Application Note

AS5xxx-EK-USB-PB

UART Programmer Operation Manual

Content Guide

1 General Description 3
1.1 Communication 4
1.2 Power supply 4
2 Connecting options 5
2.1 AS5x6y 5
2.2 Universal Connector socket 6
3 AS5xxx-EK-USB-PB Hardware 7
3.1 AS5xxx-EK-USB-PB PCB layout 7
3.2 AS5xxx-EK-USB-PB schematic 8
4 Contact Information 9
5 Copyrights & Disclaimer 10

Revision History

Revision	Date	Owner	Description
1.0	28.08.2013	dsch	Initial version
1.1	13.08.2014	ekno	Updates and corrections
1.2	04.12.2014	mzie	Updated to latest corporate template
1.3	03.02.2015	mzie	Minor corrections

1 General Description

This application note describes more in detail the usage of the AS5xxx-EK-USB-PB UART Programmer.

Figure 1: AS5xxx-EK-USB-PB UART Programmer

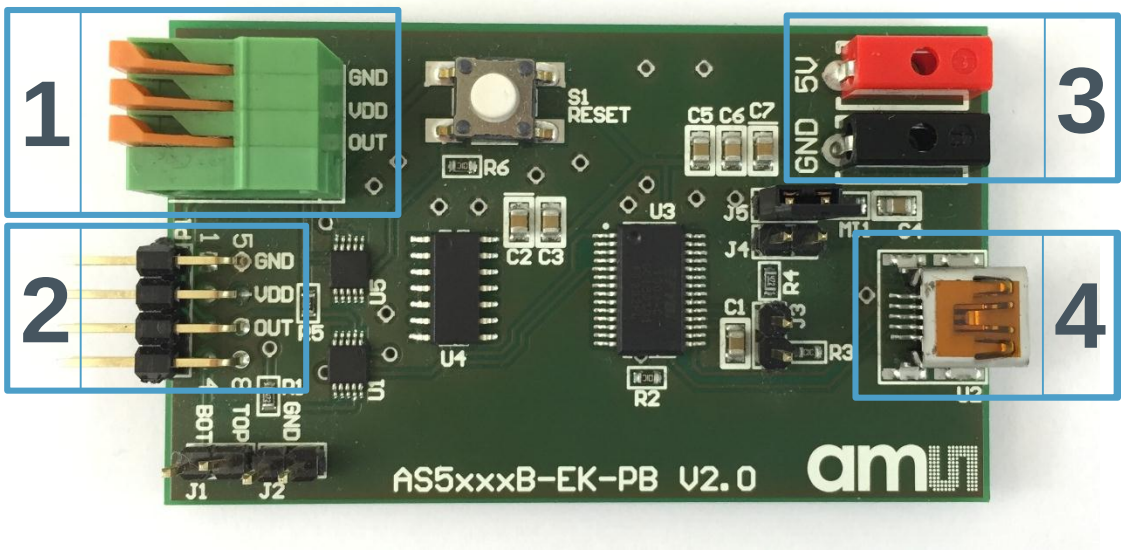


Figure 2: Connector description

Pos.	Item
1	Universal connector (e.g. AS5403X)
2	Connector for AS5x6y devices
3	External power supply connectors
4	Mini-USB socket

1.1 Communication

The Mini-USB socket is used for communicating with the computer. Therefore, a Mini-USB to USB cable is necessary. The board is using a FT232R – USB-to-UART IC by FTDI. Therefore the installation of the VCP (Virtual COM Port) is necessary to detect the USB device as a COM Port.

The driver can be downloaded from the official FTDI website using following link:
http://www.ftdichip.com/Drivers/VCP.htm

1.2 Power supply

By default the 5V supply voltage is provided by the USB interface. Depending if the jumpers J3, J4 and J5 are open or closed the supply source can be switched to external power supply.

Figure 3: Jumper configuration

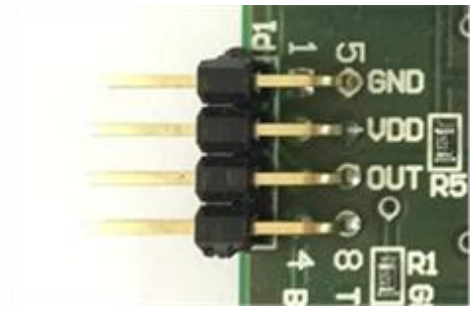
J3	J4	J5	Supply source
SET	SET	NC	External
NC	NC	SET	USB

2 Connecting options

2.1 AS5x6y

For connecting AS5x6y devices the connector P1 is used. When connecting a single die IC (AS5161 or AS5162) the bottom (BOT) interface has to be used. The required pull-up resistor for the UART communication is also included on this board.

Figure 4: Connector P1



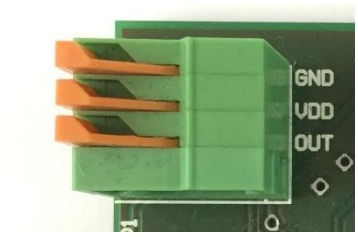
1	5
2	6
3	7
4	8

Pin #	Symbol	Description
1	GND Bottom	Ground Bottom die
2	VDD Bottom	Supply voltage Bottom die
3	OUT Bottom	Output signal Bottom die
4	OUT Bottom	Output signal Bottom die
5	GND Top	Ground Top die
6	VDD Top	Supply voltage Top die
7	OUT Top	Output signal Top die
8	OUT Top	Output signal Top die

2.2 Universal Connector socket

For more connecting options the board offers a universal connector socket. This socket provides access to GND, VDD and OUT (BOT) signals. This may be used to connect to an AS5403X adapter board. Also in this case the required pull-up resistor for UART communication is included.

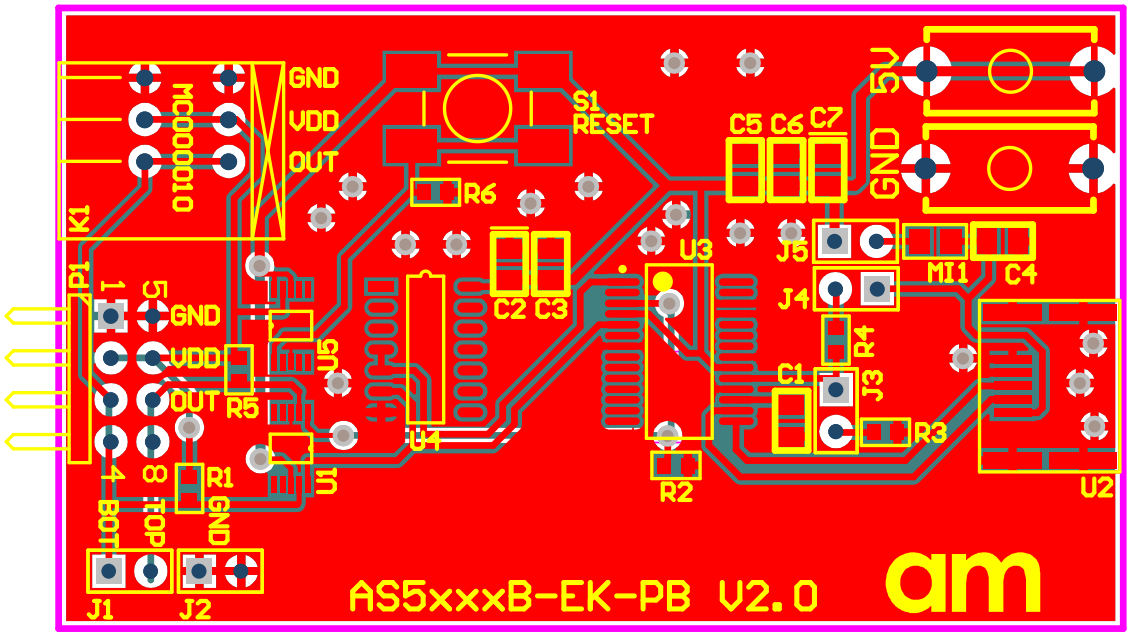
Figure 5: Universal Connector socket



3 AS5xxx-EK-USB-PB Hardware

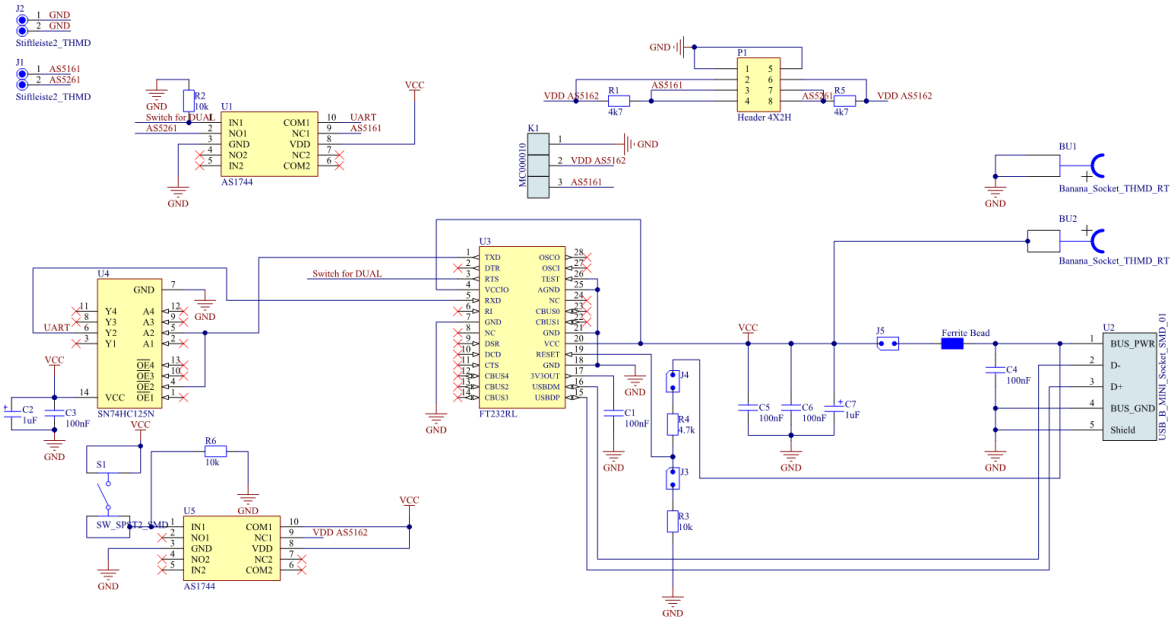
3.1 AS5xxx-EK-USB-PB PCB layout

Figure 6: AS5xxx-EK-USB-PB PCB layout



3.2 AS5xxx-EK-USB-PB schematic

Figure 7: AS5xxx-EK-USB-PB schematic



4 Contact Information

Buy our products or get free samples online at:
www.ams.com/ICdirect

Technical Support is available at:
www.ams.com/Technical-Support

Provide feedback about this document at:
www.ams.com/Document-Feedback

For further information and requests, e-mail us at:
ams_sales@ams.com

For sales offices, distributors and representatives, please visit:
www.ams.com/contact

Headquarters
ams AG
Tobelbaderstrasse 30
8141 Unterpremstaetten
Austria, Europe

Tel: +43 (0) 3136 500 0
Website: www.ams.com

5 Copyrights & Disclaimer

Copyright ams AG, Tobelbader Strasse 30, 8141 Unterpremstaetten, Austria-Europe. Trademarks Registered. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner.

Information in this document is believed to be accurate and reliable. However, ams AG does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

Applications that are described herein are for illustrative purposes only. ams AG makes no representation or warranty that such applications will be appropriate for the specified use without further testing or modification. ams AG takes no responsibility for the design, operation and testing of the applications and end-products as well as assistance with the applications or end-product designs when using ams AG products. ams AG is not liable for the suitability and fit of ams AG products in applications and end-products planned.

ams AG shall not be liable to recipient or any third party for any damages, including but not limited to personal injury, property damage, loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data or applications described herein. No obligation or liability to recipient or any third party shall arise or flow out of ams AG rendering of technical or other services.

ams AG reserves the right to change information in this document at any time and without notice.