Explore our Technologies
Integrated Drive Module (iDM)
for Hybrid and Electric Vehicles
Integrated Drive Module (iDM)

Description
- 3 in 1: Drive Module for Electrical Vehicles with fully integrated Electrical Machine, Power Electronics and Transmission
- Operating Voltage: 250 – 450 V DC

Features and Benefits
- Easy Vehicle Integration
- Scalable and Modular Architecture
- Optimized System Efficiency
- World Class Battery Energy Consumption
- State of the art Torque and Power Density
- High Speed Electrical Machine
- Water Cooled
- Optional e-Park-Lock System

Specifications iDM 2.0

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>250 – 450 V DC</td>
</tr>
<tr>
<td>Continuous Power</td>
<td>Scalable @ wheels, @ 330 V DC 45 – 85 kW</td>
</tr>
<tr>
<td>Peak Power</td>
<td>Scalable @ wheels, @ 330 V DC 90 – 160 kW</td>
</tr>
<tr>
<td>Continuous Torque</td>
<td>Scalable @ wheels 1,400 – 2,000 Nm</td>
</tr>
<tr>
<td>Peak Torque</td>
<td>Scalable @ wheels 2,400 – 3,800 Nm</td>
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<tr>
<td>Status</td>
<td>In Development</td>
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</tbody>
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Innovation Highlights

Electronics
- Full Integration for smallest package and lowest complexity
- CAN/CAN FD, FlexRay optional
- State of the art Power Electronics for lowest losses
- Full Software Functionality with option for high level controls as vehicle dynamics and energy management
- ASIL D Capable, AUTOSAR
- Scalable Design

Electrical Machine
- IPM Machine
- Optimized for highest drive cycle efficiency
- Fully integrated with the transmission and electronics
- HVH/SW Technology for small package and high efficiency
- Developed and optimized for iDM in terms of NVH and integration
- Scalable Design

Transmission
- 2-Stage Reduction
- Ratio 11–12.5:1 for iDM
- Optimized for high drive cycle efficiency and lowest system NVH
- Innovative passive lubrication system for lowest losses
- Optional Park-Lock System with integrated Actuator/ECU
- Scalable Design

For Additional BorgWarner Information: borgwarner.com