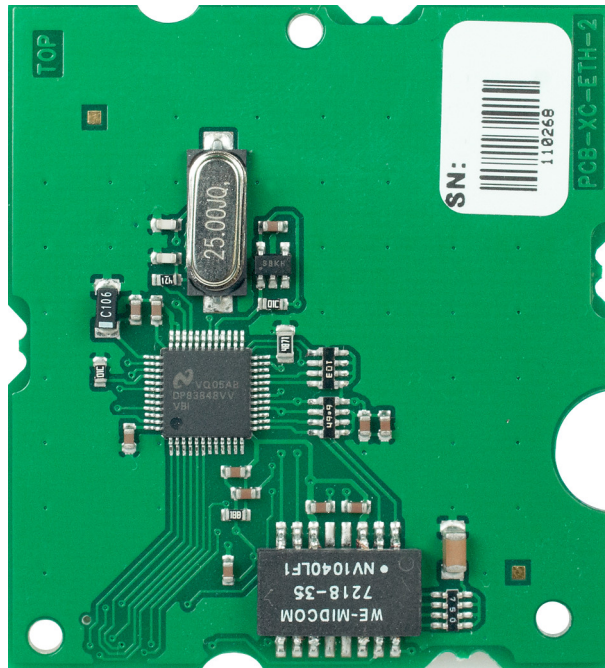# Expansion Port

ETH

USER MANUAL

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.

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.

Contents

List of Figures

List of Tables

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

The expansion port ETH is created as expansion port which enables to use of the next hardware interface of Advantech B+B SmartWorx routers and modems for next signal processing. This interface is physically connected on RJ45 connector of the device. The expansion port ETH is internally powered from the router. The ETH port is protected against bus overload.

Expansion port ETH can be fitted only into PORT1 position.

3.1   Pin-out of the Connector

Panel socket RJ45.

Pin	Signal	Description	Direction
1	TXD+	Transmit Data – positive pole	Input/Output
2	TXD-	Transmit Data – negative pole	Input/Output
3	RXD+	Receive Data – positive pole	Input/Output
4	–	–	
5	–	–	
6	RXD-	Receive Data – negative pole	Input/Output
7	–	–	
8	–	–	

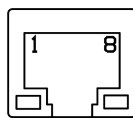Table 1: Pin-out of port connector

Figure 1: Port connector

ATTENTION! Port ETH is not POE (Power Over Ethernet) compatible!
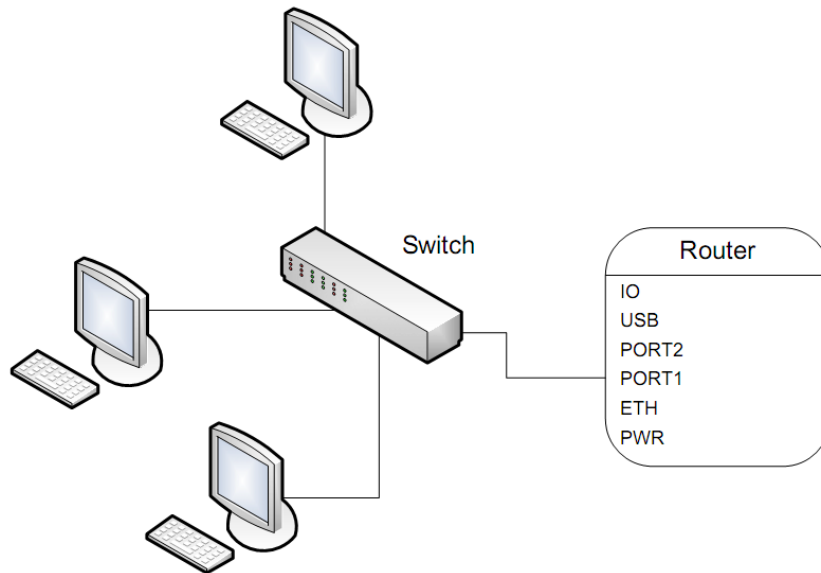
The ETH router connection:

Figure 2: Example of router ETH connection

3.2   State Indication of ETH Port

LED diode	Description of indication
Green LED	On .... selected 100 Mbit/s Off .... selected 10 Mbit/s
Yellow LED	On...................... the network cable is connected Blinking .... data transmission Off .... the network cable is not connected

Table 2: State indication

State indication of ETH port is supported from 2nd revision of boards.

3.3   Delivery Identification

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

Table 3: Delivery identification

Example of expansion port label:
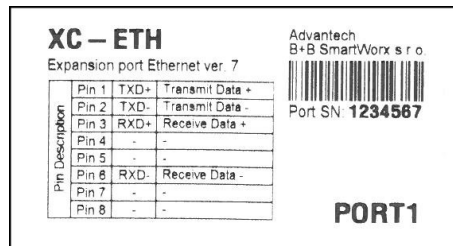
Figure 3: Expansion port label

3.4   Technical Specifications

Expansion port ETH		
Power supply	Internal	+3,3 V
Environment	Operating temperature Storage temperature	-30 to +60 °C -30 to +85 °C
Standards	Emission Immunity Safety	EN 55022/B ETS 300 342 EN 60950
Ethernet (IEEE 802.3)	Max. bit rate Max. total cable length (300Bd, 200nF/km)	100 Mbps 100 m

Table 4: 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)**

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!

CE Hereby, Advantech B+B SmartWorx s.r.o. company declares that the router (radio equipment) with this expansion port installed is in compliance with EU Directive **2014/53/EU**. The router with this expansion port installed and no radio interface present is in compliance with EU Directives **2014/30/EU** and **2014/35/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