritor's EDCM is the first such control module to be produced by a single company that also designs and manufactures the majority of the components it controls.

### Highly-Integrated Plastic (HIP) Door Module

The HIP door module is a high-strength plastic composite product that brings tangible benefits to both the vehicle manufacturer and the end user via a full system redesign of the conventional door module.

Traditional door modules mount the window regulator, latch, speaker, motor and electronics to a large steel carrier plate using a number of bolts and clips. Through a deep understanding of the components and processes combined with advanced application of plastics molding technology, ArvinMeritor has integrated a number of components, such as rivets, fittings and guide rails directly into the plastic mold for improved product quality and reduced assembly complexity.

In addition to assembly simplification, the HIP door module weighs approximately 25 percent less than its steel counterpart. And, because the plastic composite is more sound absorbent than steel, the HIP will help to reduce the amount of road noise that enters the interior of the vehicle.

### Low Energy Release Door Latch

ArvinMeritor's patented Low Energy Release (LER) door latch is a revolutionary next-generation product developed for tomorrow's vehicle closure requirements.

The LER latch uses an innovative mechanical solution to greatly reduce release efforts without compromising on strength or safety. This, combined with in-house developed electronic software

control, has delivered a latch with huge functionality and cost advantages for the customer.

Reduced operating efforts allow the door to be released with high seal loads, as well as providing freedom to innovate on door and handle styling, as the shape and position of the handles is no longer crucial. The feel of the handles can now be tuned for brand alignment while the lower actuation forces within the complete release system allow for the possibility of material system cost savings. In addition, the LER latch provides silent locking operation, allowing the use of tuned sound signatures.

The latch's design increases resistance against physical attack theft tools. Passive Entry functionality is improved; release at far higher seal loads than a conventional latch (e.g. post collision) is possible; and software locking logic means the same latch system can operate under a multitude of different regional or customer specific functional demands.

A key feature of the LER Latch is that it incorporates a failsafe power release system. In the event of power failure either by battery drain or in a collision, the LER reverts safely to the functionality of a conventional mechanical product.

Finally, the innovative design is considerably smaller, lighter and contains up to 50 percent fewer parts than current designs with comparable functionality.