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 ........................................................................................................................................... 3
  2.1 Products ..................................................................................................................................... 3
  2.2 Document types ....................................................................................................................... 3

3 Installing the digitizer .................................................................................................................. 3
  3.1 Hardware and firmware .......................................................................................................... 3
  3.2 Software and operating system ............................................................................................... 3

4 Hardware, firmware and Software Description .......................................................................... 4
  4.1 Hardware ................................................................................................................................... 4
  4.2 Firmware ................................................................................................................................... 4
  4.3 ADQAPI, Software Development Kit (SDK) ........................................................................... 4

5 Digitizer Studio GUI application software ................................................................................ 5
  5.1 Link between Digitizer Studio and Hardware and Firmware .................................................... 5
  5.2 Operating Digitizer Studio ....................................................................................................... 5
  5.3 Link between Digitizer Studio and ADQ Manual .................................................................... 5
  5.4 Link between Digitizer Studio and ADQ blocks ................................................................... 6

6 Finding the ADQAPI COMMAND ............................................................................................... 7
  6.1 Link between Digitizer Studio and ADQAPI command .......................................................... 7
  6.2 Link between ADQ Manual and ADQAPI Command .............................................................. 8
  6.3 Setting the parameters ............................................................................................................. 9
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*.

![Reference to description](image1)

Reference to API Call

![Reference to description](image2)

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.
Important Information

Teledyne Signal Processing Devices Sweden AB (Teledyne SP Devices) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to Teledyne SP Devices’ general terms and conditions supplied at the time of order acknowledgment.

Teledyne SP Devices warrants that each product will be free of defects in materials and workmanship, and conform to specifications set forth in published data sheets, for a period of one (1) year. The warranty commences on the date the product is shipped by Teledyne SP Devices. Teledyne SP Devices’ sole liability and responsibility under this warranty is to repair or replace any product which is returned to it by Buyer and which Teledyne SP Devices determines does not conform to the warranty. Product returned to Teledyne SP Devices for warranty service will be shipped to Teledyne SP Devices at Buyer’s expense and will be returned to Buyer at Teledyne SP Devices’ expense. Teledyne SP Devices will have no obligation under this warranty for any products which (i) has been improperly installed; (ii) has been used other than as recommended in Teledyne SP Devices’ installation or operation instructions or specifications; or (iii) has been repaired, altered or modified by entities other than Teledyne SP Devices. The warranty of replacement products shall terminate with the warranty of the product. Buyer shall not return any products for any reason without the prior written authorization of Teledyne SP Devices.

In no event shall Teledyne SP Devices be liable for any damages arising out of or related to this document or the information contained in it.

TELEDYNE SP DEVICES’ EXPRESS WARRANTY TO BUYER CONSTITUTES TELEDYNE SP DEVICES’ SOLE LIABILITY AND THE BUYER'S SOLE REMEDY WITH RESPECT TO THE PRODUCTS AND IS IN LIEU OF ALL OTHER WARRANTIES, LIABILITIES AND REMEDIES. EXCEPT AS THUS PROVIDED, TELEDYNE SP DEVICES DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

TELEDYNE SP DEVICES DOES NOT INDEMNIFY, NOR HOLD THE BUYER HARMLESS, AGAINST ANY LIABILITIES, LOSSES, DAMAGES AND EXPENSES (INCLUDING ATTORNEY’S FEES) RELATING TO ANY CLAIMS WHATSOEVER. IN NO EVENT SHALL TELEDYNE SP DEVICES BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFIT, LOST DATA AND THE LIKE, DUE TO ANY CAUSE WHATSOEVER. NO SUIT OR ACTION SHALL BE BROUGHT AGAINST TELEDYNE SP DEVICES MORE THAN ONE YEAR AFTER THE RELATED CAUSE OF ACTION HAS ACCRUED. IN NO EVENT SHALL THE ACCRUED TOTAL LIABILITY OF TELEDYNE SP DEVICES FROM ANY LAWSUIT, CLAIM, WARRANTY OR INDEMNITY EXCEED THE AGGREGATE SUM PAID TO SP BY BUYER UNDER THE ORDER THAT GIVES RISE TO SUCH LAWSUIT, CLAIM, WARRANTY OR INDEMNITY.

Worldwide Sales and Technical Support
www.spdevices.com

Teledyne SP Devices Corporate Headquarters
Teknikringen 6
SE-583 30 Linköping
Sweden

Phone: +46 (0)13 465 0600
Fax: +46 (0)13 991 3044
Email: info@spdevices.com

Copyright © 2020 Teledyne Signal Processing Devices Sweden AB. All rights reserved, including those to reproduce this publication or parts thereof in any form without permission in writing from Teledyne SP Devices.