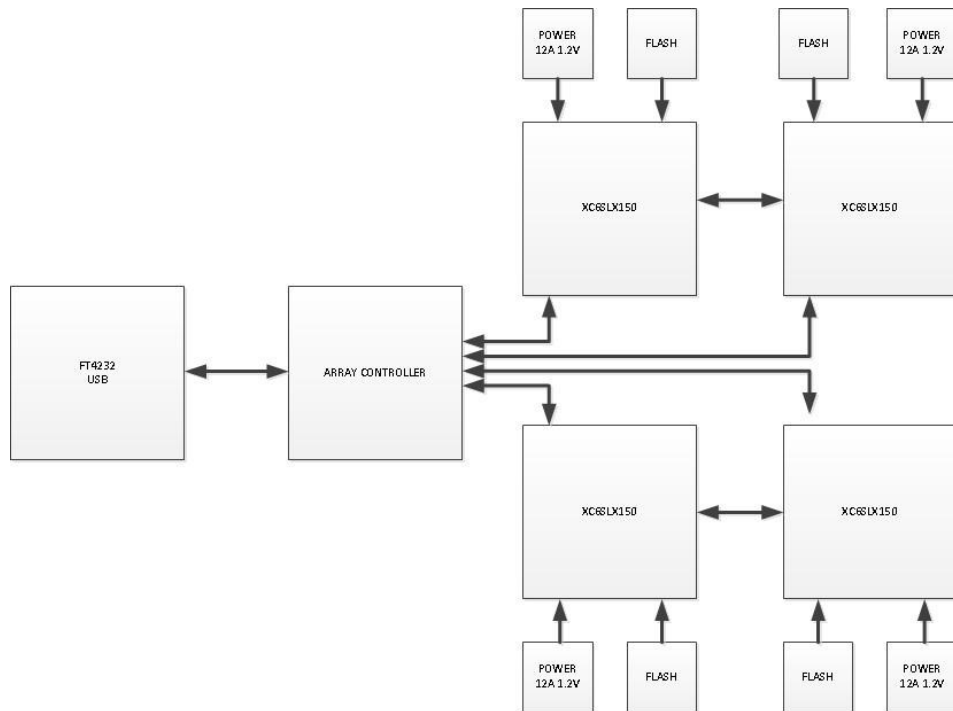


# Cairnsmore1



## Features

### FPGAs

Quad version – 4 x Spartan(TM)-6 XC6SLX150 FPGAs wired like 2 sets of Icarus board (to be confirmed by testing). Icarus bitstream compatible (to be confirmed by testing).

Dual version – 2 x Spartan(TM)-6 XC6SLX150 FPGAs.

Single version – 1 x Spartan(TM)-6 XC6SLX150 FPGA.

### **Array Power**

12A, 1.2V power supply for each array FPGA. Input is 12V nominal from jack, disk drive connector (Molex), PCIe graphics power connector (6 way) and Pheonix connector.

### **Array Controller**

Manages array can shut down power to each FPGA on individual basis.

Controls clock generator and clocks to each FPGA.

Can read temperature sensors (attached to and next to each array FPGA).

Can drive JTAG chain (needs development work).

Controller powers up on USB supply only for debug.

Can be used to pass data between FPGAs.

Supports up and down interfaces for data flow within board stacking.

Fan monitoring.

### **USB**

FT4232 USB controller can be used in multiple ways including 4 COM ports. Can also support JTAG engine. Product is supplied with 1M USB cable.

### **DIP Switches**

For mode setting etc..

### **Fan Connectors**

4 x 3 pin fan connectors supporting 12V fans. Fan monitoring hardware.

### **Fan + Heatsink**

Fitted with Arctic F12 fan and high performance heatsink on each array FPGA.

### **Mechanical Drawing**

Hole positions here.

## Optional Extras

Stacking Pillars 75mm – order code CM1-STACK-75MM

Stacking Pillars 38.4mm – order code CM1-STACK-38MM4

Power Jumper – order code CM1-POWERJUMPER

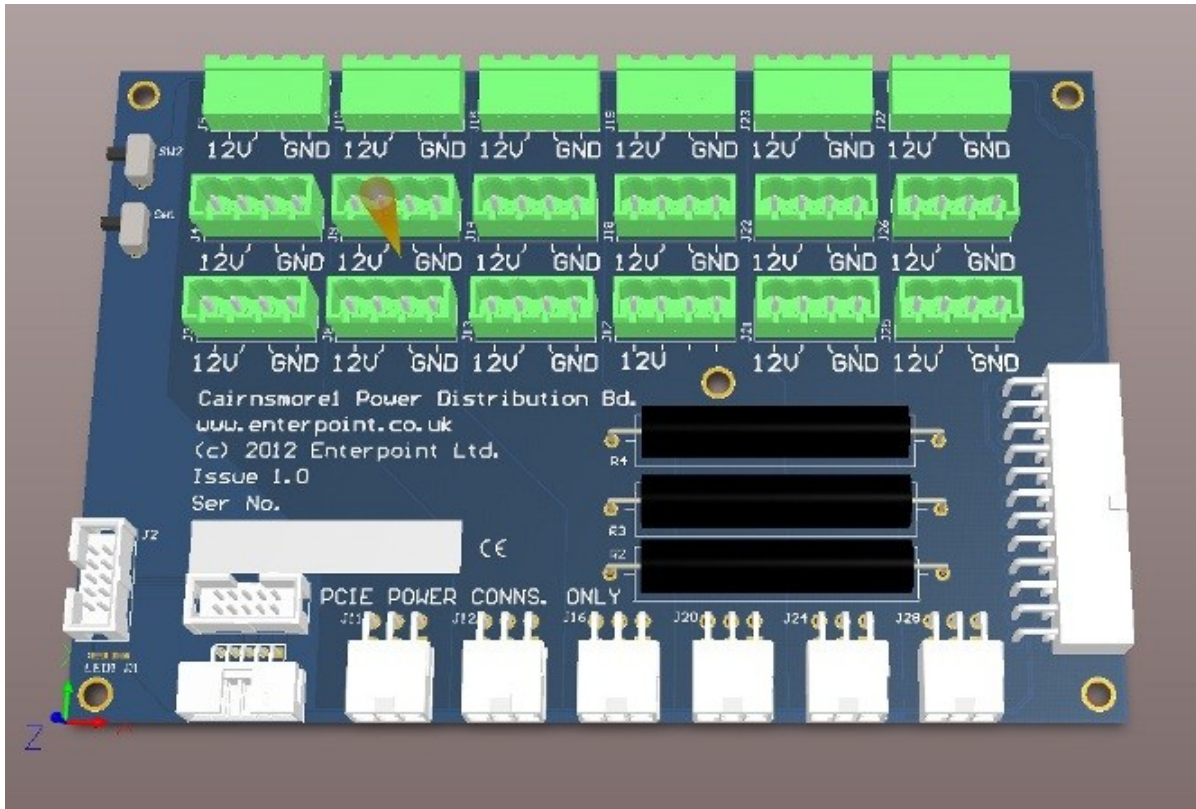


2 stacked boards(75mm stacker) powered from ATX PCIE power connector using Power Jumper

UP/DOWN 10CM Data Cable – order code CM1- UPDOWN-10CM

UP/DOWN 40CM Data Cable – order code CM1- UPDOWN-40CM

Power Distribution Board – order code CM1- POWERDIST1



Power Distribution Board allows the use of ATX power supplies to power large stacks of Cairnsmore1. It takes the power from the ATX PCIE cables to terminals for multiple custom wiring strings to on individual Cairnsmore1's. This unit also has a switch to turn on/off the ATX supply. The number of boards supported by this product is dependent on the host power supply but can be up to about 20 Cairnsmore1 boards.