Connections Between PTCB and STM32F4VExx MCU Module

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As described in the “Hardware” document, the prototype Pertec Tape Controller board was implemented using the STM32F4VEXX development board described here: https://stm32-base.org/boards/STM32F407VET6-STM32-F4VE-V2.0.html.

The connections from the controller board to the MCU were made using wire-wrap techniques, but a cable using Dupont connectors should probably be the preferred method. Another possibility is to construct a “mezzanine” printed circuit board that plugs into the controller board and mates with the microcontroller development board of choice.

In any case, the software supplied with the board uses the following pin assignments. In all cases, the first reference is to the controller board pin, the second is the microcontroller connection:

J8:

+5 → any 5V

GND → any GND

Data:

E00 → PE0 E02 → PE2 E04 → PE4 E06 → PE6

E01 → PE1 E03 → PE3 E05 → PE5 E07 → PE7

Status:

E08 → PE8 E10 → PE10 E12 → PE12 E14 → PE14

E09 → PE9 E11 → PE11 E13 → PE13 E15 → PE15

Control:

C00 → PC0 C02 → PC2 C04 → PC4 C06 → PC6

C01 → PC1 C03 → PC3 C05 → PC5 C07 → PC7

Register Select:

CMD ENA → PD1 DDIR → PD5 LDBUF → PD4 SSEL → PD3

CMD SEL0 → PD7 CMD SEL1 → PD6 TACK → PD0 GND → any GND

Note that it’s possible to change any of these association by editing the **gpiodef.h** file. All other uses of the pin names in the software are symbolically referenced.