The CDF data acquisition and trigger system is being upgraded to significantly increase the bandwidth for the upcoming high luminosity running of the Tevatron Collider (RunIIb). The challenge of this upgrade is to have an uniform design to be able to interface with many different data paths upstream, merge and process the data at high speed for fast L2 trigger decision making, and minimize the impact on the running CDF experiment during the commissioning phase. In order to meet this challenge, the design philosophy of the upgrade is to use one type of general purpose motherboard, named ”PULSAR” (PULSer And Recorder).