

Sybase® iAnywhere® Health Device Profile (HDP)

PRODUCT DATASHEET

Sybase is a global leader in providing wireless connectivity, device management and data synchronization software. The iAnywhere Health Device Profile (HDP) helps OEMs/ODMs integrate wireless connectivity and synchronization into mobile devices quickly and easily. Supported within the iAnywhere *Bluetooth™* product line, our software development kits (SDKs) for *Bluetooth* shorten time-to-market and increase return on investment by reducing development cost and testing cycles. Developers are able to focus on applications and system integration as a result of the savings provided by our certified and reliable technology.

HEALTHCARE DEVICE PROFILE

The Health Device Profile (HDP) supports data communication between medical devices and a data collector. It facilitates the concurrent transmission of multiple data streams, safe wireless data transfer, and the synchronization of medical sensors. Glucose meters, pulse oximeters, and thermometers are only a few of the devices that can be equipped with HDP capability. Reliable data transportation is guaranteed through the use of the enhanced retransmission feature incorporated in the iAnywhere Blue SDK v3.x *Bluetooth* protocol stack.

By building solutions using the IEEE 11073 medical protocols, as made available through membership to the Continua Health Alliance (CHA), developers can quickly develop and deploy products to the marketplace. Only IEEE 11073 protocol object code is shipped with this SDK, allowing developers to immediately build the sample applications included with this kit.

Health Device Profile SDK version 1.x includes object code supporting IEEE 11073 protocols (source code available to members of CHA), sample applications, and documentation for implementation of the HDP sink and source roles, as specified by the *Bluetooth* Health Device Profile specification (version 1.0).

PRODUCT OVERVIEW

The Health Device Profile specifies a method that one or more source devices can send health-related information to an enabled sink device. The required elements of the Health Device Profile are described on the reverse side.

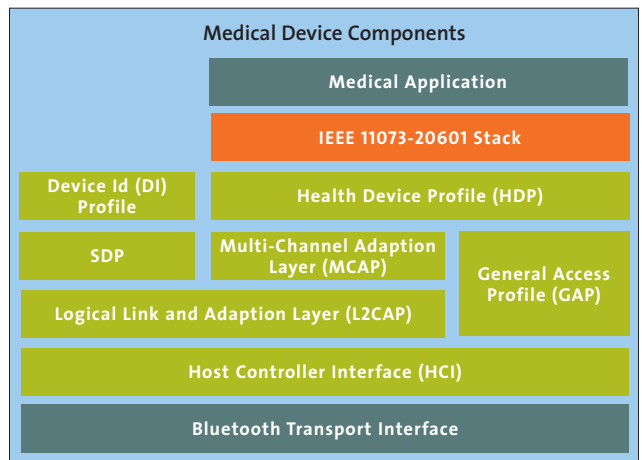


Figure 1: Health Device Profile Architecture

Architecture

The Health Device Profile relies on the MCAP protocol for data exchange. The basic structure of the profile relies on it running over the iAnywhere Blue SDK. All interactions in HDP are directed through the MCAP layer, which allows multiplexing on top of the L2CAP layer. HDP is designed to allow multiple instances of both source and sink to exist concurrently. Compile time options configure HDP behavior. Many other compile time options exist as well.

Execution Flow

The HDP profile is designed to be both event and user driven, and will process any request or notification until completion. Events are generated by the HDP protocol for a variety of reasons, such as when connections are established, when HDP commands are received, or when API requests are complete. Events typically originate within the protocol stack itself. Because events are callback related, it is recommended that they be processed quickly to prevent stack lock up. Note that certain events can also be processed directly in the case of messaging based objects. This optimizes stack processing.

HEALTH DEVICE FEATURES

The package based on HDP v1.0 includes the following features:

- An implementation of all mandatory and optional features of both the source and sink roles for HDP.
 - **SDP support for HDP profile and Device ID profile**
 - **MCL Connection/Disconnection**
 - **MDL Connection/Disconnection (one or more)**
 - **MDL Reconnection**
 - **MDL Deletion**
 - **MDL Abort**
 - **Clock Synchronization support (Get Capabilities, Set Time, Time Indication)**
- A sample Windows application (project file is provided that uses Microsoft Visual Studio) demonstrating the HDP source/sink roles and MCAP Session behavior.
- Two sample Windows applications (IEEE Agent and IEEE Manager) that demonstrate our integration with the Continua Enabling Source Library (CESL).
- Complete documentation

For more information about our *Bluetooth* SDKs please visit our website at www.sybase.com/bluetoothsdfs.

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