

Facility/Pharmaceutical Net to Ethernet Instrument Traffic Notes

General Notes

The PMS Ethernet protocol utilizes defaults that are assumed on the receiving side of the connection. This means that default values need not be sent which makes the packets vary in size depending on the contents. An example of this is would be a data message where no actual count data is transmitted if the counts are zero. Multiple PMS Ethernet messages can be sent in one packet. Instruments like the ENODE®, Lasair® II, and IsoAir® PLUS can queue data which will be transmitted when Facility or Pharmaceutical Net reconnects to the instrument.

Configuration Notes

Initial instrument configuration is normally performed once. The mechanism used is UDP/IP. This can be executed via either Multicast or Unicast. The instrument modification processing will request a configuration UDP/IP Unicast but set the new information via the TCP/IP connection when completed.

Initialization

Instrument initialization can occur when the application is first started or anytime the instrument is reconfigured. Reconfiguration can occur during runtime. Some instruments are reset prior to reconfiguration.

Packet from Facility and Pharmaceutical Net

Messages: Date/Time, Set Configuration, Get Configuration, Get Status

Length: Approx. 163 bytes (To ENODE this could be 2K)

Packet from Airnet®

Messages: Configuration

Length: Approx. 300 bytes (From ENODE this could be 2K)

Packet from Airnet/ENODE

Messages: Status

Length: Approx. 115 bytes

Packet from Facility and Pharmaceutical Net

Messages: Start Command, Get Status

Length: Approx. 88 bytes

Packet from Airnet/ENODE

Messages: Status

Length: Approx. 115 bytes

Packet from Facility and Pharmaceutical Net

Messages: Set LED on Airnet/Set Digital Outputs on ENODE

Length: Approx. 87 bytes

Data Processing

The Ethernet instrument transmits data when the internally processed sample interval is complete. No polling for data is required.

Note: Particle counter sample points may utilize “Zero count sample interval” which will reduce traffic. ENODE digital input sample points are sent on change (exact conditions are setup in the instrument and in Facility and Pharmaceutical Net). ENODE Analog Inputs are all treated as separate sample points and each have their own sample interval.

Packet from Ainet/ENODE

Messages: Data

Length: Approx. 147 bytes

Status & Date/Time Processing

Facility and Pharmaceutical Net requests status every two minutes from each Ethernet instrument. Facility and Pharmaceutical Net will add a date/time every thirty minutes to the status request packet.

Packet from Facility and Pharmaceutical Net

Messages: Get Status

Length: Approx. 87 bytes

Or

Packet from Facility and Pharmaceutical Net

Messages: Date/Time, Get Status

Length: Approx. 130 bytes

Packet from Ainet/ENODE

Messages: Status

Length: Approx. 115 bytes