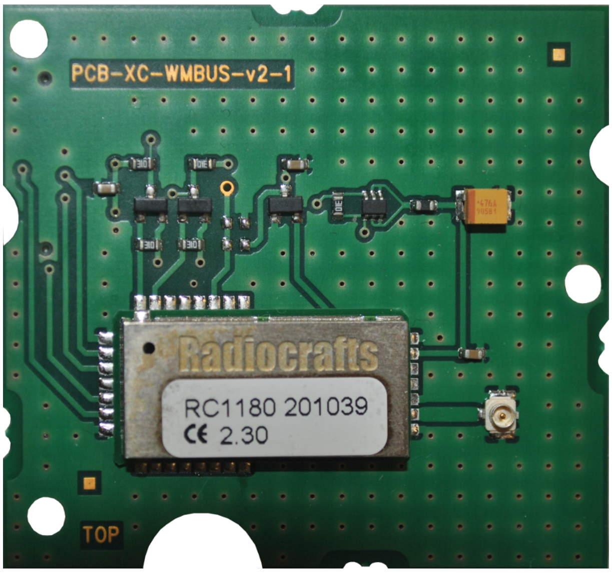
Expansion Port

WMBUS

USER MANUAL


PCB-XC-WMBUS-v2-1
Radiocrafts
RC1180 201039
CE 2.30
TOP

B+B SmartWorx

Powered by ADVANTECH

Used Symbols

⚠ *Danger* – Information regarding user safety or potential damage to the router.

❗ *Attention* – Problems that can arise in specific situations.

ℹ *Information, notice* – Useful tips or information of special interest.

GPL Licence

Source codes under GPL licence are available free of charge by sending an email to:

cellularsales@advantech-bb.com.

Advantech B+B SmartWorx s.r.o., Sokolska 71, 562 04 Usti nad Orlici, Czech Republic.
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Contents

1 Safety Instruction 1

2 Product Disposal Instructions 1

3 Description of the Expansion Port 2

3.1 Example of Use 2
3.2 Compatibility with Advantech B+B SmartWorx routers 3
3.3 State Indication of WMBUS Port 3
3.4 Delivery Identification 3
3.5 Technical Specifications 4

4 Recommended Literature 5

5 Customers Support 6

5.1 Customer Support for NAM 6
5.2 Customer Support for Europe 6
5.3 Customer Support for Asia 6

List of Figures

1 WMBUS scheme 2
2 Expansion port label 3

List of Tables

1 State indication of WMBUS port 3
2 Delivery identification 3
3 Technical specifications 4

1. Safety Instruction

Please, observe the following instructions:

- The expansion port must be used in compliance with all applicable international and national laws and in compliance with any special restrictions regulating the utilization of the communication module in prescribed applications and environments.
- Use only the original Advantech B+B SmartWorx company accessories. Thus you will prevent possible health risks and damage to the devices and ensure compliance with all relevant provisions. Unauthorised adjustments or use of unapproved accessories may result in damage to the expansion port and breach of applicable laws. Use of unapproved adjustments or accessories may lead to cancellation of guarantee, which has no effects on your legal rights.
- Do not expose the expansion port to extreme conditions. Protect it from dust, moisture and heat.

2. Product Disposal Instructions

The WEEE (Waste Electrical and Electronic Equipment: 2012/19/EU) directive has been introduced to ensure that electrical/electronic products are recycled using the best available recovery techniques to minimize the impact on the environment. This product contains high quality materials and components which can be recycled. At the end of it's life this product MUST NOT be mixed with other commercial waste for disposal. Check the terms and conditions of your supplier for disposal information.

3. Description of the Expansion Port

Expansion port WMBUS is designed as an additional expansion board, that allows using the WMBUS wireless interface in v2 routers of Advantech B+B SmartWorx company. There is another external antenna connector brought forth of the device for this purpose. It allows the router to communicate with devices equipped with Wireless MBUS interface up to distance of 500 – 600 m in the case of direct visibility (see illustrative figure below).

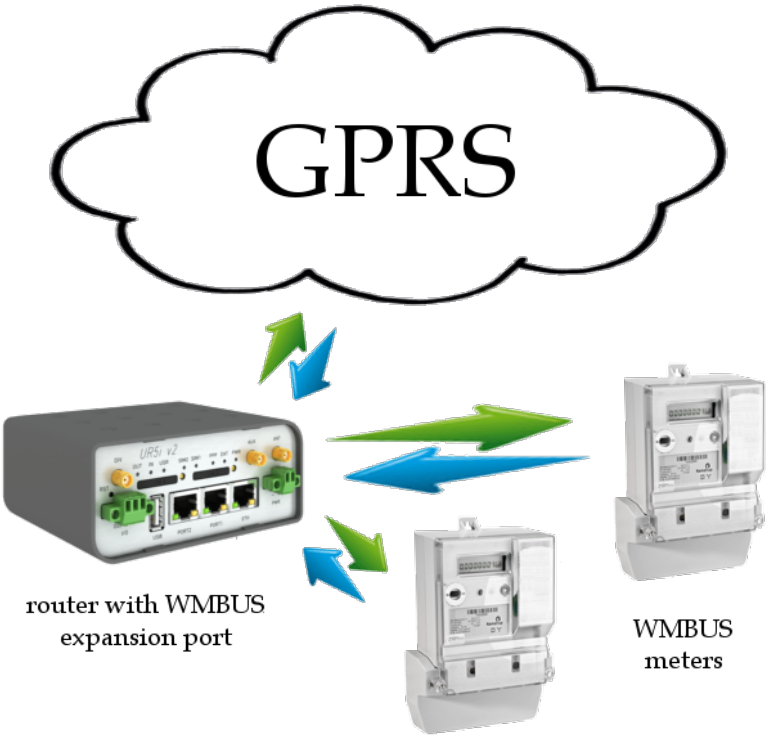

Figure 1: WMBUS scheme

3.1 Example of Use

- Systems for data automatic reading (AMR – Automatic Meter Reading) from meters of electricity, gas, heat and other energy.
- Advanced Metering Infrastructure (AMI)
- Data concentrator

3.2 Compatibility with Advantech B+B SmartWorx routers

Expansion port WMBUS can be used in all v2 routers with available PORT2 position. Therefore it is designed for routers in version known as FULL.

3.3 State Indication of WMBUS Port

LED diode	Description of indication
Green LED	Indicates Receive data
Yellow LED	Indicates Transmit data

Table 1: State indication of WMBUS port

3.4 Delivery Identification

Trade name	Type name	Power supply
XC-WMBUS	XC-WMBUS	Internal supply

Table 2: Delivery identification

Example of expansion port label:

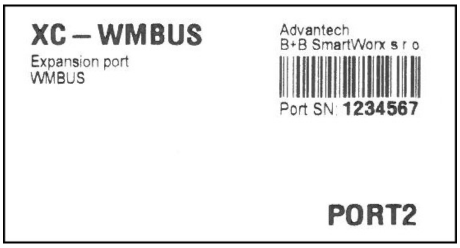
XC – WMBUS
Expansion port
WMBUS
Advantech
B+B SmartWorx s.r.o.
Port SN: 1234567
PORT2

Figure 2: Expansion port label

3.5 Technical Specifications

Expansion port WMBUS		
Power supply	Internal	+3,3 V
Environment	Operating temperature	-30 to +60 °C
	Storage temperature	-40 to +85 °C
Standards	EN 13757-4:2005	
Modes	S, T and R2	
Wireless MBUS	Range	500 – 600 m (in case of direct visibility)
	Data rate	4.8, 32.768, 100 kbps
	Output power	9 dBm
	Frequency range	868.03 – 868.95 MHz

Table 3: Technical specifications

4. Recommended Literature

[1]	Advantech B+B SmartWorx:	**Application Note – Expansion Port Mounting for v2 Routers (APP-0001-EN)**
[2]	Advantech B+B SmartWorx:	**Configuration Manual – Cellular Industrial v2 Routers (MAN-0021-EN)**
[3]	Advantech B+B SmartWorx:	**Application Note – User Module wM-BUS Concentrator**

5. Customers Support

5.1 Customer Support for NAM

Phone: +1-800-346-3119 (Monday – Friday, 7 a.m. to 5:30 p.m. CST)
Fax: +1-815-433-5109
E-mail: support@advantech-bb.com
Web: www.advantech-bb.com

5.2 Customer Support for Europe

Phone: +353 91 792444
Fax: +353 91 792445
E-mail: techSupport@advantech-bb.com
Web: www.advantech-bb.com

5.3 Customer Support for Asia

Phone: +886-2-2792-7818 #1299 (Monday – Friday, 9 a.m. to 5:30 p.m. UTC+8)
Fax: +886-2-2794-7327
E-mail: icg.support@advantech.com.tw
Web: www.advantech.com

Upkeep-advices:

- During cleaning of the router do not use aggressive chemicals, solvents and abrasive cleaners!

Hereby, Advantech B+B SmartWorx s.r.o. company declares that the router with this expansion port installed is in compliance with EU Directive **2014/53/EU**.

The full text of the EU Declaration of Conformity of the corresponding router is available at the following internet address: www.advantech-bb.cz/eudoc