

Broadcast Data Between PCs Using HYPACK®'s Input Echo Tool

by Joshua Sampey

Recently I was testing an upcoming product using an SBG Ellipse-D connected to a PC via the USB interface and a Velodyne VLP 16 LiDAR. The testing required mirroring the survey instruments on both PCs for simultaneous acquisition. The LiDAR was easy to set up with its simple network connection, and all that was required was a small network switch and three LAN cables, easy peezy! The SBG INS data on the other hand was a bit more complicated. I could not split the USB cable into both computers. This is where HYPACK®'s Input Echo tool becomes immensely useful. Input Echo connects to the serial port implemented by the SBG INS and re-broadcasts that data over the network. Most of the time the output is set to the local host (127.0.0.1 port 5656), which allows the data to be looped back and read by HYPACK® using a network connection. However, this setup does not allow data to be sent to the other PC. To send data to another PC you must use the following steps:

- 1) Connect both PCs to the same network. For example, PC-A (connected to the SBG) has a static IP address of 192.168.1.220, PC-B is set to 192.168.1.221, and the subnet mask is 255.255.255.0 for both.
- 2) Make sure firewalls are off.
- 3) In the Output tab of Input Echo, set the Protocol to UDP, Role to Client, Port to 5656, and to force the program to output data via the ethernet card, the IP address must be set to 192.168.1.255. This will send the data over the network, and any computer on the 192.168.1.xxx network will be able to receive data via Input Echo. If your IP address is different than what is shown here, simply change it accordingly while ensuring that the last three digits are 255.

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- HYPACK Data Sharing
- Simultaneous Data Acquisition
- Data Input Conversion
- Serial Input Network Distribution

