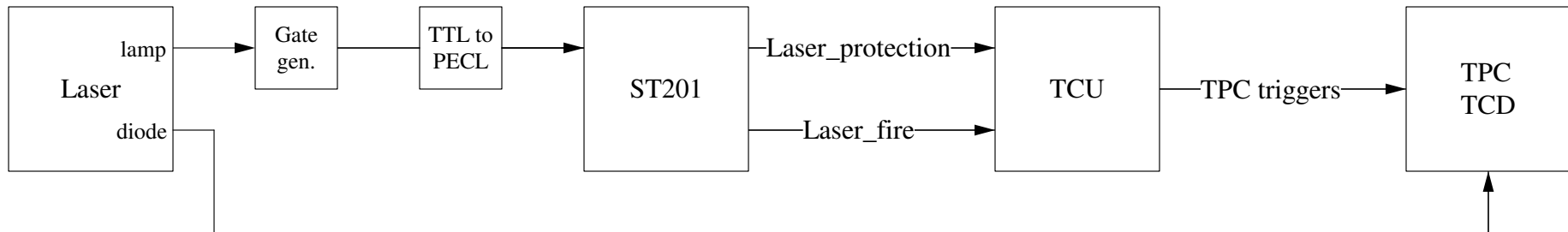# STAR TPC Laser-to-Trigger Connections

Laser Configuration:
- lamp signal comes about 200 us before the diode signal
- lamp signal is stretched to be at least 1 RS tick long, and converted to PECL so it can be sent to the ST201 DSM.
- diode signal is TTL and is sent directly to the TPC TCD

TCU Configuration
- Physics Trigger = DSM conditions && !Laser_protection && TPC Live
   => TRG_CMD = 4
- Laser Trigger = Laser_fire && Laser_protection && TPC Live
   => TRG_CMD = 9

ST201 Configuration
- Laser_protection is made by stretching the lamp signal to cover the full 200 us before the diode signal, and at least 40 us after the diode signal
- Laser_fire is made by stretching the lamp signal to cover just the 200 us before the diode signal

TCD Configuration:
- When TRG_CMD = 9 is received, enter the BUSY state and wait for the diode signal to come in on the front panel. Then initiate readout. TCD will timeout eventually if diode signal never arrives.

30th November 2009