

Register programming:

Step - > Program the registers – Test bench

TB – raises the write request (CMDIN =4, DATAIN = Address)

TB – Pass the Data phase (CMDIN = 1, DATAIN = DATA)

Module (controller) – request for Bus access (Reqout – Low,medium,High)

TB – Responds with ackin

Module (controller) – (CMDOUT – Write response - 5)

After enabling the controller:

Module (controller) – request for Bus access (Reqout – Low,medium,High) – Get ack in

Module – Read request (CMDOUT – Read request – 2, Calculated address)

Calculated address = Base address + line increment (vertical count)

TB – Read response (CMDIN =3, CMDIN =1 DATA_phase = data)

32 bits – 8dummy 8 R 8 G 8 B – 1 pixel

Controller 8/4 pixels (each 4 byte) – Push all the 8 pixels to a FIFO.

Then start fetching values from FIFO to RGB.