**SPI Hardware Controller 0**

**W25qxx Device#m**

**SPI Hardware Controller n**

**SPI BUS#0**

**SPI BUS#n**

**ssd1351 Device#0**

**ENC28J60 Device#0**

**SD Device#m**

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**SPI Hardware Controller 0**

**SPI BUS#0 Drv**

**SPI Hardware Controller n**

**SPI BUS#n Drv**

**SPI BUS#0**

**SPI BUS#n**

**SPI BUS#0 CS0**

**SPI BUS#0 CSn**

**ssd1351 Drv**

**W25qxx Drv**

**SPI BUS#n CS0**

**SPI BUS#n CSn**

**ENC28J60 Drv**

**SD Drv**

**硬件外设：串口、I2C、SPI、网卡**

**UART驱动**

**I2C驱动**

**SPI驱动**

**GPIO驱动**

**···**

**Serial**

**I2C**

**SPI**

**PIN**

**···**

**设备操作接口**

**应用程序**

I/O设备管理框架

驱动框架