Methods for Discovery of X4x00/Duet Devices.

(1) In the case of a decoder (D4000, D4100, or DuetD) the simplest method is to power on the device and connect an HDMI cable to a display. The decoder should provide a default (or customized) splash screen to the display which includes the Device's IP address listed in the lower right corner of the screen along with the IP address of an associated encoder.

D4x00 IP: 192.168.1.101
E4x00 IP: 0.0.0.0

(2) The default format of the X4x00 device MAC Address scheme is the following

encoder: 00:0E:14:40:xx:yy
decoder: 00:0E:14:50:xx:yy

Therefore it is possible to use a utility such as nmap (or Zenmap windows GUI version) to perform a Network discovery scan and display all found devices and their MAC addresses. Once the list is presented you can look through the MAC addresses to determine which devices are X4x00 units as well as the associated IP address.

(3) If there is a DHCP server running on the Network and the devices are in default or known DHCP mode then you should be able to check the client bindings in the server to locate various devices.

(4) Use Visionary Solutions Vision Lite Routing Server (java application) and a web browser to discover all Encoders and Decoders on a specific subnet. The Vision Lite Software will send a Multicast Discovery packet using the specified Interface and then display a list of discovered devices based upon the replies.

(5) Both Encoders and Decoders will join a specific Multicast group address (226.0.0.19) for API control and status communication in addition to standard MDNS groups. From any Linux machine on the same Network subnet you can simply ping 226.0.0.19 and check the list of replies. Or from any Windows, Mac, or Linux PC you can use the avahi-browse utility.

(6) Using Wireshark Network Packet Sniffing application (Windows, Mac, Linux) connect directly to an encoder or decoder device with a PC running wireshark (PoE injector or external Power Supply required). Start the Wireshark capture on the connected Ethernet interface and then power on the device. Any address seen in the Wireshark display that is not your own should be the device of the unit.