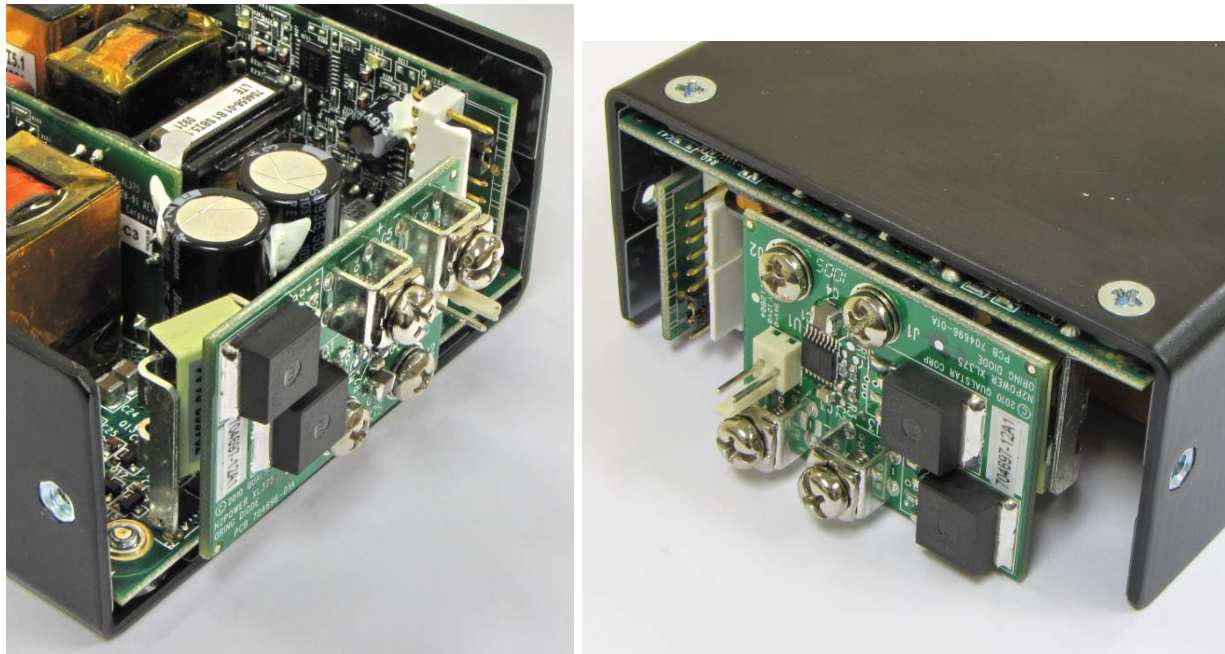


## XL375 OR-ing Board

The XL375 OR-ing board is a new accessory available to XL375 users who wish to run the main outputs of two to four XL375s in parallel. This board provides the OR-ing diode function for use in redundant N+1 configurations. This allows for hot-swapping the XL375 in a live system.



**Figure 1 XL375 OR-ing Board Top & Bottom Views**

The OR-ing board mounts to the XL375's J14 and J15 screw terminals and provides a new set of the same terminals at the top of the board for connection to the load. It also fits within the 1.5-inch ceiling restriction of the XL375 but increases the length by 0.5-inches. There are four different versions available for the various XL375 output voltages.

Output Voltage	OR-ing Board Part Number	Maximum Forward Current	Maximum Bus Reverse Voltage	Typical Dissipation @ 360W Output	Input-Output Capacitance
12	400040-02-8	160A	80V	600mW	≤ 5500pF
24	400041-02-6	80A	80V	300mW	≤ 2900pF
28-48	400052-02-3	50A	60V	250mW – 150mW	≤ 1000pF
54-56	400044-02-0	50A	100V	133mW – 129mW	≤ 1000pF

**Table 1 XL375 OR-ing Board Unique Specifications & Part Numbers**

The XL375 OR-ing board utilizes the Intersil® ISL6144VZA Active OR-ing controller plus one or two D<sup>2</sup>PAK N-Channel MOSFETs to achieve the functionality of a nearly perfect diode (Intersil is a registered trademark of Intersil Corporation). The following specifications are common to all models:

Parameter	Limits
Forward Voltage Regulation	10-30mV
Fault Isolation Response Time	400nS maximum
Turn-on Time	1mS typical
Output to Ground Capacitance	0.1uF through 15 ohms
Input bias current	3.5-5.0mA typical

**Table 2 XL375 OR-ing Board Common Specifications**

The fault signal is an open drain output that goes low when the OR-ing diode is opened (see the Intersil datasheet for more details). It can drive up to 4mA at less than 0.5V. A two-pin header is provided for the Fault Signal output. The fault signal is found on pin-1 (closer to the board center) with ground on pin-2 (closer to the board edge). The following or an equivalent mating connector may be used:

J5	Molex P/N
Connector Circuits (pins)	2
Mating Housing with ramps & ribs	22-01-3027
Crimp terminal (selective gold)	08-65-0816
Rated Contact Current	2.5 A
Rated Wire Size	AWG 22 thru 30

**Table 3 Fault Signal Mating Connector**

The XL375 OR-ing Board is designed for use on Revision D1 or later XL375 Power Supplies. Installation of the OR-ing Board will reduce the airflow through the XL375 by 10%, thus an 11-CFM fan or larger should be used for full-load operation at 50C.