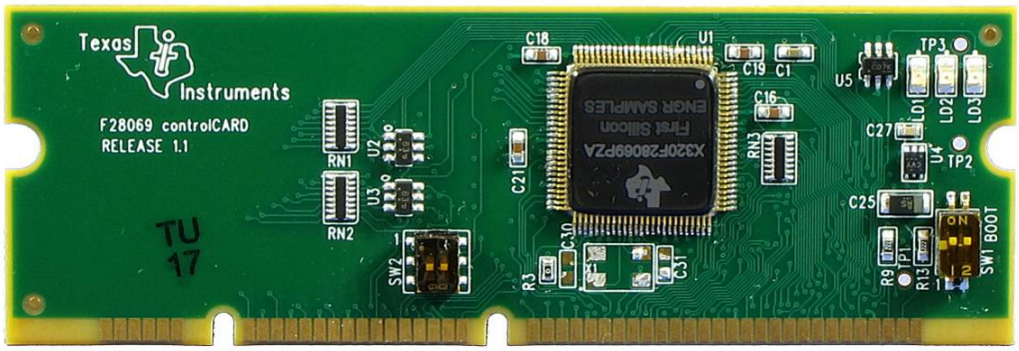
Piccolo F2806x controlCARD



The Piccolo F2806x controlCARD can be used as a quick evaluation board as well as a noise-resistant plug-in card in low-quantity production. The controlCARD features:

- Small size – 90mm x 25mm (3.5” x 1”)
- All GPIO, ADC and other key signals routed to gold connector fingers
- Single 5V input supply to the controlCARD and extensive supply pin decoupling with L+C connected close to the device
- Clamping diode protection at ADC input pins
- Anti-aliasing filter (noise filter) at ADC input pins
- Ground plane

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 in OrCAD and ExpressPCB schematic capture utility
- 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

SW1 – controls the boot options of the F28069 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

SW2 – ADC VREF control
The ADC will by default convert from 0 to 3.3V and scale this to 0-4096 ADC counts, however if the ADC (in software) is configured to use external references, the ADC will convert its full range of resolution (0-4096) from VREF-LO to VREF-HI.

Position 1 controls VREF-HI, the value that the ratiometric ADC will convert as the maximum 12-bit value, 0x0FFF. In the downward position, VREF-HI will be connected to 3.3V. In the upward position, VREF-HI will be connected to pin 66 of the DIMM100-socket. This will allow a connecting board to control the ADC-VREFHI value.

Position 2 controls VREF-LO, the value that the ratiometric ADC will convert as the minimum 12-bit value, 0x0000. In the downward position, VREF-LO will be connected to 0V. In the upward position, VREF-LO will be connected to pin 16 of the DIMM100-socket. This will allow a connecting board to control the ADC-VREFLO value.