Links between documents for ADQ digitizers

This document describes how to find information about ADQ digitizers

- **Models included ADQ7 ADQ8 ADQ12 ADQ14**

- **Software SDK, ADQAPI, Digitizer Studio**

1 CONTENTS

2 PARTS

2.1 Products

- Hardware
- Firmware
- Software

2.2 Document types

- Datasheet
- Manual (User Guide, User's guide)
- Reference guide
- Quick start guide

3 INSTALLING THE DIGITIZER

3.1 Hardware and firmware

The digitizer hardware is shipped with the ordered firmware installed. Follow the included **Quick start guide** when installing the digitizer.

3.2 Software and operating system

The SDK (Software Development Kit) for Windows, all software for Windows, is available in the supplied USB stick. Installer of SDK for Linux is available on request from Teledyne SP Devices Support. Available Linux distributions are listed in **15-1494 Operating System Support** Follow the included **Quick start guide** when installing the software.

4   HARDWARE, FIRMWARE AND SOFTWARE DESCRIPTION

4.1   Hardware

The hardware performance and capabilities is described in the **xx-xxxx ADQyy Datasheet**. Here are available combinations of options listed.

Operating the digitizer hardware is described in the manual **xx-xxxx ADQyy Manual**.

4.2   Firmware

The ADQ digitizers has a pre-installed firmware according to the order. The standard firmware, FWDAQ (firmware data acquisition), is described the hardware documentation datasheet **xx-xxxx ADQyy Datasheet**, and manual **xx-xxxx ADQyy Manual**.

Firmware options are described in separate datasheets **xx-xxxx ADQyy FWzzz Datasheet**, and manual **xx-xxxx ADQyy FWzzz User Guide**.

4.3   ADQAPI, Software Development Kit (SDK)

The software development kit principle of operation is described in **08-0214 ADQAPI User Guide**. This document describes the method of operating the digitizer as well as the recommended programming flow.

The function calls are described in detail in the **14-1351 ADQAPI Reference Guide**.

Supported operating system are listed in **15-1494 Operating System Support**.

There is one software installer supporting all hardware and firmware options.

5 DIGITIZER STUDIO GUI APPLICATION SOFTWARE

5.1 Link between Digitizer Studio and Hardware and Firmware

The Digitizer Studio software is installed with the SDK. This is GUI for controlling the ADQ Digitizer. Digitizer Studio support some models and some firmware which are listed in the datasheet **20-2381 Digitizer Studio datasheet**. See this datasheet for the link between hardware – firmware and Digitizer Studio.

5.2 Operating Digitizer Studio

The manual for Digitizer Studio **20-2382 Digitizer Studio Manual** describes how to operate the GUI Digitizer Studio.

(This document does not describe how to operate the digitizer. Operating the digitizer is described in the respective xx-xxxx ADQyy manual.)

5.3 Link between Digitizer Studio and ADQ Manual

Operating the ADQ digitizer is described in the **xx-xxxx ADQyy Manual**. The relation to digitizer studio is as follows:

In Digitizer Studio is a setup view "*Diagram*". This diagram has a corresponding description in the **xx-xxxx ADQyy Manual**, Figure 1. In the manual is a description of each block which can be seen in Digitizer studio. There is also a reference to the ADQAPI command for controlling the function.
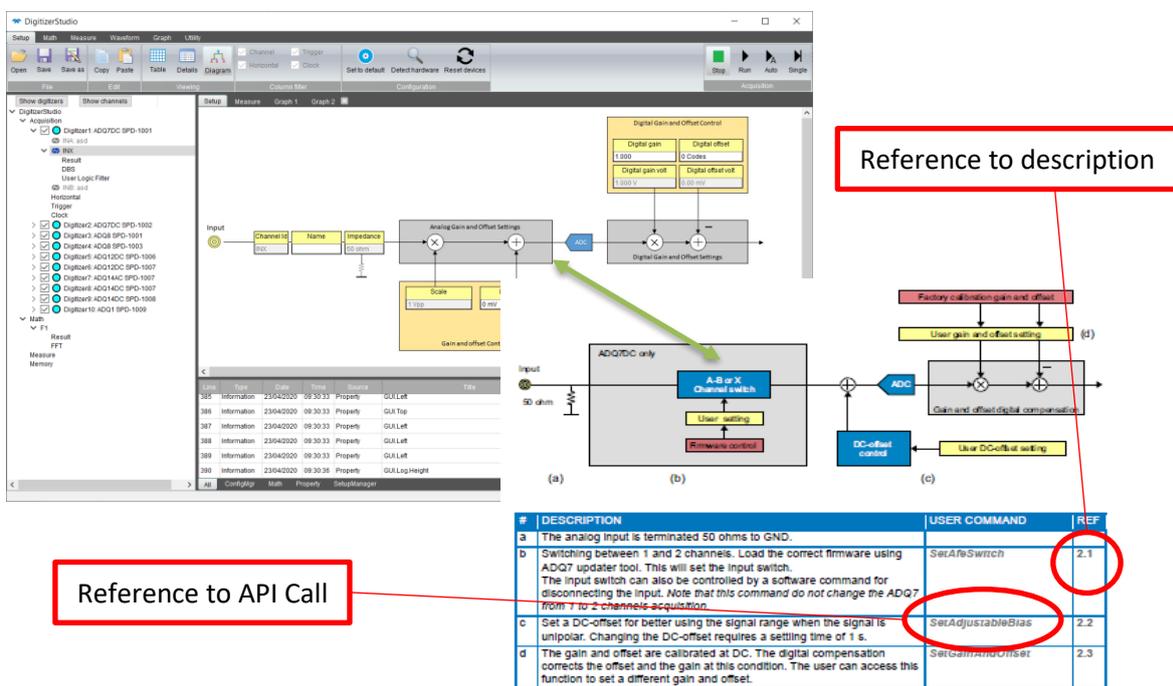

Figure 1 Link between Digitizer Studio and ADQ manual

5.4 Link between Digitizer Studio and ADQ blocks

Digitizer Studio contains several functional blocks that are controlled one by one. These blocks are linked to the functional blocks in the digitizer in the manual **xx-xxxx ADQyy Manual**, see Figure 2.
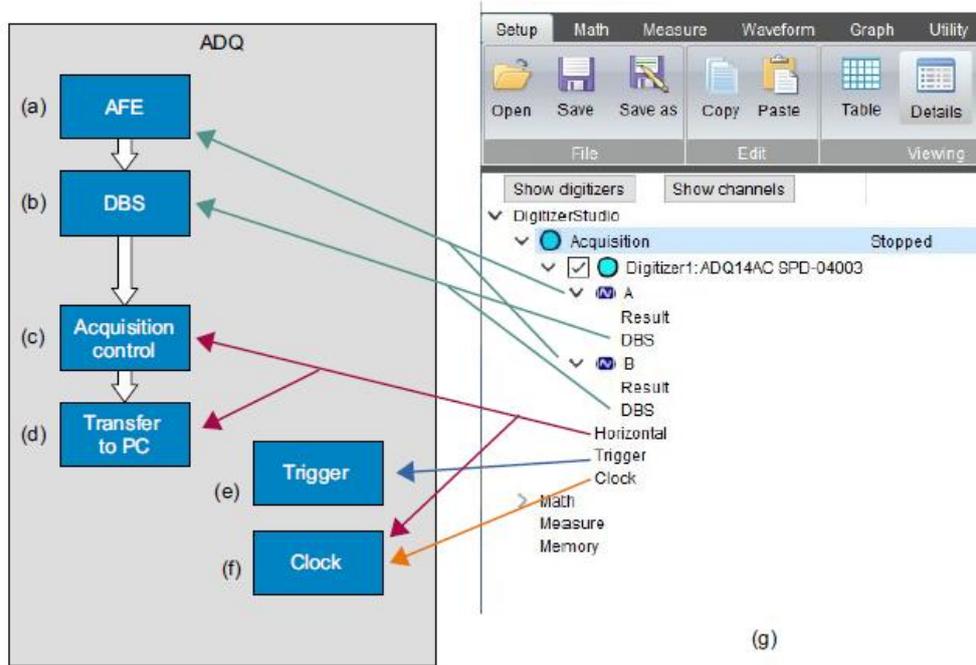

Figure 2 Block diagram

6 FINDING THE ADQAPI COMMAND

6.1 Link between Digitizer Studio and ADQAPI command

The Digitizer Studio offers a way of setting up the digitizer. At some points this set-up is transferred into a real-time software application. Then the setup has to be done via the ADQAPI programming interface. There are two ways to find the link between the Digitizer Studio setting and the ADQAPI:

1. Via the ADQ Manual as in Figure 1.
2. By looking in the ADQ Command log in digitizer Studio Figure 3

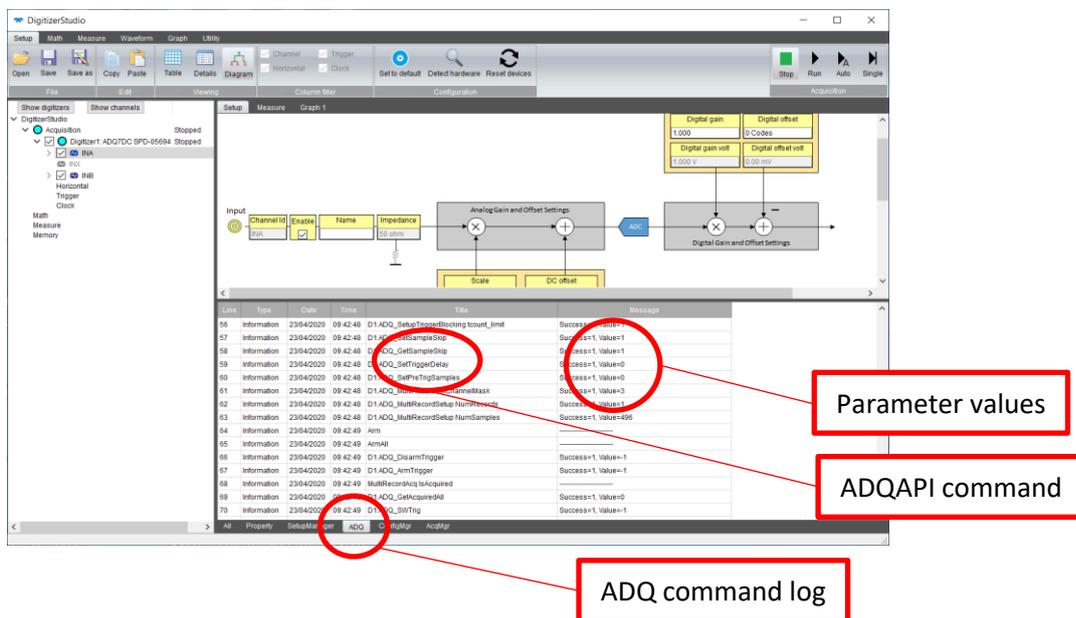The parameter values for the ADQAPI commands are found in the ADQ log as in Figure 3.

Figure 3 Digitizer Studio command log

6.2   Link between ADQ Manual and ADQAPI Command

The link between the ADQAPI command description and a function in the ADQ digitizer is found in the manual of the digitizer, **xx-xxxx ADQyy Manual**. The description of the function is in the ADQ Manual. The description of the ADQAPI call is in the reference guide **14-1351 ADQAPI Reference Guide**.
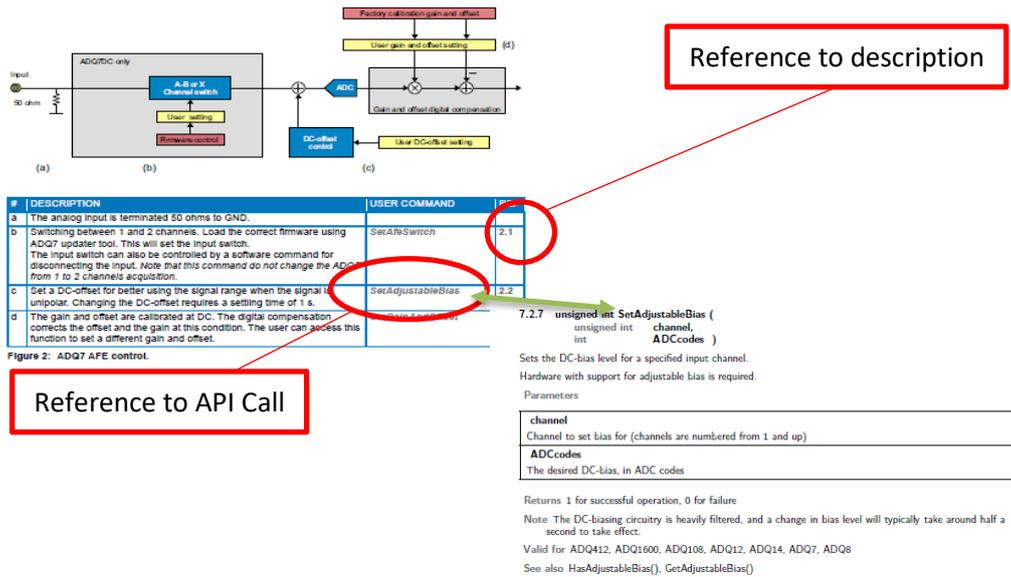

Figure 4 Link between ADQ Manual and ADQAPI Reference Guide

6.3 Setting the parameters

The parameters are listed in the Digitizer Studio ADQ command log, Figure 3. The parameters are described in detail in the **14-1351 ADQAPI Reference Guide**, see Figure 4.

Limits and valid values for parameters are found in the **14-1351 ADQAPI Reference Guide** and in Digitizer Studio "*Detailed*" setup view, Figure 5.

The parameters are also in an indirect way put into the fields in the "Diagram" view of digitizer studio, see Figure 6.

Figure 5 ADQAPI Reference guide and Digitizer Studio detailed view
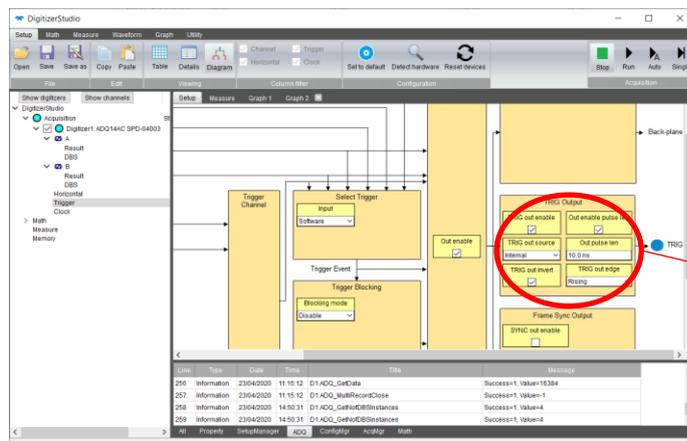

Figure 6 Parameter in Diagram view

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