

FreeForm™

Magna FreeForm™ is an innovative new seat trim cover technique that provides OEMs with a single smooth, seamless styling surface with hidden tiedowns. It enables the freedom to achieve endless design possibilities, high seat concavity, improved seat back comfort and enhanced cleanability.



Smarter



Cleaner



Lighter



Design



New Mobility



Exclusive@Magna



Patented



First to Market

Competitive advantage/differentiators

- Remarkable design & styling flexibility
- Allows for rapid mid cycle trim changes
- Reduces production variation, improves overall quality and craftsmanship
- Can be applied to other areas of the interior (i.e. door panels, and center consoles)
- Utilizing our in-house expertise, FreeForm™ back panels can contain up to 50% proprietary polyols derived from recycled polyethylene terephthalate while the seating surface foam can contain up to 20% renewable materials from a bio-feedstock.

Benefits

- Provides a highly concave surface without material bridging or traditional tie-downs
- Allows for various shapes and crisp styling lines that result in prominent visual effects (Seamless A or B surface designs)
- Provides a back panel with a “soft touch” while maintaining shape, improving rear seat occupant knee clearance

SOP

Ideation

Discovery

Concept

Development

Series Preparation

In Production

IP Nesting

The passenger seat nests into the instrument panel by combining stadium cushion flip-up and long rails to provide cargo storage space for improved mobility. The use of a stadium cushion and long rails provides additional cargo storage space and an enhanced user experience by offering an adaptable, flexible interior.



Smarter



First to Market
Opportunity



New Mobility



Patent Pending



Industry First

Competitive advantage/differentiators

- One step, single-handed operation to move seat to IP nesting position
- Seat back recline
- Fore/aft comfort adjustment
- Integrated restraint system (ABTS capable)
- Option for power IP nesting

Applications

- Coupes, Sedans, MPVs, SUVs and Commercial Vehicles

SOP

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Long Rails

Magna's power Long Rail technology provides ease of reconfigurability and flexibility for various occupant and cargo situations. The vehicle cabin can be reshaped to offer a more useable and collaborative interior for the autonomous vehicle, ride sharing and car sharing scenarios of the future.



Smarter



New Mobility



Electrification

Competitive advantage/differentiators

- Enables conference / cargo mode seat arrangements
- Power version with quick and comfort adj
- Manual override ability
- Removable seat attachment
- Mountable inside the floor

Applications

- 2 row or 3 row SUV and Commercial Vehicle configurations

Additional Information

- These weights are estimates and based on CAD, they are subject to change
- Manual Long Rail –
 - Generic Lower Channel (Mass: 2.3735 gm/mm)
 - Generic Upper Channel (Mass: 1.1686 gm/mm)
- Power Long Rail -
 - Generic Lower Channel (Mass: 3.872 gm/mm)
 - Generic Upper Channel (Mass: 1.3083 gm/mm)

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Stadium Swivel Seat

Magna's Stadium Swivel Seat technology provides a flexible, reconfigurable seating solution for future mobility scenarios including autonomous vehicles, ride sharing and car sharing. The ease of operation and adaptable interior space enhance the occupant's experience.



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New Mobility

Competitive advantage/differentiators

- Enables conference / campfire seat arrangements
- Best-in-class swivel mechanism package and stadium cushion enable compact swivel arc
- Low rotational efforts and high rotational stability through use of rolling elements in swivel mechanism

Applications

- 2 row or 3 row SUV and Commercial Vehicle configurations
- Improves consumer social engagement

SOP

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Central Seat ECU

Magna's Central Seat ECU provides a scalable solution with the capability to incorporate features for all rows of seating and the opportunity to extend into other vehicle controls (such as doors, steering wheel, mirrors, running boards, etc.).



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Electrification

Competitive advantage/differentiators

- High performance 32 bit, 48MHz MCU (S32K142)
- 2 KB EEPROM/NVRAM for position memory
- High speed CAN/LIN (CAN-FD scalable)
- Object detection
- Modular concept (Configurable IOs) can be scaled up or down as required
 - Capable to run up to 10 motors with PWM controls and 11 hall effect sensors
 - 4 temperature sensors (thermistors), 10 digital inputs, 5 analog inputs and 4 solenoids
 - 4 high side drivers for heaters and 4 for vents

Applications

- Reconfigurable IOs to support different applications
- Capable of consolidating multiple functions to reduce the number of individual controllers

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