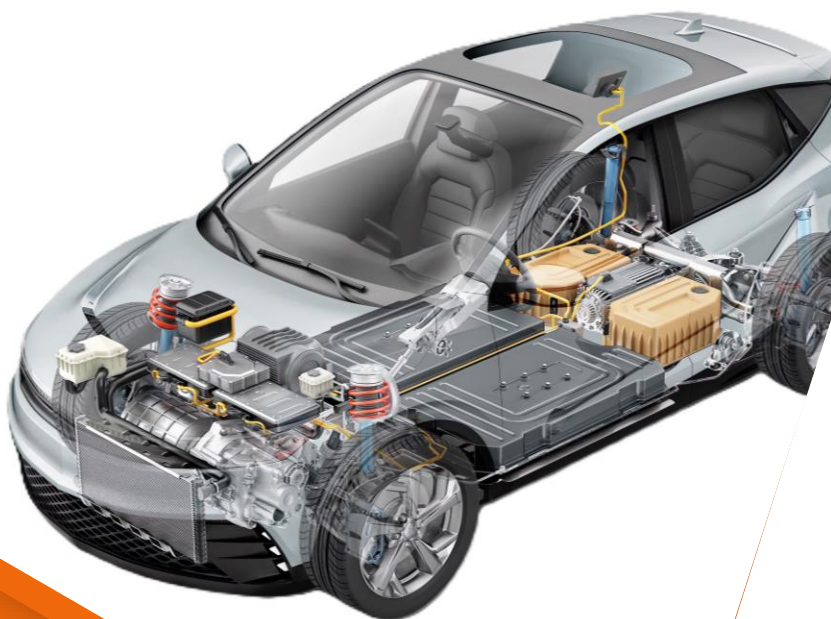




系统方案指南 – 预览

48V 电源网趋势



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System Solution Guide
48V Powernet
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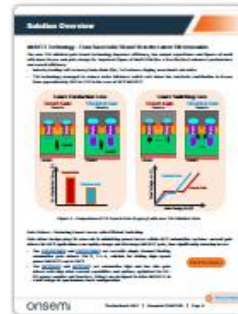
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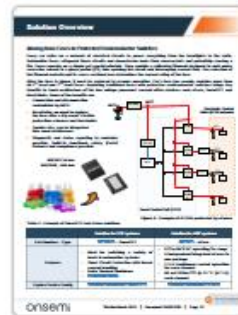
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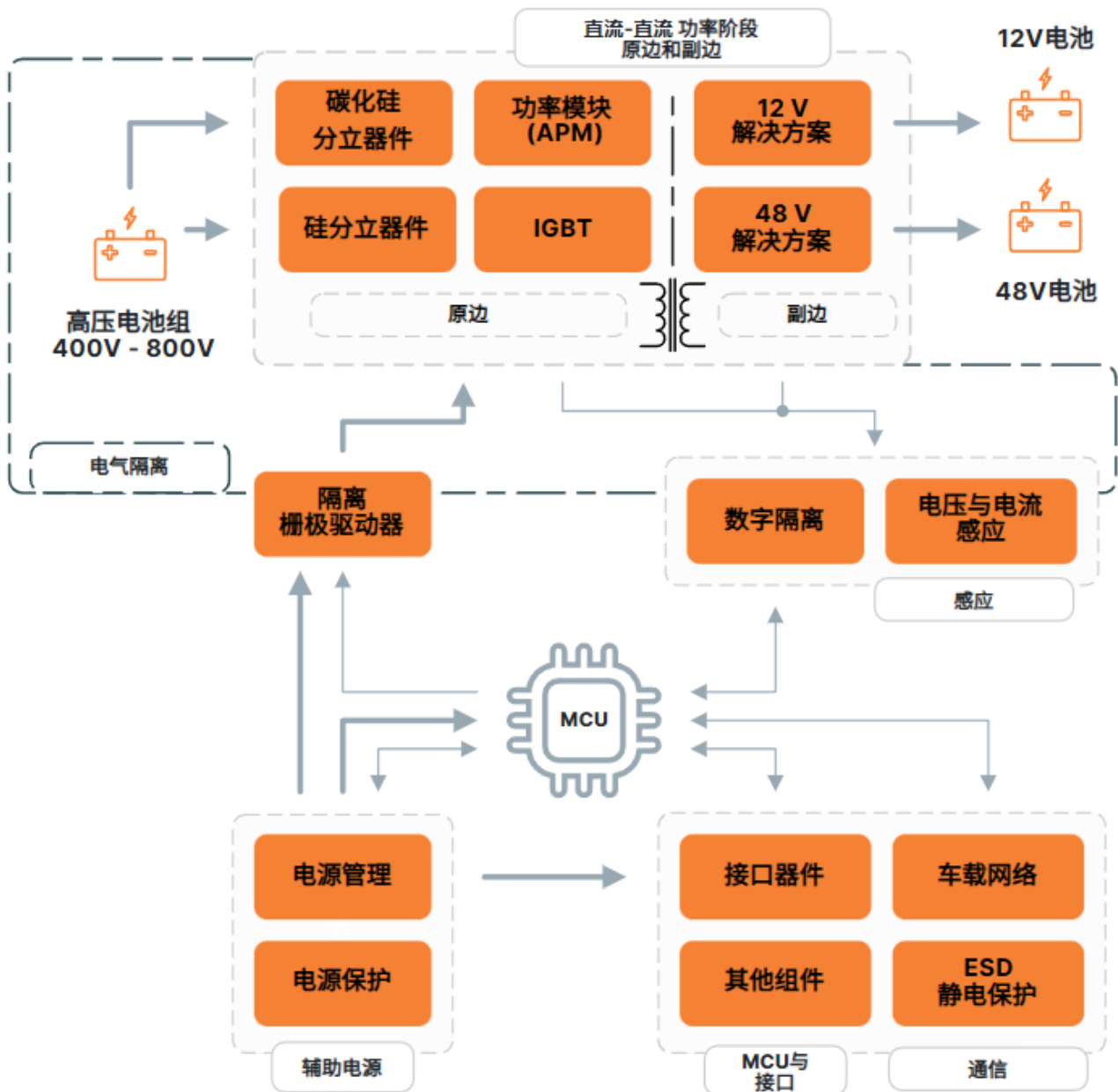


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DC-DC 转换器 HV-48V/12V – 框图

高压 (HV) 至低压 (LV) DC-DC 转换器是电动汽车 (BEV) 中多电压架构的关键元件。安森美 (onsemi) 提供种类丰富的 DC-DC 转换器相关产品, 包括传感器、控制器和执行器, 可提供具备可扩展性的解决方案, 为车辆低压电网输送所需电力。在安森美的在线交互式框图 (IBD) 工具中打开以下框图, 查找备高效率与高功率密度特性且适用于高压转 48V 及高压转 12V 应用场景的元件。



使用我们的交互式框图工具



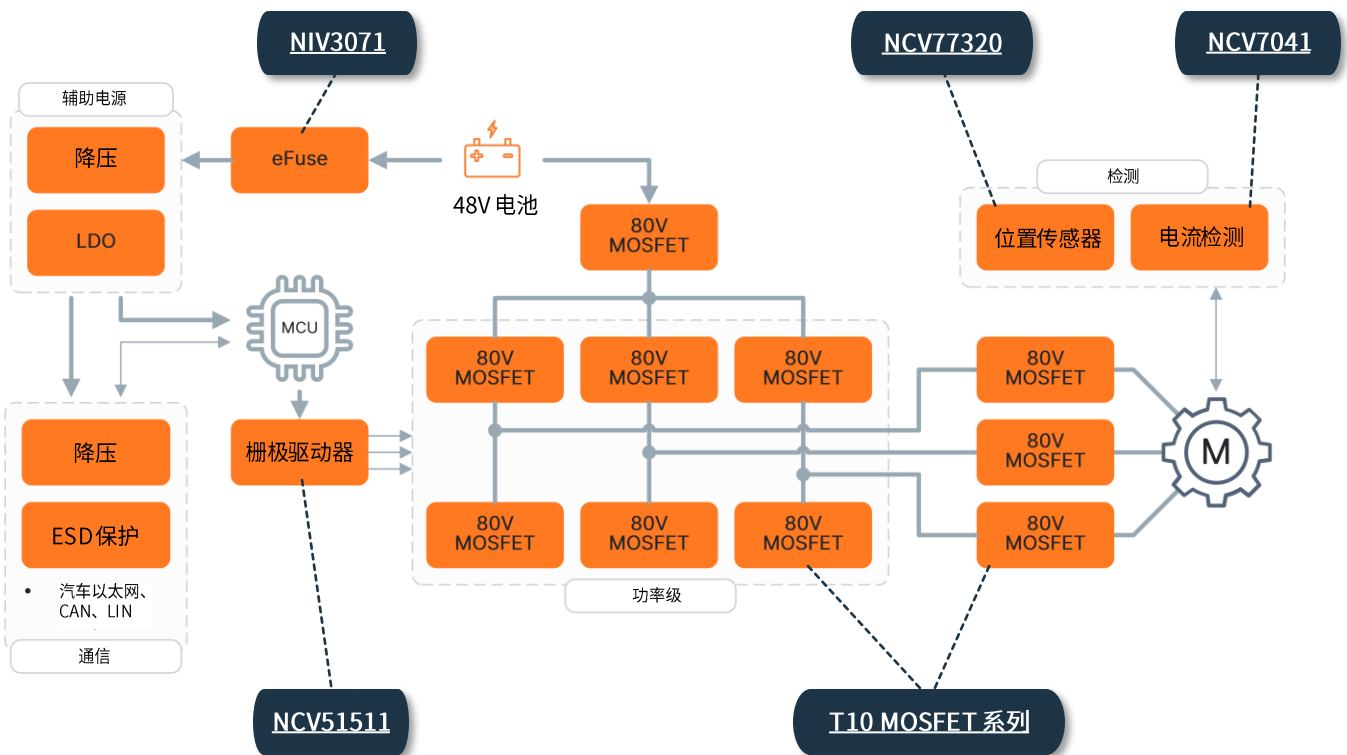
打开 IBD 工具

线控转向 – 应用示例

交通运输的未来在于先进驾驶辅助系统 (ADAS) 和潜力十足的全自动驾驶汽车。这些系统采用 48 V 电压供电，因为需严重依赖电力来驱动如下等高耗电配件：

- **电动转向：**电机取代传统的液压动力转向系统，提升响应能力和燃油效率。
- **电子线控系统：**电子线控 (X-by-Wire) 是线控转向和线控制动系统的通用名称。这些系统用电信号控制取代传统的机械连杆（方向盘、刹车踏板），为自动驾驶汽车开发提供了更大的灵活性。

然而，电子线控也对可靠性、功能安全和冗余度提出了更高的要求。与 12 V 系统相比，48 V 系统可使线控转向等高峰值负载装置的冗余执行器更轻、更具性价比。



NCV77320 – 电感位置传感器

NCV77320 是一款电感位置传感器接口器件，可与 PCB 结合形成用于精确测量角度或线性位置的系统。它在冗余应用中最高能达到 ASIL D 安全性等级，并可用作线控转向传感器。如果转速（最大 10 800 RPM）和输出协议匹配，那么 NCV77320 可用于任何需要精确位置检测的旋转和线性应用。

- 采用安森美电感技术可提高 EMC 稳健性，尤其是在直流域。与基于磁铁的方案不同，电感技术的结构可使其免受杂散磁场的影响，与前者相比，这是一个重要优势，因为随着汽车功能电子化，强直流电流会越来越多。
- NCV77320 系统对温度变化不敏感。
- 易于实现冗余：两个传感器可以堆叠，实现精准对齐。

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