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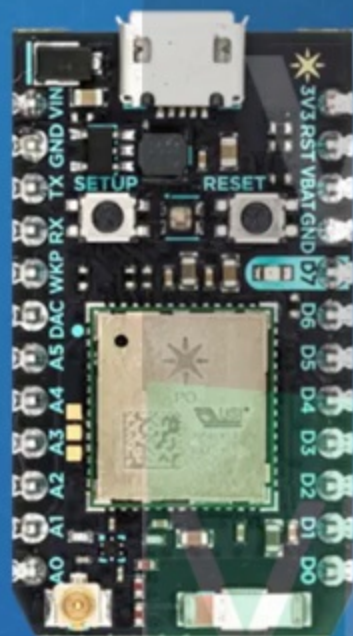
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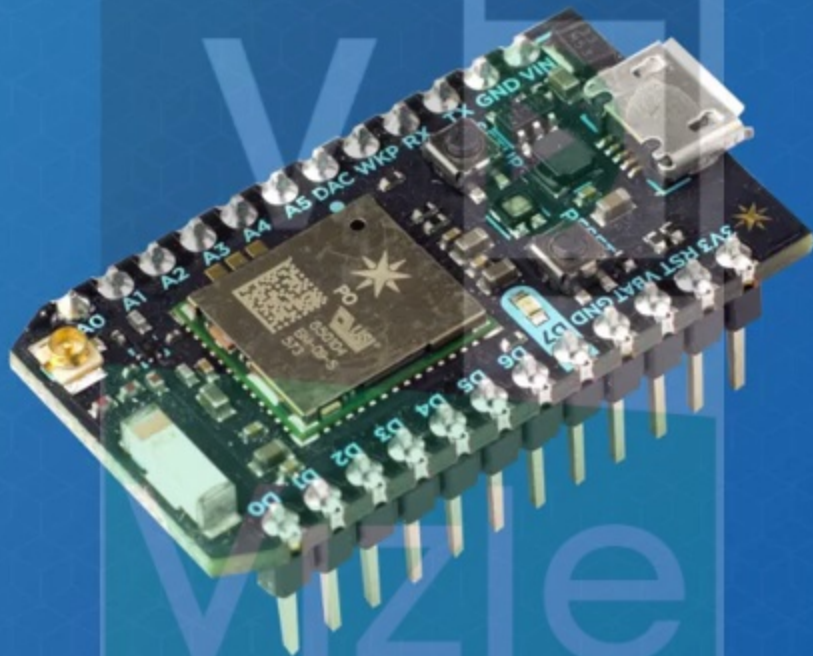


How to – SPI on the Particle Photon

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SPI as a Bus

CHARACTERISTIC

SPI

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SPI as a Bus

CHARACTERISTIC	SPI	I2C
Data Transmission Wires	SDI (MISO) for data going in and SDO (MOSI) for data going out	SDA is for both reception and transmission
Clock Wires	A single master clock wire	A single master clock wire
Speed	Very fast. Photon has 60MHz SPI clock	Slow. Low clock speeds and many control bytes hinder max bandwidth
Address	Requires external control wires. Can make circuits messy	All addressing done in I2C protocol and only requires 2 wires (data + clock)

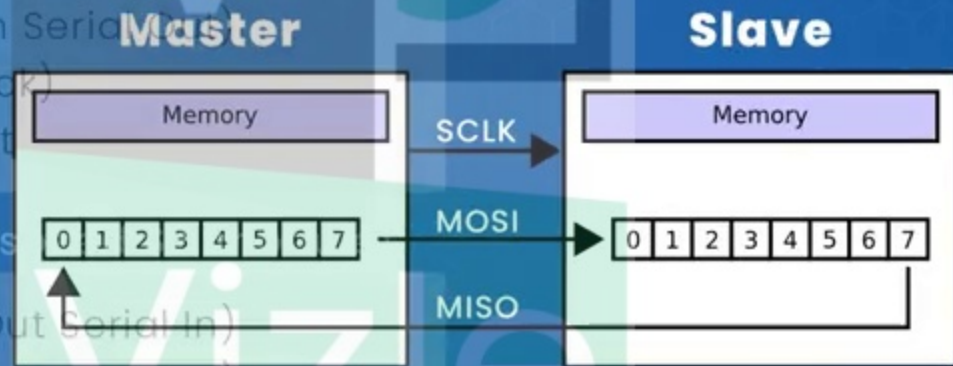
PHOTON HARDWARE SPI

SPI Module (standard SPI module)

- A5 – MOSI (Master Out Serial In)
- A4 – MISO (Master In Serial Out)
- A3 – SCK (Serial Clock)
- A2 – SS (Slave Select)

SPI Module 1 – (high speed)

- D2 – MOSI (Master Out Serial In)
- D3 – MISO (Master In Serial Out)
- D4 – SCK (Serial Clock)
- D5 – SS (Slave Select)



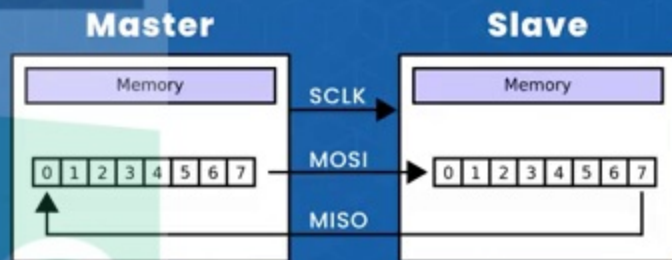
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