

h/p/cosmos coscom v3

Overview

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As a contribution to h/p/cosmos' efforts for development and updating the coscom protocol, all users of the coscom protocol and coscom features are obliged to list the name and company logo h/p/cosmos and the Copyright of h/p/cosmos in their software menu and their user/operation manual on a well visible position.

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[2.] Introduction





This document gives a brief overview of the available h/p/cosmos coscom v3 documents. At the end you will find a small decision matrix which will help you implementing coscom v3 in your own application.

[3.] Document overview

- *XDOP Device Architecture* (XDOP DA 103 20090709.pdf): h/p/cosmos coscom v3 is based on XDOP (Indexed Device Object Protocol). This Document contains a complete protocol and device model description of XDOP.
- *h/p/cosmos coscom v3 protocol – Implementation notes* (h-p-cosmos – coscom v3 protocol.pdf): This document contains additional explanations of the h/p/cosmos coscom v3 protocol. It also contains a **list of important safety features** which should be considered when implementing coscom v3.
- *MCU4 respectively MCU5 device description with examples* (MCU5 device description with examples.pdf): Contains a complete listing of all coscom v3 services, actions and variables. You will find a brief overview of all actions with a short argument description.
- *h/p/cosmos discovery device description* (MCU5Ladder device description.pdf): Contains a complete listing of all coscom v3 services, actions and variables of the h/p/cosmos discovery ergometer. Basically the interface is almost the same as the one of the h/p/cosmos running machine devices.
- *h/p/cosmos coscom v3 services notes* (h-p-cosmos - coscom v3 services notes.pdf): In this document the most important services which are needed for a basic device control are explained.
- *h/p/cosmos coscom v3 .NET Objects*: A set of class libraries for Microsoft .NET Framework which implement a high level interface for coscom v3 and it's features. Refer the tutorial documentations for further information or visit www.coscom.org.
- *h/p/cosmos coscom v3 .NET Controls*: A set of Microsoft .NET Framework Winforms controls which can be used to quickly implement a remote functionality for the MCU5 user terminal. Refer the tutorial documentations for further information or visit www.coscom.org.

[4.] Important Notes, Safety Precautions, Warnings

The coscom v3 protocol can be used with h/p/cosmos running machines and OEM running machines which are equipped with MCU4 and MCU5 control board (UserTerminal).

			
h/p/cosmos mercury med	h/p/cosmos mercury lt med	h/p/cosmos para control@ 4.0	MCU 5 control board

Do not use coscom v3 with a MCU4 device which has a firmware version between version MCU4 EPROM Firmware version 4.04.1 and 4.04.4. These versions contain implementation errors for coscom v3 features and must not be used with coscom v3. From MCU4 Firmware v 4.04.5.0025 the coscom v3 protocol can also be used, so please make sure the Firmware was updated this 4.04.5 or higher.

Pay attention to all safety instructions and warnings as well as the chapters “intended use” and “forbidden use” of the operation and service manual of the h/p/cosmos running machines and also the h/p/cosmos para control® 4.0 software!

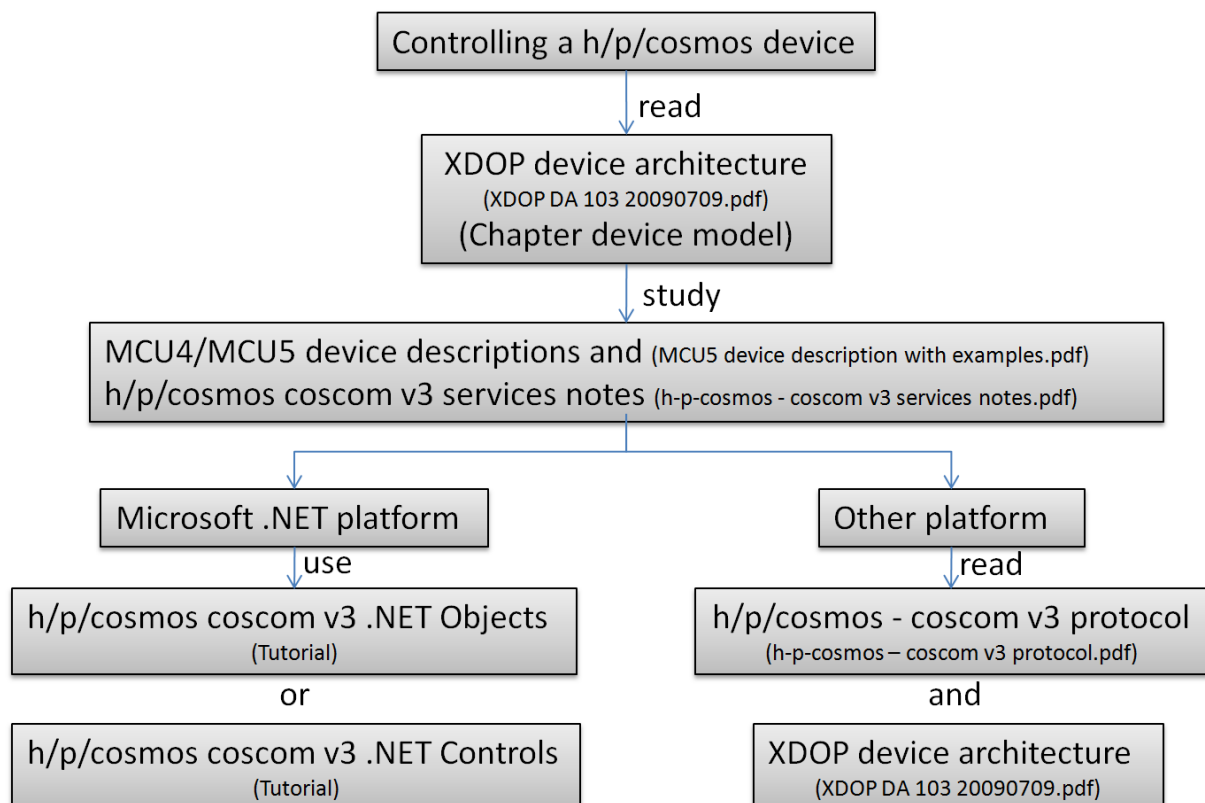
Always activate “failsafe timeout mode”, so the running machines stops automatically in case of termination of the interface communication.

Always communicate the “status” mode of the running machine with any host programs.

In case the running machine was stopped via STOP button on the running machine or via any other reason (for example power failure for the running machine supply), the host program must realize this “stop status” and must terminate automatically any control functions of speed any elevation control of the running machine. If not, a user may be caught by surprise and unexpected command from host program, although the user pressed STOP on the running machine before. This may lead to serious accident.

[5.] Decision matrix

Below is a small decision matrix which can be used when trying to implement coscom v3 in your own applications. For the Microsoft .NET Platform h/p/cosmos offers the ready to use h/p/cosmos coscom v3 .NET Objects and Controls. The h/p/cosmos coscom v3 .NET Objects provide a high level interface for all coscom v3 features. Additional to this interface the h/p/cosmos coscom v3 .NET Controls contain basic Microsoft WinForms controls for building some remote terminal functions in your application. If you're using a different platform like Java, C, C++ etc. you have to implement coscom v3 yourself. In this case we recommend studying the h/p/cosmos – coscom v3 protocol document and the XDOP Device Architecture for an in-depth understanding of the protocol itself.



[6.] **Verification of your protocol implementation**

h/p/cosmos offers you to verify your coscom v3 implementation. The requirement for this service is that you send us your software and the according test plan of your implementation. We will analyze your implementation by checking your test plan and performing further tests of our own. Please contact us for further information.

[7th] **h/p/cosmos coscom v3 .NET Objects/Controls and DIN EN 62304**

In order to include the h/p/cosmos coscom v3 .NET Objects or h/p/cosmos coscom v3 .NET Controls in medical device software you should handle it like an SOUP (System Of Unknown Provenance) component.