Lab 03	
3	*Eye Diagram*
	Advanced Wireless Lab
TLEN 5830 Advanced Wireless Systems	

Interfacing USRP with the computer

After connecting the USRP to the Ethernet port, configure the Ethernet connection to be in the same subnet as that of the USRP. IP address of USRP: 192.168.10.2

Interfacing with LabVIEW Communication Suite 2.0

Setup the connection as shown below for the Transmitter and Receiver:

Transmitter:
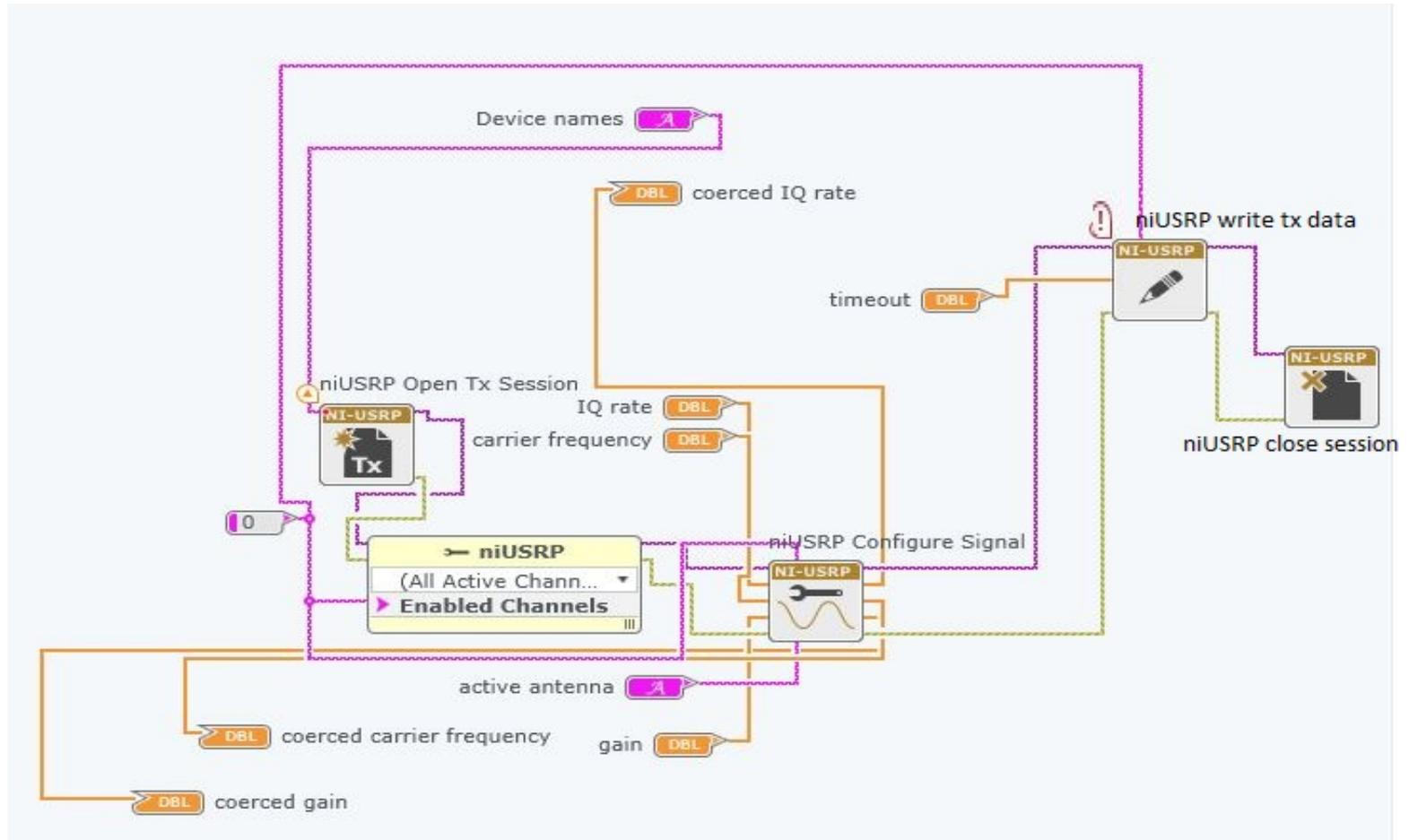
NOTE: the transmitter vi (pre-lab) output is connected to the niUSRP write data block.

- USRP transmission session needs to initiated. It is then connected to the niUSRP property node.
- Set the active channel on the property node ('0' in this case).
- Connect the channel to the niUSRP Configure signal block and create a control block for active antenna

Receiver:

NOTE: niUSRP Fetch Rx data receives data from the USRP hardware. It is connected to the AWGN block and make sure it is kept within the loop.

- USRP receive session needs to initiated. It is then connected to the niUSRP property node.

- Set the active channel on the property node ('0').
- niUSRP initiate is used to configure the niUSRP fetch Rx block and is not placed within the loop.
- Connect the channel to the niUSRP Configure signal block and create a control block for active antenna.

The loopback cable can be used to connect the Tx port of the USRP hardware to its Rx port. However, it is not necessary (you will see learn just "why" the USRP is able to receive the over the air signal with no loopback cable, KKG ;-).

The transmitter and receiver programs need to be run in parallel to observe the pattern.