

### Introduction

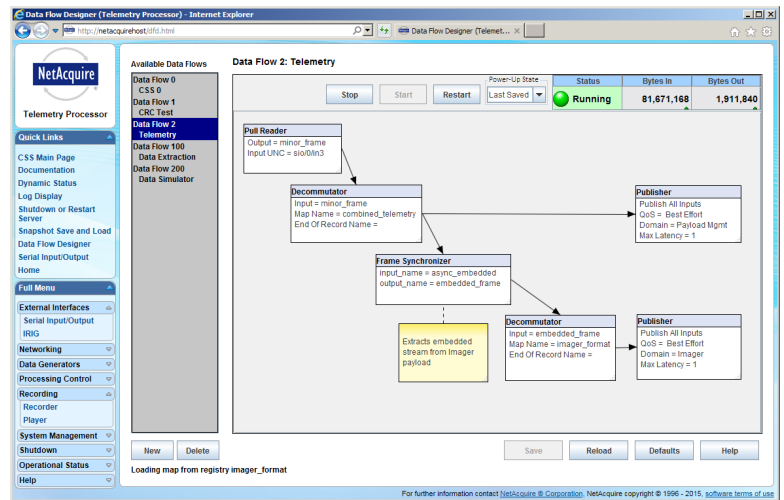
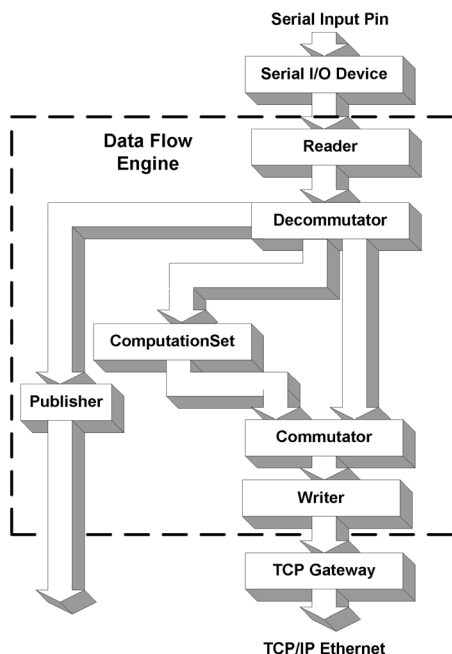
Real-time data processing and conversion has never been easier! Now there is a way to streamline the creation of serial or network data conversion that will save you time and effort. The NetAcquire Data Flow option gives you the tools to process one or more record-based input streams into one or more output streams with user-defined formats in real-time. Then, either publish the resulting data onto your network, or send it to an output port. And, with the graphic Data Flow Designer everything is done without programming!

### The Process

The Data Flow option enhances the existing capabilities of the NetAcquire Server and extends it to function as a gateway between input streams and either output streams or individual published values. In addition to format conversion, the NetAcquire Server can mix data from multiple sources and perform calculations on the data before it is output.

Data Flow conversions using record reformatting is possible by extracting or decommutating individual fields from input records, optionally performing arbitrarily complex computations on these fields, and then re-assembling raw and or derived fields into output frames. Record reformatting is expressed in clear and powerful data flow representation, and the flexibility of this extensible framework allows easy configuration of both simple and complex data reformatting.

In addition to its ability to output record-based streams of data, the Data Flow Option can also be used to conveniently publish individual, named measurands to a network within the NetAcquire Publish/Subscribe framework.



The flexibility and performance of the Data Flow Option leverages your data by giving you the information formats that you really need. You decide the flow of the data between sources and destinations. You decide when to create computed or derived data; even in the midst of data routing. You control the word order, and any integer or floating point data type. All configuration is performed through a graphical user interface called the Data Flow Designer running locally or remotely using any computer with a Web browser.

### Features

- Easy configuration - GUI based setup from any browser.
- Completely flexible user-specified flow of data between sources and destinations.
- Fully integrated with NetAcquire decommutation functions.
- Conversion of fixed-length records of any binary input format into any other binary output format; data fields can be in any order and of any integer or floating point type.
- Input/output of serial, UDP or TCP streams.
- Resulting data flow runs in the Data Flow Engine in real-time at rates of many thousands of updates per second.
- Publishers don't need to explicitly specify their recipients (subscribers).
- Individual field publishing to a network.
- Open architecture allows installation of user-supplied custom computations.
- Supports arbitrary embedded synchronous and asynchronous frames.
- Multiple Data Flow configurations can be stored simultaneously and selectively activated or deactivated.
- Event-based communication never adds delays to client applications.