

# Bolt-on POCT connectivity for medical environments

*Comtrade has developed a standard package for enabling medical devices to have full POCT connectivity to healthcare IT infrastructures*

Comtrade has built a standard set of communication software that can be quickly adapted into a semi-custom integration within a medical device or healthcare IT software solutions. Development and all documentation follow the IEC 62304 standard, therefore the software is fully compliant with the EU and USA regulatory requirements.

## *The POCT1-A2 standard*

The POCT1 standard is an important milestone in an effort to modernize healthcare IT in the coming years. Philips Medical, Bayer Diagnostics and Roche Diagnostics are among the 52 member manufacturers working with government regulators to unify communications within hospital environments. Protocols such as POCT1-A2 are important differentiators that enable medical device manufacturers to stay current in the marketplace, yet mass adoption may not justify learning and developmental costs.

## *The POCT1-A2 Building Block*

Comtrade provides full source code licensing – you maintain all the flexibility as if you had developed the software internally, yet you have all the benefits of outside experts. Comtrade calls this offering Building Block + customization/integration services. This approach enables faster time to market and lower cost of development and verification.

Comtrade also provides end-to-end consultation, design, execution and testing support of products with the POCT1-A2 building block when they interact with external, 3rd party medical devices and data management systems.

## *Overview of POCT1-A2*

Comtrade's POCT1-A2 protocol implementation offers the manufacturers of medical devices the optimal way to add support for POCT1-A2 communication protocol to their devices and data management systems in a timely and efficient manner.

As shown in Figure 1, the POCT1-A2 Building Block can be integrated into a wide variety of point-of-care and other medical devices. It is also available for integration into the laboratory or hospital information system where it, together with a vendor's or 3rd party data management application, fulfills the role of the observation reviewer/data manager.

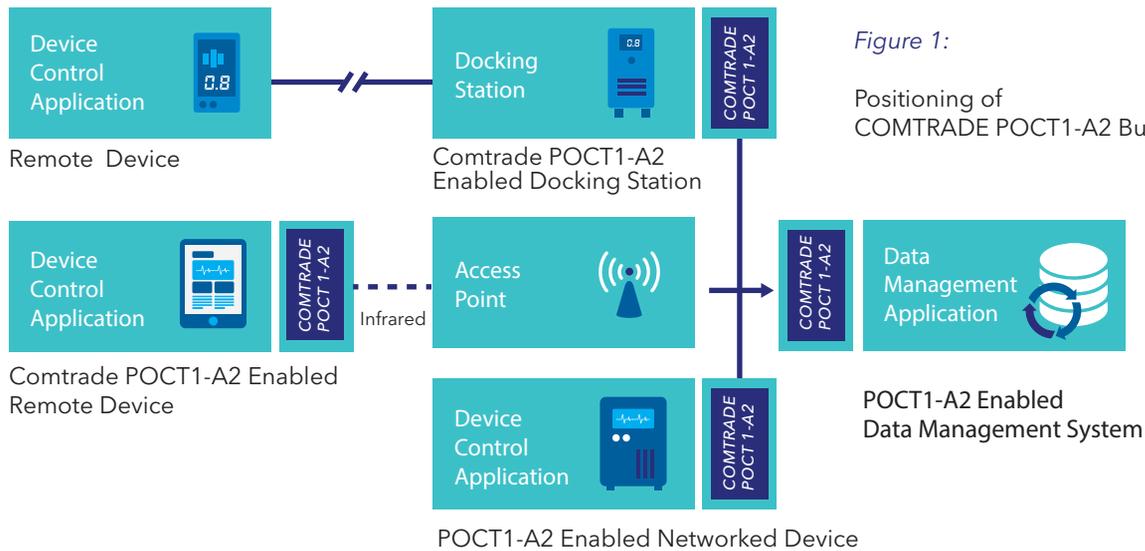


Figure 1:  
Positioning of  
COMTRADE POCT1-A2 Building Block

## Product details

Comtrade's POCT1-A2 protocol implementation is done in C++, with special care taken in regards to the use of computing resources. As such, it is suitable for numerous applications in a wide range of medical devices, from resource constrained point-of-care devices to complex laboratory analytical systems. The code is designed to be portable and extendible in order to accommodate different software platforms and assists in seamless integration of vendor and device specific extensions.

### Structure of Comtrade POCT1-A2 Building Block

Internally, the POCT1-A2 Building Block consists of the following main modules (see Figure 2):

- **POCT Module** provides integration of the POCT1-A2 Building Block into a Device Control application or an Observation Reviewer application. This module can be customized based on the vendor specifications to optimally integrate into the application.
- **POCT Engine** controls the Conversation state machine (data exchange) according to the POCT1-A2 protocol. It uses the POCT Message Engine module for exchanging data. This module can be customized to include vendor specific Conversation Topics.
- **POCT Message Engine** enables data exchange by using the Data Connection module. Incoming data, received POCT Messages in XML format, is processed and converted into native C++ objects. Outgoing data, POCT Messages (native C++ objects), are converted to XML format and sent. This module can be customized to support vendor specific POCT Messages.
- **Data Connection** provides a uniform interface to different communication technologies, thus providing the flexibility to use the communications best suited to a particular product.

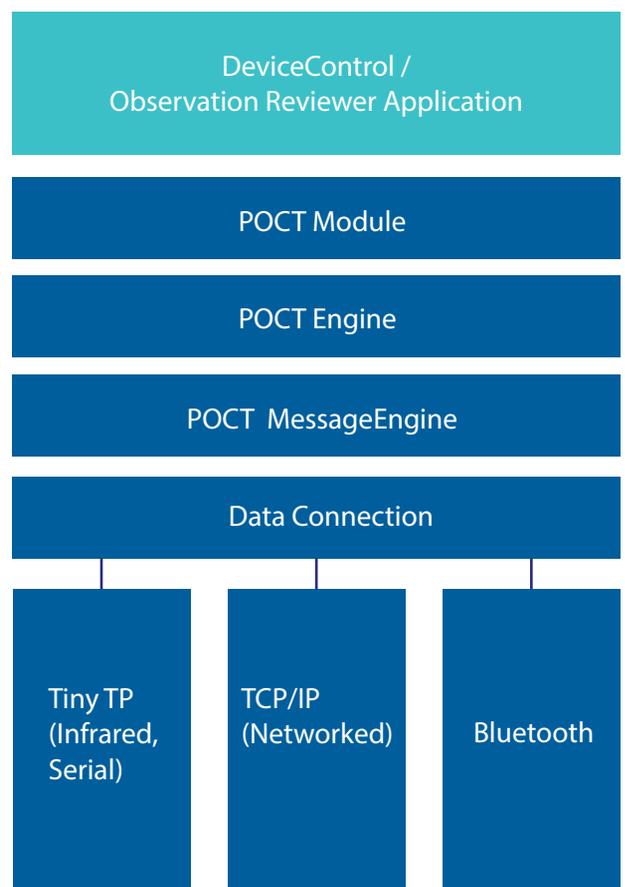


Figure 2:  
COMTRADE POCT1-A2 Protocol Implementation