



Installation Instruction

**HART Add-On Module**

## Installation Instruction - Translation

### HART Add-On Module

Typs 17-A1Z0-0005, B7-A2Z0-0033 and G7-A0Z0-0007

#### Version for:

- Non hazardous areas
- ATEX/IECEX Zone 1 and Zone 2
- UL Class I Division 1 and Division 2

Document No.: B1-A2Z0-7N0001 / 400570

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#### **Reservation:**

Technical data subject to change without notice. Changes, errors and misprints may not be used as a basis for any claim for damages.

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## Basic Information

### Read carefully before putting the device into operation.



The Installation Instruction is a fixed part of the product. It must be kept in the direct vicinity of the device and the installation, operating and service staff must have access to it at all times.

More detailed instructions of use can be found at [www.bartec.de](http://www.bartec.de) as well as the current versions of the datasheets, user manual, certificates and EU declaration conformity or may be requested directly from BARTEC GmbH.

Knowledge of the safety and warning information and the strict compliance with it is essential for safety installation and use. Injuries and material damage can be avoided by circumspect handling and systematically following the instructions.

The BARTEC company reserves the right to carry out technical changes at any time.

**Maintenance and Repairs** The pertinent erection and operating provisions for electrical systems must be observed! Repairs to explosion-protected devices may only be performed by authorised personnel with original spare parts and according to the state of the art. The applicable provisions must be observed in this respect.

**Inspections** According to EN/IEC 60079-17 and EN/IEC 60079-19, the operator of electrical systems in potentially explosive atmospheres is obliged to have these inspected by an electrician to ensure correct condition.

**Warranty** If non-specified components are used, the explosion protection will no longer be guaranteed. In the case of externally procured parts, it is not guaranteed that these have been designed and manufactured in accordance with their load and requisite safety.

**Disposal** As professional electrical devices, our devices are intended exclusively for commercial use, so-called B2B devices, in accordance with the WEEE Directive. Observe the national waste disposal regulations when disposing of the devices. All products purchased from us can be returned to us by our customers for disposal. The sender shall bear the costs of postage and packaging.

**Safety Instructions** The HART Add-On Module may only be operated in a clean, undamaged condition and may only be deployed within the specified temperature class and the temperature range indicated for it. Special Conditions for explosion protection must be observed. The assembly/dismantling must be conducted by qualified personnel authorised and trained to install electrical components in potentially explosive areas. The use in areas other than those specified or alteration of the product releases BARTEC from liability for defects and further liability. Modifications and changes to the module are not permitted. The generally applicable statutory regulations and other binding guidelines on occupational health and safety, on accident prevention and on environmental protection must be complied with.

**Danger, Warning and Note Symbols** Safety instructions and warnings are specially highlighted in this installation instruction and marked by symbols.



### DANGER

The **DANGER** sign draws attention to a direct threat which if not avoided will lead to death or very serious injuries.



### WARNING

**WARNING** draws attention to a possible threat which if not avoided can lead to death or very serious injuries.



### CAUTION

**CAUTION** draws attention to a possible danger which if not avoided can lead to slight or minor injuries.

### ATTENTION

**ATTENTION** draws attention to a potentially damaging situation which if not avoided can cause damage to the equipment or to objects in its vicinity.



Important instructions and information on effective, economical & environmentally compatible handling.

## Marking, test certificate, and standards

Note: Full information see "user manual" tablet PC.

Type 17-A1Z0-0005 for tablet PC "Agile X IS"		
ATEX Zone 1	⊕ Ex II 2G Ex ia [ia Ga] IIC T4 Gb	EPS 15 ATEX 1 069 X
IECEX Zone 1	Ex ia [ia Ga] IIC T4 Gb	IECEX EPS 15.0065X
NEC (USA/Canada)	Class I Div 1 Groups A, B, C, D T4	CSA 70045374
Type G7-A0Z0-0007 for tablet PC "Agile"		
ATEX	⊕ Ex II (2)G [ia Ga] IIC	EPS 15 ATEX 1 069 X
IECEX	[Ex ia Ga] IIC	IECEX EPS 15.0065X
NEC	[Ex ia Ga] II C	CSA 70045374

## Special conditions on the test certification EPS 15 ATEX 1 069 X for types 17-A1Z0-0005 and G7-A0Z0-0007

- Maximum ambient temperature range: -20 °C to +50 °C.
- The HART add on modules shall be protected against strong charge generating processes.
- It is allowed to connect the HART add on module to non certified HART circuits outside hazardous areas. Um = 60 V shall never be exceeded. The user is responsible to meet this condition.

Type B7-A2Z0-0033 for tablet PC "Agile X"		
ATEX Zone 2 and 22	⊕ Ex II 3G Ex ic [ia Ga] IIC T4 Gc	EPS 15 ATEX 1 823 X
	⊕ Ex II 3D Ex ic [ia Da] IIIB T135 °C Dc	
IECEX Zone 2 and Zone 22	Ex ic [ia Ga] IIC T4 Gc	IECEX EPS 15.0010X
	Ex ic [ia Da] IIIB T135 °C Dc	
NEC (USA/Canada)	Class I Division 2 Groups A, B, C and D	UL File E321557

### Special conditions on the test certification EPS 15 ATEX 1 823 X for type B7-A2Z0-0033

- Maximum ambient temperature range: -20°C to +50°C.
- External connectors shall never be used in hazardous areas. The battery shall never be removed, changed or charged in hazardous areas. The RFID module shall never be mounted or removed in hazardous areas. The flash (LED) shall never be used as a permanent light in hazardous areas.
- The apparatus shall be protected against mechanical impact, excessive UV-light and strong charge generating processes.
- In combination with Bartec accessory 03-9849-0130 (hand strap) the device is only suited for gas group IIA.
- It is allowed to connect the HART add on module to non certified HART circuits outside hazardous areas. Um = 60 V shall never be exceeded. The user is responsible to meet this condition.

Device / system specification

HART interface	$U_i \leq \text{DC } 30 \text{ V}$ $I_i \leq 130 \text{ mA}$ $P_i \leq 1 \text{ W}$ $U_o \leq \text{DC } 3 \text{ V}$ $I_o \leq 10 \text{ mA}$ $P_o \leq 5 \text{ mW}$ $U_m \leq \text{DC } 60 \text{ V}$ max. cable length: 1.8 m
Size (weight x length x height)	125 mm x 125 mm x 24 mm
Weight	200 g
Protection class (IEC 60529)	Mounted on tablet PC: IP54 Connector strip (PoGo Pins): IP20
Operating temperature	inside hazardous areas: -20 °C to +50 °C outside hazardous areas: -20 °C to +60 °C
Storage temperature	-30 °C to +70 °C
Operating humidity	30 % to 95 % (non-condensing)

## Introduction

The intrinsically safe combination of the tablet PC system and the newly developed HART Add-On Module makes it possible to perform diagnostics, set parameters and manage field devices much more quickly and efficiently. The HART modem is used as an add-on module for the tablet PC system in its extension interface. Since the user is now able to switch safely between the Ex and non-Ex area, only one device is then needed for the wireless uploading or adjusting of the field devices distributed there, completely independently of the control system.

### Scope of delivery:

- 1x HART Add-On Module
- 2x Pan head screw M3x10
- 2x Pan head screw M3x7
- 2x Truss head screw M3x7
- 2x Connection cable
- 2x Test probes
- 1x Installation instruction HART Add-On Module

### DANGER

**The extension interface of the tablet PC must always be sealed in a potentially explosive atmosphere! There is a risk of explosion!**

- ▶ Only remove or mount the cover of the extension module outside the potentially explosive atmosphere.
- ▶ Only assemble/dismantle the HART Add-On Module outside the potentially explosive atmosphere.
- ▶ Risk of short circuiting if the screws supplied with delivery are not used.
- ▶ Carry out the correct assembly for the attachment.

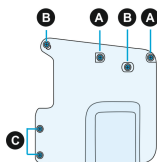
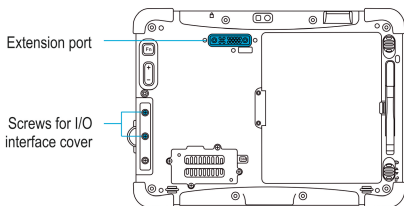
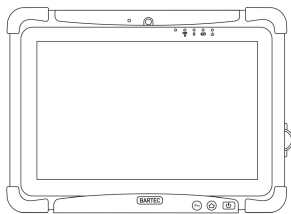


Use the screws supplied with delivery. All screws must be used to ensure the safe mechanical assembly of the HART Add-On Module on the tablet PC.

Store the cover of the extension port safely.



## Installation HART Add-On Module



**A** Pan Head Screw M3x10

**B** Pan Head Screw M3x7

**C** Truss Head Screw M3x7

Only assemble/dismantle the HART Add-On Module outside the potentially explosive atmosphere.

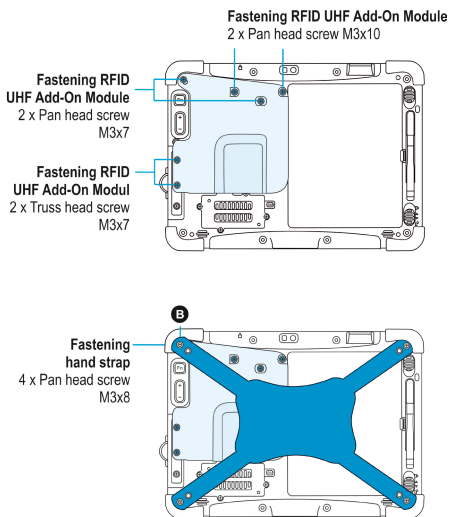
Only use the HART Add-On Module for the purpose that they have been tested and certificated by BARTEC..



Avoid data losses!

Do not just switch the tablet PC using the "ON/OFF" switch.

1. Shut the tablet PC down using the operating system.
2. Place the tablet PC on the display side, taking care that no parts nearby scratch the screen.
3. Remove the cover on the extension interface.
4. Remove the top two screws on the I/O interface cover.
5. Unpack the HART Module (the screws supplied for mounting are in the packaging).
6. Place the HART Add-On Module on the extension interface.



7. Fasten the HART Add-On Module using the six screws supplied. Torque 3 Nm.
8. Visual inspection of the HART Add-On Modules to ensure correct positioning and assembly.
9. Switch the tablet PC on using the "ON/OFF" button.

### Optional: Attach hand strap.

(Material No. 03-9849-0130)

10. Loosen the top screw that holds the HART Add-On Module in place.
11. Place the hand strap on and fasten using the four M3x8 (supplied) pan head screws. Torque: 3 Nm.



Do not assemble or remove the hand strap in a potentially explosive atmosphere.



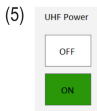
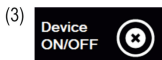
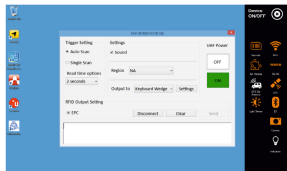
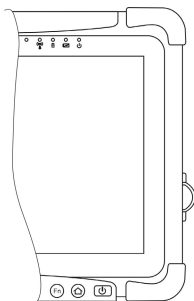
### **DANGER**

**Zone 2: Tablet PC Agile X**

**There is a risk of fatal injury in an explosive atmosphere!**

- ▶ The hand straps may only be used in areas with gas group IIA.

## Setting up/activating the HART Add-On Module



### Switching the tablet PC on.

- ▶ Press the ON/OFF button for three seconds.

### Activating the HART Add-On Module.

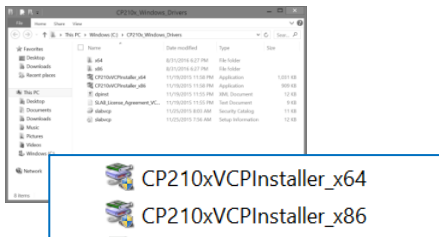
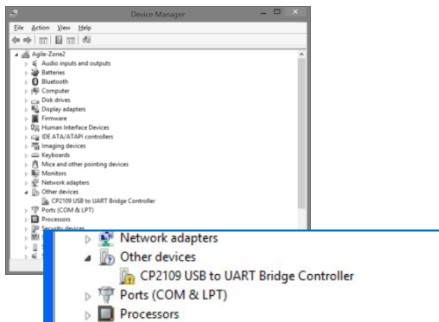
- (1) Click on "Hottab" on the start screen to start the application.
- (2) Click in the menu on the option "Device ON/OFF".
- (3) Select "Ext.Module" to activate the extension interface.  
  
(orange = ON; White = OFF)
- (4) Power set to ON.

In up-to-date versions of the operating system the driver has already been integrated in the image. With older versions the driver must be installed manually using the device manager.



Affects "Hottab" versions from 1.40 and higher. Older versions can be updated..

## Downloading and installing driver software



1. If the driver for the virtual COM port is not listed in the tablet PC's system image, a new "CP2109 USB to UART Bridge Controller" device will appear under "Other devices" in the device manager once the HART Add-On Module has been mounted.

2. Download the driver from:

<http://automation.bartec.de/>

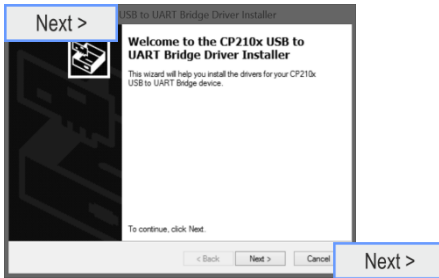
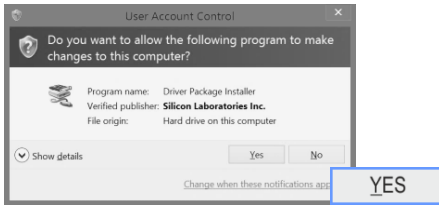
3. Unzip the zip file.
4. Select the right driver installer for the operating system

- 32-bit driver version:

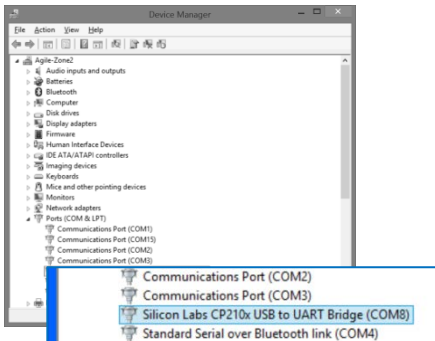
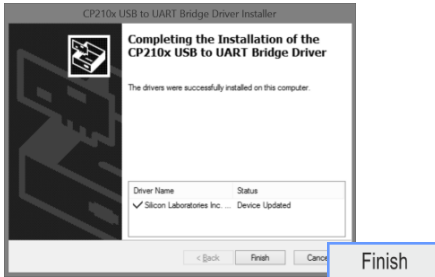
CP210xVCPInstaller\_x86-Installer

- 64-bit driver version:

CP210xVCPInstaller\_x64-Installer



5. The "User Account Control" (UAC) window opens.
6. Start installation by clicking on "Yes".
7. Continue installation in the "CP210x USB to UART Bridge Driver Installer" window by clicking on "Next".
8. Accept the licence conditions by clicking on "I accept this agreement" and confirm by clicking on "Next".



- The "The Drivers were successfully installed on this computer" message appears in the window.

Complete installation by clicking on "Finish".

- Once the driver has been installed, the HART Add-On Module can be found in the device manager under:

"Ports (COM & LPT)" with the designation "Silicon Labs CP210x USB to UART Bridge".



## BARTEC

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for safety  
technology.  
Challenge us!

