Product training – BCS3678^{ex} NI series overview of possible connections

BARTEC

BCS3678^{ex}-NI Bluetooth – connection options

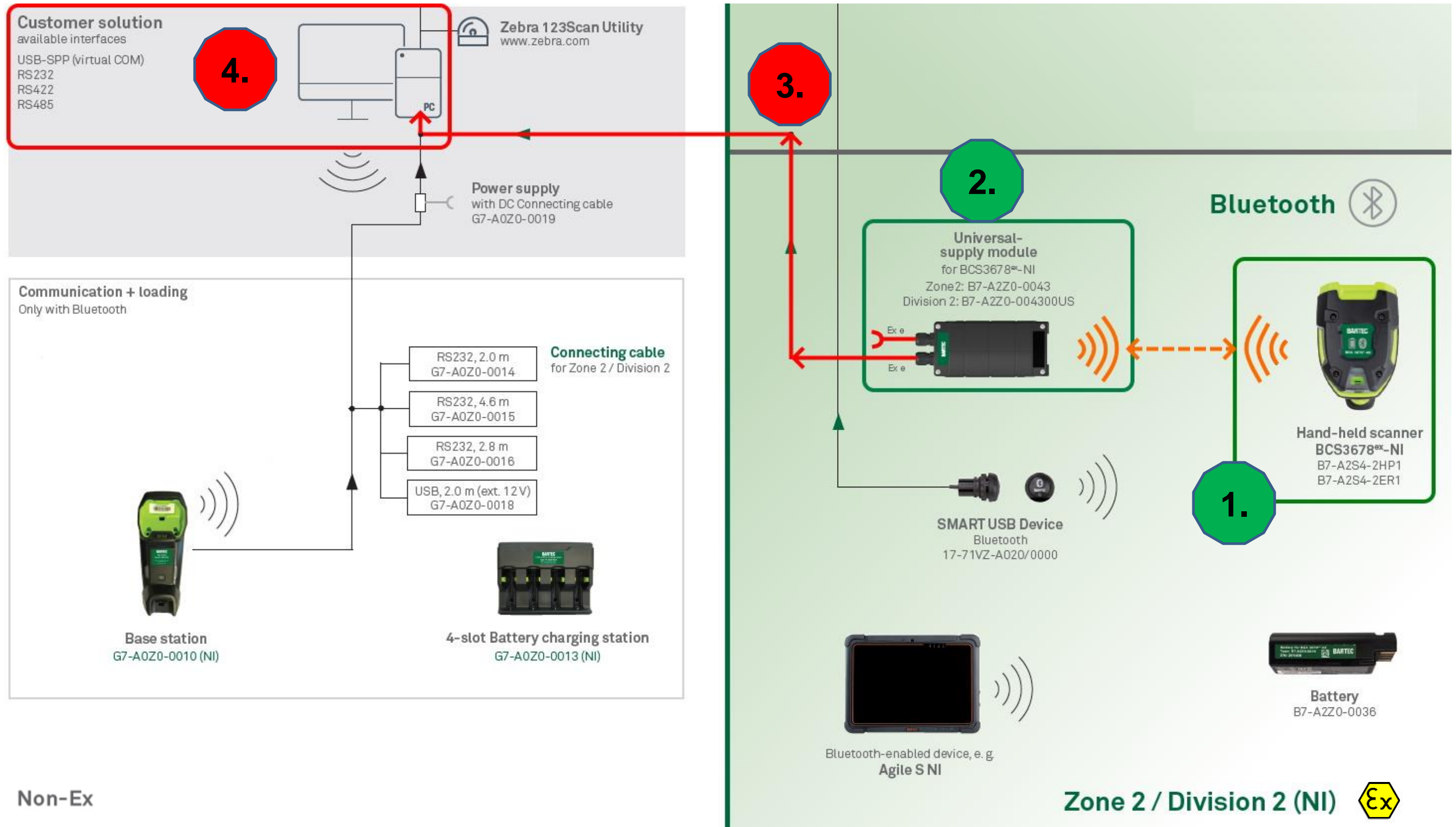| Picture	Option
	Option 1 Connection via Universal Supply Module to a PC/Host* in safe area.
	Option 2 Connection via Base station to a PC/Host* in safe area.
	Option 3 Connection via Universal Supply Module to a HMI certified for use in Zone 2/22 or Division 2
	Option 4 Connection via Smart USB Device Bluetooth to a HMI certified for use in Zone 2/22
	Option 5 Connection via Bluetooth to another Bluetooth device in safe area or hazardous location in Zone 2/22 or Division 2

About PC/Host*:

The designation PC/Host covers a wide range of possible devices to which the BCS3678^{ex}-NI can be connected.

- PC with operating system e.g. Windows
- remote station
- PLC
- Scale system
- Any other system with a compatible interface and the ability to process serial data.

Important is that the system need to have a compatible interface that scanner can be connected.
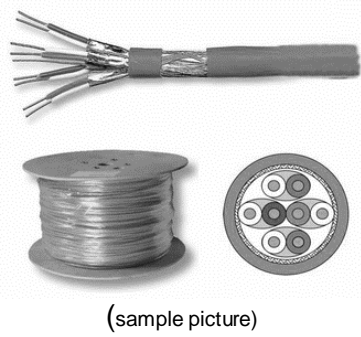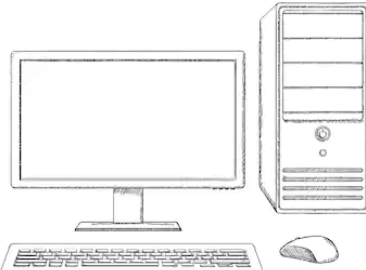
Option 1: BCS3678ᵉˣ-NI connection via Universal Supply Module to a PC/Host* in safe area.

Customer solution
available interfaces

USB-SPP (virtual COM)
RS232
RS422
RS485

4.

Zebra 123Scan Utility
www.zebra.com

3.

Power supply
with DC Connecting cable
G7-A0Z0-0019

Communication + loading
Only with Bluetooth

RS232, 2.0 m G7-A0Z0-0014	**Connecting cable** for Zone 2 / Division 2
RS232, 4.6 m G7-A0Z0-0015	
RS232, 2.8 m G7-A0Z0-0016	
USB, 2.0 m (ext. 12 V) G7-A0Z0-0018	

Base station
G7-A0Z0-0010 (NI)

4-slot Battery charging station
G7-A0Z0-0013 (NI)

Non-Ex

2.

Bluetooth

Universal-supply module
for BCS3678ᵉˣ-NI
Zone2: B7-A2Z0-0043
Division 2: B7-A2Z0-004300US

Ex e
Ex e

1.

Hand-held scanner
BCS3678ᵉˣ-NI
B7-A2S4-2HP1
B7-A2S4-2ER1

SMART USB Device
Bluetooth
17-71VZ-A020/0000

Battery
B7-A2Z0-0036

Bluetooth-enabled device, e. g.
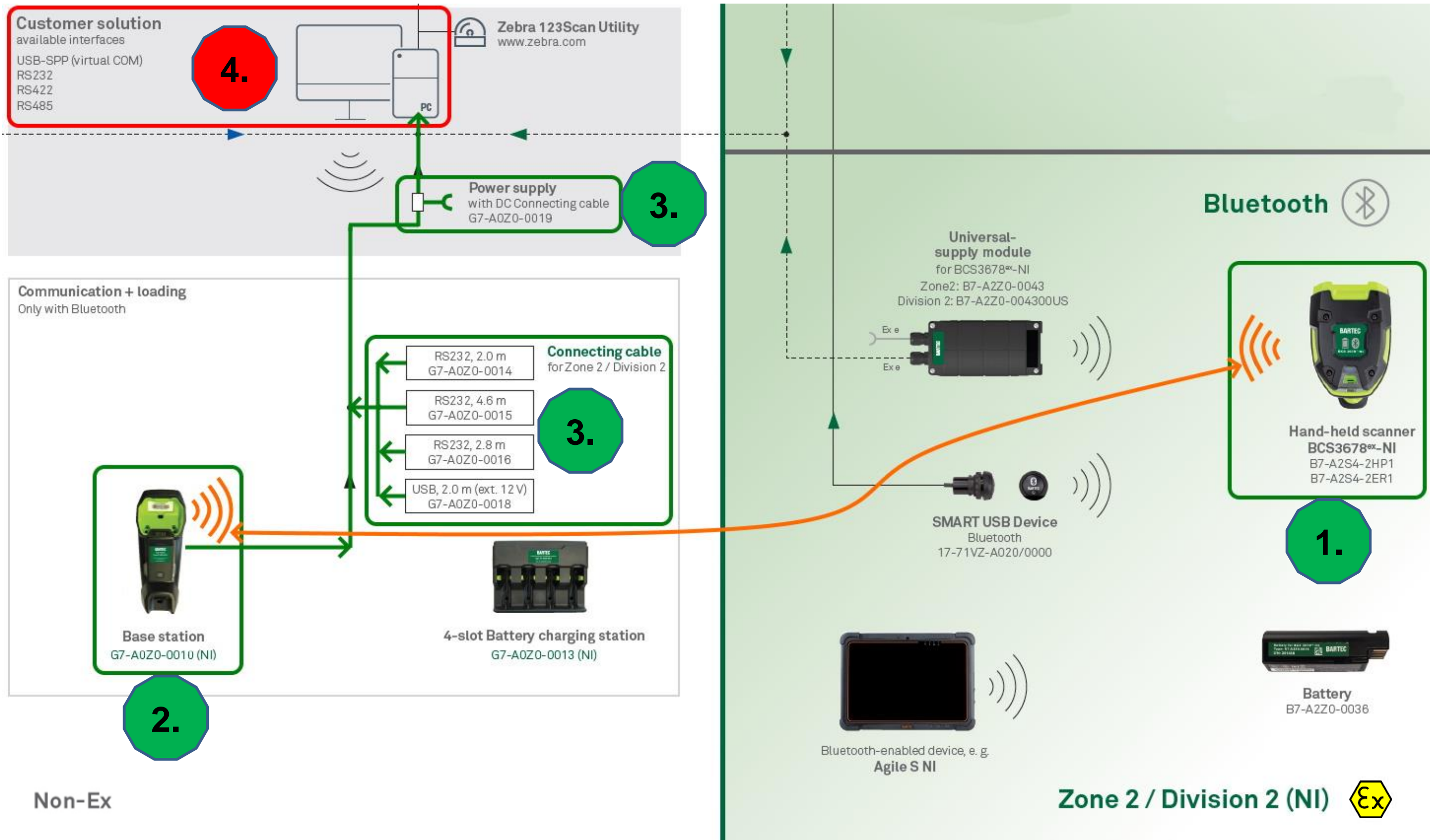**Agile S NI**

Zone 2 / Division 2 (NI)

Green = Components from BARTEC for use in hazardous location Zone 2/22 or Division 2
Red = Customer-specific components (not supplied by BARTEC)

BARTEC

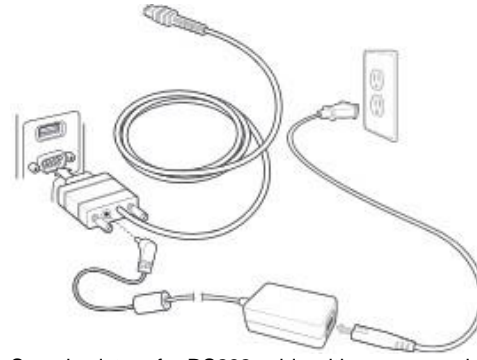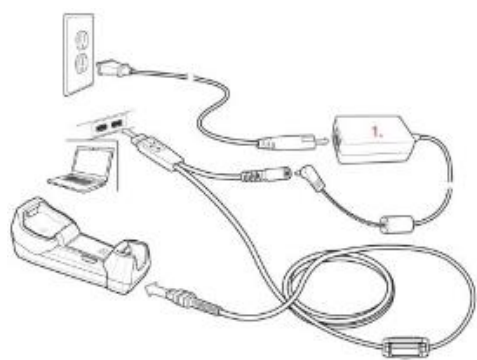| No.	Picture	Part	Interfaces and their Ex-protection type
1.		**BCS3678ex-NI Bluetooth** • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2S4-2xxx	**Bluetooth interface for:** • Class 1, Version 4.0 (LE)
2.		**Universal supply module Bluetooth** • ATEX/IECEx Zone 2/22 P/N: B7-A2Z0-0043	**Power supply: (Ex e)** • AC 100 V - 240 V ± 10% / 50-60 Hz • DC 24 V ± 10% / 0.4 A **Data line: (Ex e to PC/Host)** • RS232 (TxD from Scanner/USM to PC/host only) • RS422 • RS485 • USB-SPP (Serial Port Profile)
		Universal supply module Bluetooth • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2Z0-004300US	**Only difference is power supply supports only:** • DC 24 V ± 10% / 0.4 A
3.	(sample picture)	**Connection cable** Customer specific and not supplied by BARTEC. We recommend shielded cables e.g. CAT5 or higher.	**Data line: (Ex e to PC/Host)** • RS232 (TxD from Scanner/USM to PC/host only) • RS422 • RS485 • USB-SPP (Serial Port Profile) Cable laying is carried out by the customer in accordance with the Ex-protection requirements of Ex e.
		Power Cable Customer specific and not supplied by BARTEC.	**Power supply: (Ex e)** • AC 100 V - 240 V ± 10% / 50-60 Hz • DC 24 V ± 10% / 0.4 A
4.		**PC/Host** Customer specific PC/Host with interface for connection to Universal Supply Module (USM).	**PC/Host** Customer specific and installed in safe area.

Product training – BCS3678ex NI series overview of possible connections

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Option 2: BCS3678ex-NI connection via Base station to a PC/Host* in safe area.

Customer solution
available interfaces

USB-SPP (virtual COM)
RS232
RS422
RS485

4.

Zebra 123Scan Utility
www.zebra.com

PC

Power supply
with DC Connecting cable
G7-A0Z0-0019

3.

Communication + loading
Only with Bluetooth

Connecting cable
RS232, 2.0 m G7-A0Z0-0014
RS232, 4.6 m G7-A0Z0-0015
RS232, 2.8 m G7-A0Z0-0016
USB, 2.0 m (ext. 12 V) G7-A0Z0-0018

Connecting cable
for Zone 2 / Division 2

3.

Base station
G7-A0Z0-0010 (NI)

2.

4-slot Battery charging station
G7-A0Z0-0013 (NI)

Bluetooth

Universal-supply module
for BCS3678ex-NI
Zone2: B7-A2Z0-0043
Division 2: B7-A2Z0-004300US

Ex e
Ex e

SMART USB Device
Bluetooth
17-71VZ-A020/0000

Hand-held scanner
BCS3678ex-NI
B7-A2S4-2HP1
B7-A2S4-2ER1

1.

Battery
B7-A2Z0-0036

Bluetooth-enabled device, e. g.
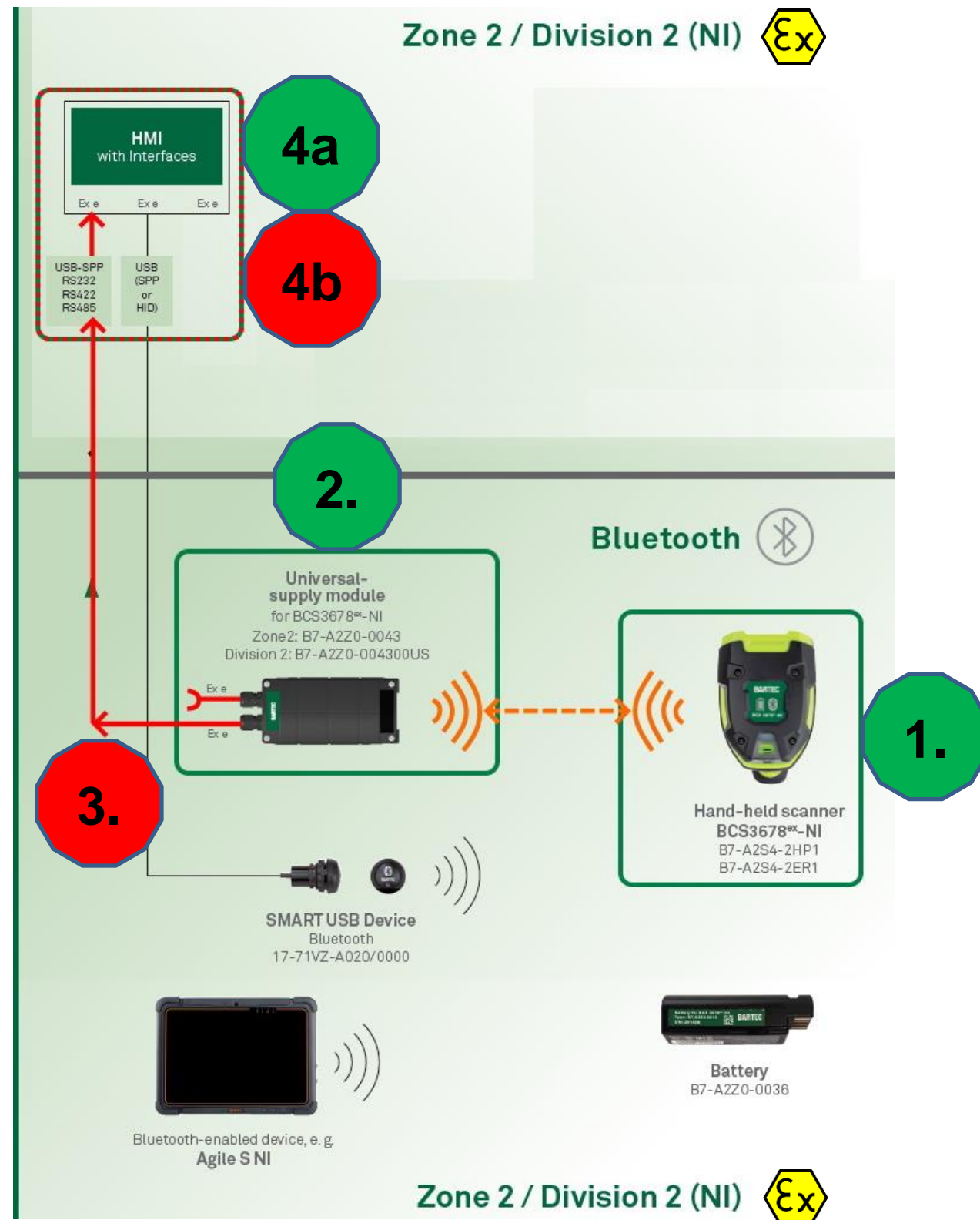**Agile S NI**

Zone 2 / Division 2 (NI) ⟨Ex⟩

Non-Ex

Green = Components from BARTEC for use in hazardous location Zone 2/22 or Division 2
Red = Customer-specific components (not supplied by BARTEC)

Required parts

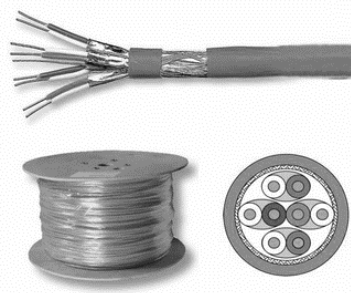| No.	Picture	Part	Interfaces and their Ex-protection type
1.		**BCS3678ex-NI Bluetooth** • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2S4-2xxx	**Bluetooth interface for:** • Class 1, Version 4.0 (LE)
2.		**Base station** • Only for use in safe area P/N: G7-A0Z0-0010	**Power supply:** • Input: AC 100 V - 240 V ± 10% / 50-60 Hz • Output: DC 12 V / 4.6 A / 50 W **Data line: (to PC/Host)** • RS232 • USB-HID (Human Interface Device) • USB-SPP (Serial Port Profile)
3.	 Sample picture for RS232 cable with power supply	**Connection cable** between base station and PC • Only for use in safe area **Part numbers:** RS232; 2 m; plain => G7-A0Z0-0014 RS232; 4.6 m; plain => G7-A0Z0-0015 RS232; 2.8 m; spiral => G7-A0Z0-0016 USB; 2 m; plain => G7-A0Z0-0018	**Data line:** • RS232 • USB (supports –HID or –SPP mode)
	 Sample picture for USB cable with power supply	**Power Supply with DC connection cable** between connection cable and power outlet • Only for use in safe area P/N: G7-A0Z0-0019	**Power supply:** • AC 100 V - 240 V ± 10% / 50-60 Hz • DC 24 V ± 10% / 0.4 A
4.		**PC/Host** Customer specific PC/Host with interface for connection to Universal Supply Module (USM).	**PC/Host** Customer specific and installed in safe area.

Option 3:
BCS3678ex-NI connection via Universal Supply Module to a HMI certified for use in Zone 2/22 or Division 2

Green = Components from BARTEC for use in hazardous location Zone 2/22 or Division 2
Red = Customer-specific components (not supplied by BARTEC)

Required parts

No.	Picture	Part	Interfaces and their Ex-protection type
1.		**BCS3678ex-NI Bluetooth** • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2S4-2xxx	**Bluetooth interface for:** • Class 1, Version 4.0 (LE)
2.		**Universal supply module Bluetooth** • ATEX/IECEx Zone 2/22 P/N: B7-A2Z0-0043	**Power supply: (Ex e)** • AC 100 V - 240 V ± 10% / 50-60 Hz • DC 24 V ± 10% / 0.4 A **Data line: (Ex e to PC/Host)** • RS232 (TxD from Scanner/USM to PC/host only) • RS422 • RS485 • USB-SPP (Serial Port Profile)
		Universal supply module Bluetooth • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2Z0-004300US	**Only difference is power supply supports only:** • DC 24 V ± 10% / 0.4 A
3.	(sample picture)	**Connection cable** Customer specific and not supplied by BARTEC. We recommend shielded cables e.g. CAT5 or higher.	**Data line: (Ex e to PC/Host)** • RS232 (TxD from Scanner/USM to PC/host only) • RS422 • RS485 • USB-SPP (Serial Port Profile) Cable laying is carried out by the customer in accordance with the Ex-protection requirements of Ex e.
		Power Cable Customer specific and not supplied by BARTEC.	**Power supply: (Ex e)** • AC 100 V - 240 V ± 10% / 50-60 Hz • DC 24 V ± 10% / 0.4 A

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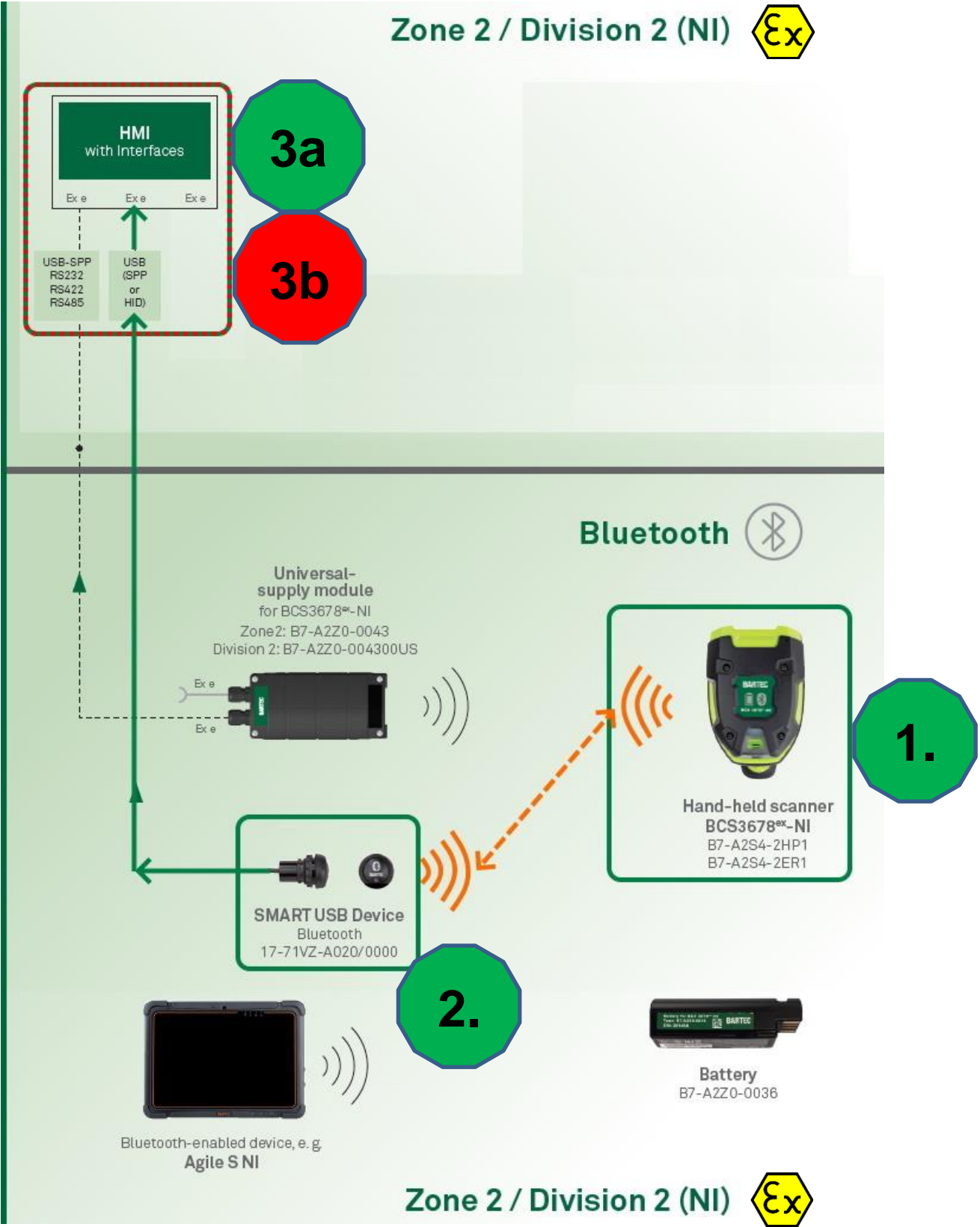|			
4a	⟨Ex⟩	**HMI Polaris II Series** • ATEX Zone 2/22 P/N: on request by ESS-AUT business unit Compatible Polaris series: • Polaris Professional with RS422 or USB • Polaris II Professional RS422 or USB • Polaris Remote Digital with USB • Polaris Zero Client with RS 422 or USB	**Data line: (Ex e to HMI)** It is important that on the Polaris device is a free interface in RS422 or USB available. Then the "Universal Supply Module" interface can be connected to the Polaris device. The "Universal Supply Module" powers the scanner.
4b	⟨Ex⟩	**HMI – Ex version of 3ʳᵈ party manufacturer** • ATEX Zone 2/22	**It is possible but customer need to check that Ex-relevant values are compatible with HMI manufacturer.** **Data line: (Ex e to HMI)** • RS232 (TxD from Scanner/USM to PC/host only) • RS422 • RS485 • USB-SPP (Serial Port Profile) Ex-relevant input parameter of BARTEC Universal Supply Module | Input	Ex-Model
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Power supply	Ex e
Data interface	Ex e	

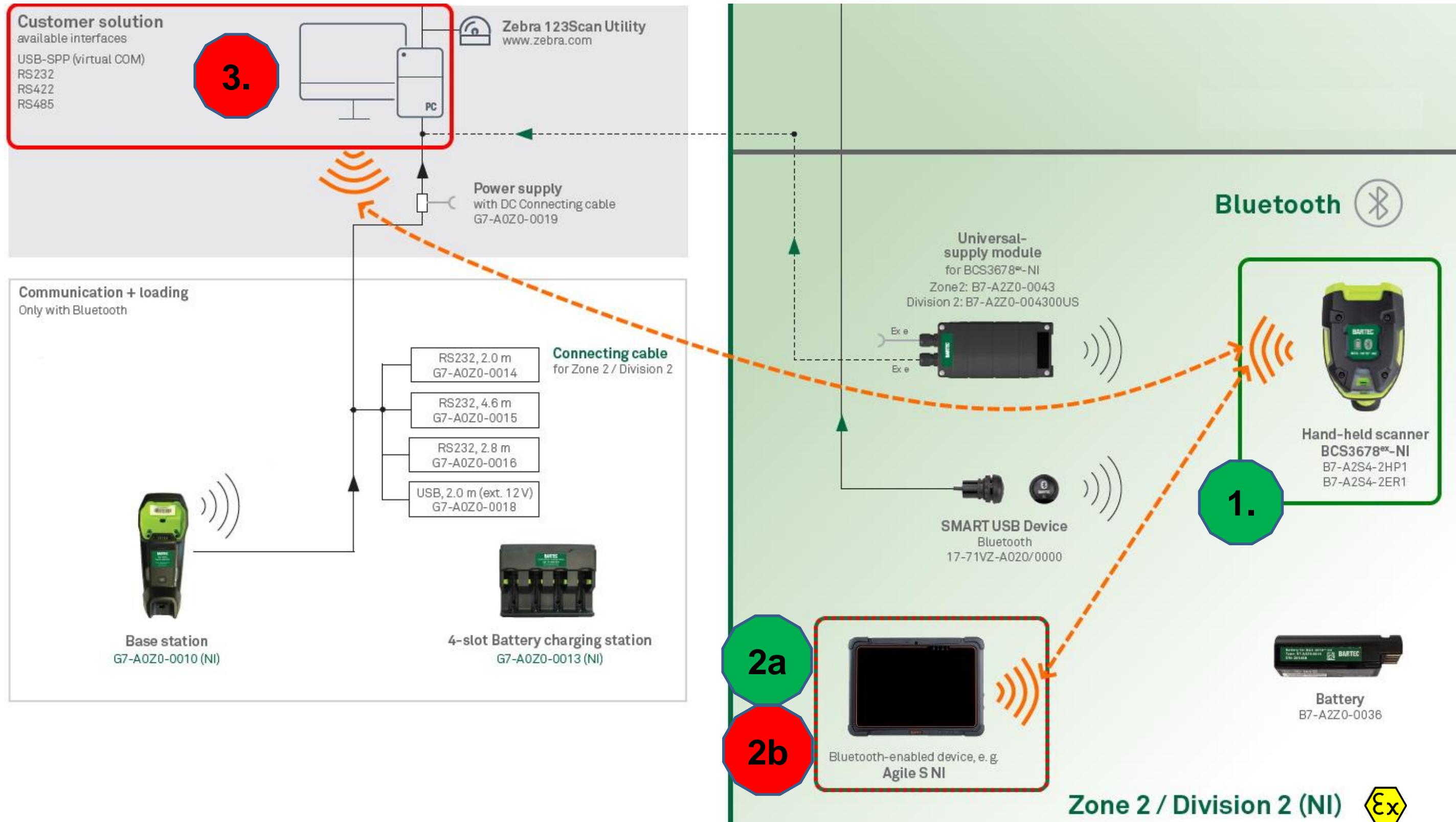## Option 4: BCS3678ex-NI connection via Smart USB Device Bluetooth to a HMI certified for use in Zone 2/22

Green = Components from BARTEC for use in hazardous location Zone 2/22 or Division 2
Red = Customer-specific components (not supplied by BARTEC)
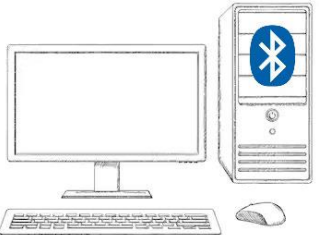
Required parts

No.	Picture	Part	Interfaces and their Ex-protection type
1.	Ex	**BCS3678ex-NI Bluetooth** • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2S4-2xxx	**Bluetooth interface for:** • Class 1, Version 4.0 (LE)
2.	Ex	**SMART USB Device Bluetooth** • ATEX/IECEx Zone 1/21 P/N: 17-71VZ-A020/0000	**Data line: (Ex e to PC/Host)** • USB-HID (Human Interface Device)
3a	Ex	**HMI Polaris II Series** • ATEX Zone 2/22 P/N: on request by ESS-AUT business unit Compatible Polaris series: • Polaris Professional with USB • Polaris II Professional with USB • Polaris Zero Client WIN10 with USB	**Data line: (Ex e to HMI)** • USB-HID (Human Interface Device mode is supported – Incoming data can be processed as keyboard entry) USB interface provides the functional necessary values of $5V_{DC}/500mA$
3b	3rd party HMI Ex	**HMI – Ex version of 3rd party manufacturer** • ATEX Zone 2/22	**It is possible but customer need to check that Ex-relevant values are compatible with HMI manufacturer.** **A compatible interface in "Ex e" version must be available** **Data line: (Ex e to HMI)** • USB-HID USB interface provides the functional necessary values of $5V_{DC}/500mA$

Product training – BCS3678ex NI series overview of possible connections

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Option 5: BCS3678ex-NI connection via Bluetooth to another Bluetooth device in safe area or hazardous location in Zone 2/22 or Division 2

Customer solution
available interfaces

USB-SPP (virtual COM)
RS232
RS422
RS485

3.

Zebra 123Scan Utility
www.zebra.com

PC

Bluetooth

Power supply
with DC Connecting cable
G7-A0Z0-0019

Universal-supply module
for BCS3678ex-NI
Zone2: B7-A2Z0-0043
Division 2: B7-A2Z0-004300US

Ex e
Ex e

Communication + loading
Only with Bluetooth

RS232, 2.0 m G7-A0Z0-0014	**Connecting cable** for Zone 2 / Division 2
RS232, 4.6 m G7-A0Z0-0015	
RS232, 2.8 m G7-A0Z0-0016	
USB, 2.0 m (ext. 12 V) G7-A0Z0-0018	

SMART USB Device
Bluetooth
17-71VZ-A020/0000

1.

Hand-held scanner BCS3678ex-NI
B7-A2S4-2HP1
B7-A2S4-2ER1

Base station
G7-A0Z0-0010 (NI)

4-slot Battery charging station
G7-A0Z0-0013 (NI)

2a

2b

Bluetooth-enabled device, e. g.
Agile S NI

Battery
B7-A2Z0-0036

Zone 2 / Division 2 (NI) Ex

Green = Components from BARTEC for use in hazardous location Zone 2/22 or Division 2
Red = Customer-specific components (not supplied by BARTEC)

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No.	Picture	Part	Interfaces and their Ex-protection type
1.	Ex	**BCS3678ex-NI Bluetooth** • ATEX/IECEx Zone 2/22 • NEC/ETL Division 2 P/N: B7-A2S4-2xxx	**Bluetooth interface for:** • Class 1, Version 4.0 (LE)
2a	Ex Sample picture Agile S	**BARTEC device with Bluetooth capability** • ATEX/IECEx Zone 2/22 or 1/21 • Division 2 or 1 Devices as example: • Tablet PC Agile X IS • Tablet PC Agile S • Mobile Computer MC93ex-NI • Mobile Computer MC27ex-NI • Touch Computer TC77ex-NI • Touch Computer TC26ex-NI • Pixavi Phone • Smart USB Device Bluetooth•	**Bluetooth interface for:** Class 1 or 2 Bluetooth Class and version is depending of the Mobile device. Bluetooth connection can be established with any kind of device in all areas.
2b	Ex	**Ex-certified 3rd Party PC/Host with Bluetooth capability** Customer specific PC/Host with Bluetooth interface. • Device must be certified for use in hazardous area.	**Bluetooth interface for:** Class 1 or 2 Bluetooth Class and version is depending of the Mobile device. Bluetooth connection can be established with any kind of device in all areas.
3		**3rd Party PC/Host with Bluetooth capability** Customer specific PC/Host with Bluetooth interface. Device can be certified for use in hazardous area or in safe area.	**Bluetooth interface for:** Class 1 or 2 Bluetooth Class and version is depending of the PC/Host device. Bluetooth connection can be established with any kind of device in all areas.