When the EMC2 is an add-in card there is always a supply of +5 and +3v3 from the 1-bank or 3-bank connectors. When using the 1-bank connector, an external +12v source is required.

When the EMC2 is a host board, then external power must be supplied for +12v, +5v and +3v3.

The +3v3 (or v33in) is sent to the Trenz module and switched to provide v33out to power EMC2 board devices. The Trenz module also requires +5v for its on-board DCDCs.

3Amps for PCIe switch

V33out goes high when Trenz module has switched the 3.3v pass-thru on. Then Q2 turns on and the DCDCON/OFF goes low (negative logic variant). The PCIe switch will then be powered up.

\[ R_{22} = R_{23} \times \left( \frac{2.5V}{0.5V} - 1 \right) \]

\[ R_{25} = R_{26} \times \left( \frac{1.8V}{0.5V} - 1 \right) \]
Note that all SATA pins are hardwired to the FMC TRZ pin. The Trenz SATA TX goes to a switch which directs the signal to either a SATA connector on the SEIC, or to the PCIe connector. Note that there cannot be a PCIe host at the same time as this would want to drive the SATA.

The PCIe pin goes to the FMC C2M pin as the EMC2 is an FMC carrier. The Trenz TX pin goes to the FMC TRZ pin. Note that there cannot be a PCIe host at the same time as this would want to drive the SATA.