IENA Troubleshooting Procedures

Below are troubleshooting steps to take if you're having problems using the Acra IENA data source with IADS. These steps assume that the user has some familiarity with basic networking tools and terminology such as IP address, ping and Wireshark. For more information on these subjects please consult an online reference such as Wikipedia.

1. Make sure you can communicate with the ETH card on the KAM.
   1. Find the IP address of the ETH card if you don't already know it.
      1. Under kSetup, double-click on the ETH card in question in the hardware tree and select the 'Setup' tab in the Module Setup screen. You will see the IP address in the "Module IP Address" text field.
      2. Under kWorkbench, you will find it as the "IP Address" when the configuration link is set to "Ethernet". (The "Host IP" is the address of the PC that will be used to talk to the ETH card.)
      3. In the XidML, you can find the ETH card's IP address by looking under /xidml/Instrumentation/InstrumentationSet/InstrumentSet/SubLocatio n/X-Module-Ethernet-Out-1.1/Settings/Module-Ethernet-1.1/IPAddress. There will several 'SubLocation' branches so you will have to find the right one, depending on where the ETH card is located in the hardware setup.
   2. Ping the KAM by IP address.

2. Make sure you're getting data packets from the ETH card.
   1. Use Wireshark (previously known as Ethereal) to see if there are UDP packets coming in from the PC's network interface.

3. Make sure the data packets are going to the correct PC network interface.
   1. The IadsTpp log will list which network interface (by IP address) it's expecting to see IENA packets on. If this is not the network interface the ETH card is connected to, manipulate the PC's network interface order so that the correct one is listed first and re-start IADS. To do this go to Start Menu | Control Panel | Network Connections | Advanced | Advanced Settings and push the wired network interface (generally called something like 'Local Area Connection') to the top of the list.
   2. We suggest you avoid wireless interfaces for any type of UDP work.

4. Make sure you're using the correct XidML file when you start IADS.
   1. If you're getting warning statements in the IadsTpp log that it's encountered an unknown IENA packet type, you could be using the wrong XidML file.

5. Make sure your IENA packets are well-formed.
    1. Although kSetup will allow you to leave entirely blank columns within an IENA packet definition, this is an error for the parser later. This condition arises when a parameter has been renamed or deleted from another card.
    2. All packets must have a unique key id. kSetup will not enforce this behavior but you will see an error later.
    3. Currently IADS only supports IENA packets from 1 port so make sure all packets use the same port number and destination address – unicast or multicast -- or you will see an error message.

6. Make sure if you're using a video stream in an IENA packet that you have an equivalent stream defined in the PCM as well.
    1. Both "embedded" streams have to represent the exact same aggregate sample rate for the video parameters.
    2. The order of the parameter has to be the same for the IENA packet as the PCM stream. This is an easy mistake to overlook because the "auto-populate" feature of the two data sources sort the video parameters differently and hence may auto-insert them into the streams in a different order.