

Delfino F28335 controlCARD

The Delfino F28335 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
- All GPIO, ADC and other key signals routed to gold connector fingers.
 - External memory interface pins not routed to connector.
- 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
- Isolated RS-232 communication

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
- Hardware Starter Module – Gerbers, and schematics for DIM100 connector

Reference

LD1 – Turns on when controlCARD is powered on

LD2 – controlled by GPIO-31

LD3 – controlled by GPIO-34

Note: Older versions of the F28335 controlCARD do not include SW1 or SW2.

SW1 – controls whether on-card RS-232 connection is enabled or disabled.

- ON – RS-232 transceiver will be enabled and allow communication through a serial cable via pins 2 and 42 of the DIMM-100 socket. Putting SW1 in the “ON” position will allow the F28535 controlCARD to be card compatible with the F2808, F28044, F28335, and F28027 controlCARDs. GPIO-28 will be stuck as logic high in this position.

- OFF –SW1 in the “OFF” position allows GPIO-28 to be used as a GPIO. **Serial communication** is still possible, however **an external transceiver is needed such as the FTDI – FT2232D chip.**
 - This is primarily used for communicating over the USB to serial bridge included in the onboard XDS100 JTAG emulation on many C2000 development boards.

SW2 – controls the boot options of the F28335 device. Below are the most commonly used boot options. See the F28335 datasheet for more boot options.

Position 1 (GPIO- 84)	Position 2 (GPIO - 85)	Position 3 (GPIO- 86)	Position 4 (GPIO - 87)	
0	1	1	1	SCI-A Boot
1	0	1	1	SPI-A Boot
1	1	1	1	(default) Get mode; the default get mode is boot from FLASH

Some earlier versions of the F28335 controlCARD use the ZJZ (a BGA) package. These are functionally equivalent to versions that use the PFG package.