

Gating an Ag9050 Output with an External Power Supply



With only the Ethernet Data & Power Input connected, the ADJ input of the Ag9050 is connected to GND via a 220R resistor. This will increase the output voltage at +VDC to nominal +10% (~ +5.5V).

D3 is a 1N5820 Schottky diode with a forward voltage drop of ~ 0.5V, therefore the voltage supplied to the device will be ~ +5.0V.

If an external +6Vdc supply is also connected, D1 will take the ADJ input to ~5.5V reducing the output voltage at +VDC to nominal -10% (~ +4.5V). At the same time D2 will start to conduct maintaining the supply to the device at ~ +5.0V.

If the external +6Vdc supply is removed the ADJ input will go low again and the +VDC will return to ~ +5.5V and the Ag9050 will resume supplying power to the device.

C1 is used to remove the effect of an output load step change on the Ag9050. R2 is used to ensure that the Ag9050 supplies its minimum load current when the external +6Vdc supply is connected.

