

LTC6820  
Dual Master isoSPI Adapter

## DESCRIPTION

Demonstration circuit DC2792A is an SPI serial to dual-port isoSPI adapter that uses a pair of multiplexed [LTC®6820](#) isoSPI transceivers. The board can replace a DC1941 in cases where isoSPI battery-management (BMS) devices are being evaluated, but provides a second isoSPI master to exercise the reversible isoSPI feature where available. The SPI interface can be provided via the legacy 14-contact ribbon cable from either a DC590 or DC2026 USB adapter, or directly installed on the DC2026

as a Linduino ‘shield’. The two isoSPI ports are MAIN and AUXiliary, with activity of each indicated by blue LEDs. For use in place of DC1941, the MAIN port must be used. Power for the DC2792A comes indirectly from the USB port of the host computer, via the USB to serial adapter being used.

**[Design files for this circuit board are available.](#)**

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## QUICK START PROCEDURE

### Equipment Required

1. PC with USB port
2. DC2026 Linduino board
3. USB cable to connect PC to Linduino
4. 14-wire SPI demo board ribbon cable to connect to Linduino (optional)
5. 2 Ethernet patch cords to connect DC2972A to isoSPI BMS demo(s)
6. Software that controls one or two isoSPI channels (usually intended for demonstrating isoSPI BMS products)

### Connection of Demo Board

1. Connect DC2972A to DC2026 Linduino with ribbon cable (refer to Figure 1) or directly mate with 'shield' connectors (refer to Figure 2).
2. Connect BMS demo unit to DC2972A using both Ethernet cables. The cable positions are not important, just that both ports are connected. Note: for use with legacy single port isoSPI systems, use only the 'MAIN' isoSPI connection.
3. Connect Linduino to PC with USB cable.
4. Start evaluation software associated with the BMS demo unit(s).

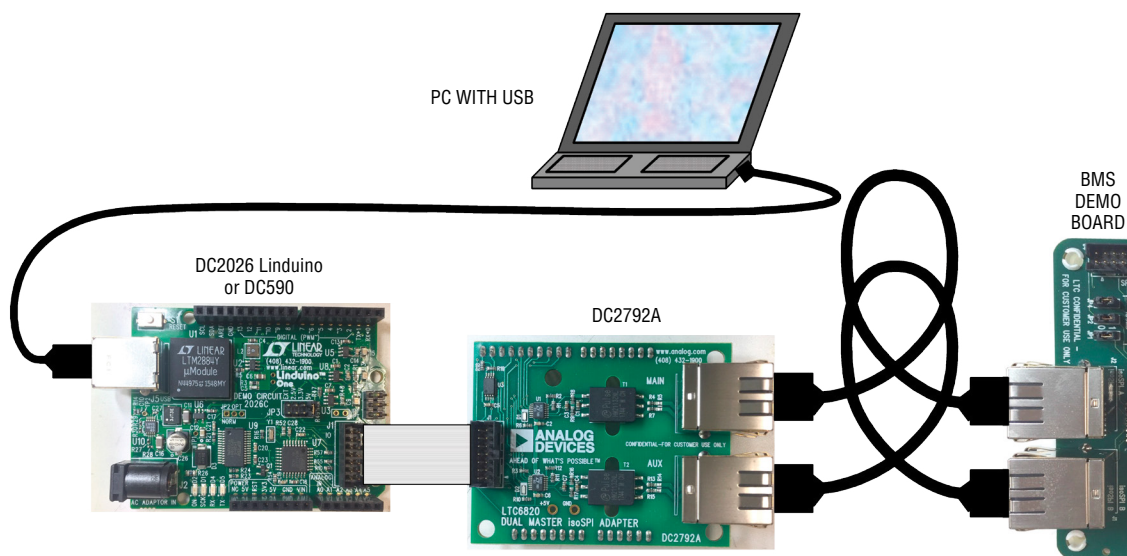


Figure 1. Proper Demo Board Connection (with Ribbon Cable)

## QUICK START PROCEDURE

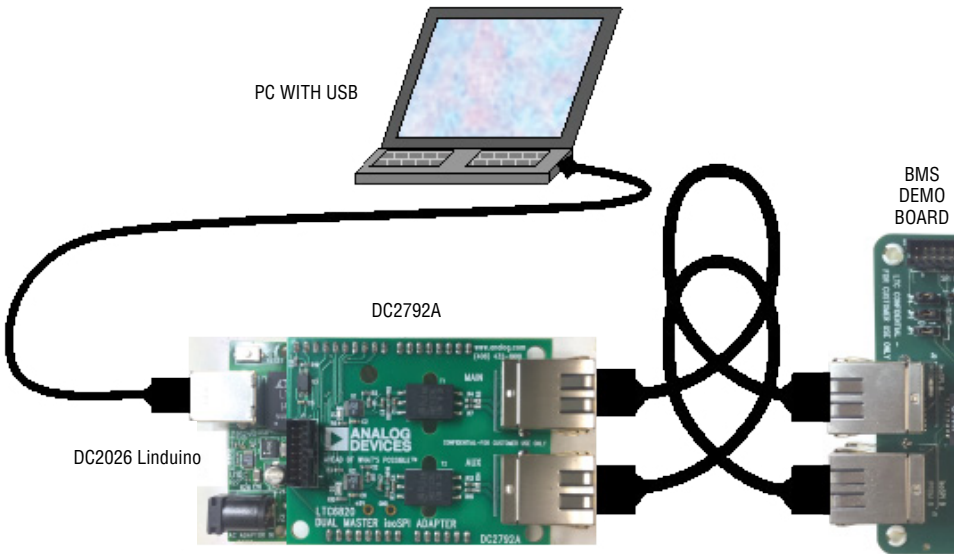


Figure 2. Proper Demo Board Connection (as Linduino Shield)

**ESD Caution**

**ESD (electrostatic discharge) sensitive device.** Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

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