Piccolo F2803x ISO controlCARD

The Piccolo F2803x ISO controlCARD can be used as a quick evaluation board for the F2803x C2000 controller as well as a noise-resistant plug-in card with Isolate JTAG emulation build in, to enable quick debug and bring up of boards requiring isolated emulator. All the key peripherals are brought out on the controlCARD pins including the ADC, PWM, GPIO etc. Along with this an isolated emulator is on the control card itself, and can be connected to the host computer using a mini-USB cable to connect to the debugger.

To summarize the controlCARD features:
- Small size – 90mm x 25mm (3.5" x 1")
- All GPIO, ADC and other key signals routed to gold connector fingers
- 5V input supply to the controlCARD is needed for the controller. Extensive supply pin decoupling with L+C connected close to the device are provided on the control card
- Clamping diode protection at ADC input pins
- Anti-aliasing filter (noise filter) at ADC input pins
- Isolated JTAG Emulator though the mini-USB connector
- Isolated Serial connection using USB-Serial of the FTDI chip, though the mini-USB connector
- The emulator drives it's power from the mini-USB connector and connection to the controller are isolated using digital isolators.

Each controlCARD includes a "Hardware Developer's Package", a set of "soft collateral" files which makes deploying this technology very easy, these files include:
- Schematics
- Bill of materials (BOM)
- Gerber files to freely use or modify
- Pinout table showing all key signals at the 100-pin connector
- DIMM100 pin / socket mechanical details

Reference

LD1 – Turns on when controlCARD is powered on
LD2 – controlled by GPIO-31
LD3 – controlled by GPIO-34
LD4 – USB-mini connection

SW2 – controls the boot options of the F28035 device

Position 1 (GPIO-34)	Position 2 (TDO)	
0	0	Parallel I/O
0	1	Wait mode
1	0	SCI
1	1	(default) Get mode; the default get mode is boot from FLASH

SW3 – TRSTn Control

This switch is used to connect or disconnect the TRSTn pin that is used for the JTAG emulation. When JTAG connection is needed for the board the SW3 should be in ON position. For booting from FLASH or other boot options (no JTAG connection needed) this pin should be in the OFF position.