Quick Manual

GWS-QX

Intelligent Gateway

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Acknowledgements

Intel® Quark SoC X1000 series are trademarks of Intel Corporation.

McAfee* Embedded Control* and the Wind River* Intelligent Device Platform*

All other product names or trademarks are properties of their respective owners.

Declaration of Conformity

FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ■ Reorient or relocate the receiving antenna.
- ■ Increase the separation between the equipment and receiver.
- ■ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ■ Consult the dealer or an experienced radio/TV technician for help.

FCC Label Compliance Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received, including interference that may cause undesired operation.

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Warning!   *Any changes or modifications made to the equipment which are not expressly approved by the relevant standards authority could void your authority to operate the equipment.*

Attention!   *Toute modification apportée à l'équipement qui n'est pas expressément approuvé par l'autorité des normes pertinentes peuvent annuler votre droit à faire fonctionner l'équipement.*

Caution!   *Danger of explosion if battery is incorrectly replaced.*
Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions

Attention!   *Danger d'explosion si la pile est remplacée de façon incorrecte.*
Remplacez-la uniquement avec le même type ou équivalent recommandé par le fabricant. Jetez les piles usagées selon les instructions du fabricant

Waste disposal instruction

Do not throw this electronic device into the trash can when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle it in European WEEE (waste electrical and electronic equipment) directive system or recycle system in Taiwan.

MPE 警語

Exposure to Radio Frequency Radiation:

To comply with FCC RF exposure compliance requirements, a separation distance of at least 20cm must be maintained between the antenna of this device and all persons. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

NCC 警語

本產品符合低功率電波輻射性電機管理辦法 第十二條、第十四條等條文規定

1. 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
2. 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
   前項合法通信，指依電信法規定作業之無線電通信。
   低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

電磁波曝露量 MPE 標準值 $1mW/cm^2$，送測產品實測值為：$0.0941mW/cm^2$

Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any items are missing, please contact your dealer immediately.

- GWS-QX x1
- Adapter x1
- Power Cord x1
- User Manual x1
- USB to RS-232 cable x1   (Optional)
- Null Cable (RS-232) x1   (Optional)
- Antenna x2   (Optional)
- VESA Mount Bracket x1   (Optional)

Warning!   *To prevent electric shock, Do not remove cover.*

No user serviceable parts inside, refer servicing to qualified personnel.

Attention!   *Pour éviter un choc électrique, ne pas retirer le couvercle.*
Aucune pièce réparable par l'utilisateur, voir l'entretien à du personnel qualifié.

Additional Information and Assistance

1. Visit the ECS websites at www.ECS.com.tw where you can find the latest information about the product.
2. Contact your distributor, sales representative, or ECS's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
   - Product name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages
   - This equipment is a source of electromagnetic waves. Before use, please make sure that there are not EMI sensitive devices in its surrounding which may malfunction therefore

Warning!   *1. Input voltage rated 100-240 VAC, 47-63 Hz, 2.0 A,*
Output Voltage rated 24 VDC, 5 A

2. Maintenance: to properly maintain and clean the surfaces, use only approved products or clean with a dry applicator

Attention!   *1. Tension de sortie Tension d'entrée nominale 100-240 VAC, 47-63 Hz, 2,0 A, la note de 24 VDC, 5 A*

2. Entretien: bien entretenir et nettoyer les surfaces, utiliser uniquement des produits approuvés ou nettoyer avec un applicateur sec

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:

    a. The power cord or plug is damaged.

    b. Liquid has penetrated into the equipment.

    c. The equipment has been exposed to moisture.

    d. The equipment does not work well, or you cannot get it to work according to the user's manual.

    e. The equipment has been dropped and damaged. f.

    The equipment has obvious signs of breakage.
15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60°C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.
16. If your computer is losing time significantly or the BIOS configuration resets itself to the default, the battery may have no power.
17. IMPROPER INSTALLATION OF VESA MOUNTING CAN RESULT IN SERIOUS PERSONAL INJURY! VESA mount installation should be performed by a professional technician; please contact the service technician or your retailer if you need this service.
18. Maintenance: to properly maintain and clean the surfaces, use only the approved products or clean with a dry applicator.

Contents

Chapter 1

General Information

1.1 Introduction

GWS-QX Intelligent Gateway solutions was based on the Intel® Quark SoC X1000 series. The processors are supported by software components, including McAfee* Embedded Control* and the Wind River* Intelligent Device Platform*, needed to connect, manage, and secure gateways.

Common industrial applications include factory automation systems, precision machinery, and production process control. It is also suitable for many non-industrial applications, including interactive kiosk systems, entertainment management, and car park automation. Users can securely aggregate, filter, and share data from edge devices to the cloud in areas such as energy, industrial, and transportation infrastructure.
GWS-QX is a reliable, cost-effective solution to meet an application's processing requirements

1.2 Specifications

Item	Description	
Dimensions (WxDxH)	192 x 130 x 49 mm	
Weight	0.55 Kg without Accessories	
CPU	Intel® Quark SoC X1021 400 MHz	
Memory	DDR3 1G (512MB x 2)	
Storage	Mirco SD 8GB up to 32G	
ROM	8MB NVRAM SPI NOR flash chip	
External I/O	10/100M LAN Port	X2
	Micro USB 2.0	X1
	USB 2.0 Type A	X1
	RS-232	X1
	RS-485	X1
	DC-in	X1
MCR 20pin connector	Analog Input / Output 6 in/4 out (4~20mA)	
MCR 40pin connector	Digital Input / Output 16 in Normal Open.　　Max. Input = DC 24V 16 out Normal Open.　　Max carry current 1A	
Thermal Solution	Fanless Design	
Operating System	Integrated Intel solution (Moon Island)	
Control Button	Reboot	X1
	Reset	X1
WIFI　(Optional)	Azurewave　AW-NB159H	X1

Item	Description	
Indicated LED	Power/ State LED	X1
Power Adapter	DA-120B24 INPUT: 100 ~ 240 V, 2.0 A Max., 47/63 Hz OUTPUT: 24 V, 5 A	X1
System Operating Temperature	-10° C ~ 60° C	
System Operating Humidity	10% ~ 85% @ 40° C, non-condensing	
System Storage Temperature	-40° C ~ 60° C	
Storage Humidity	10% ~ 90%, non-condensing	

1.3   Cleaning/Disinfecting

During normal use GWS-QX may become soiled and should, therefore, be cleaned regularly.

Steps:

1. Wipe GWS-QX with a clean cloth that has been moistened in the cleaning solution.
2. Prepare agent per manufacturer's instructions or hospital protocol.
3. Wipe thoroughly with a clean cloth.

Caution!   *Do not immerse or rinse GWS-QX or its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed personnel regarding the continued safety of the unit before placing it back in operation.*

Do not spray cleaning agent on the chassis.

Do not use disinfectants that contain phenol.

Do not autoclave or clean GWS-QX or its peripherals with strong aromatic, chlorinated, ketone, ether, or other solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.

Attention!   *Ne pas immerger ou rincer GWS-QX ou ses périphériques. Si vous renversez par accident un liquide sur l'appareil, débranchez l'appareil de la source d'alimentation. Contactez votre Biomed concernant la sécurité continue de l'unité avant de la remettre en service.*
Ne pas pulvériser l'agent de nettoyage sur le châssis.
Ne pas utiliser de désinfectants contenant du phénol.
Ne pas passer à l'autoclave ou GWS-QX propre ou ses périphériques avec fortes, cétone, éther, ou d'autres solvants, des outils tranchants ou abrasifs aromatiques chlorés. Ne jamais plonger connecteurs électriques dans l'eau ou d'autres liquids.

Chapter **2**

Getting Started

2.1 A Quick Tour of GWS-QX

Before you start to set up GWS-QX, take a moment to become familiar with the locations and purposes of the controls, drives, connections and ports, which are illustrated in the figures below.

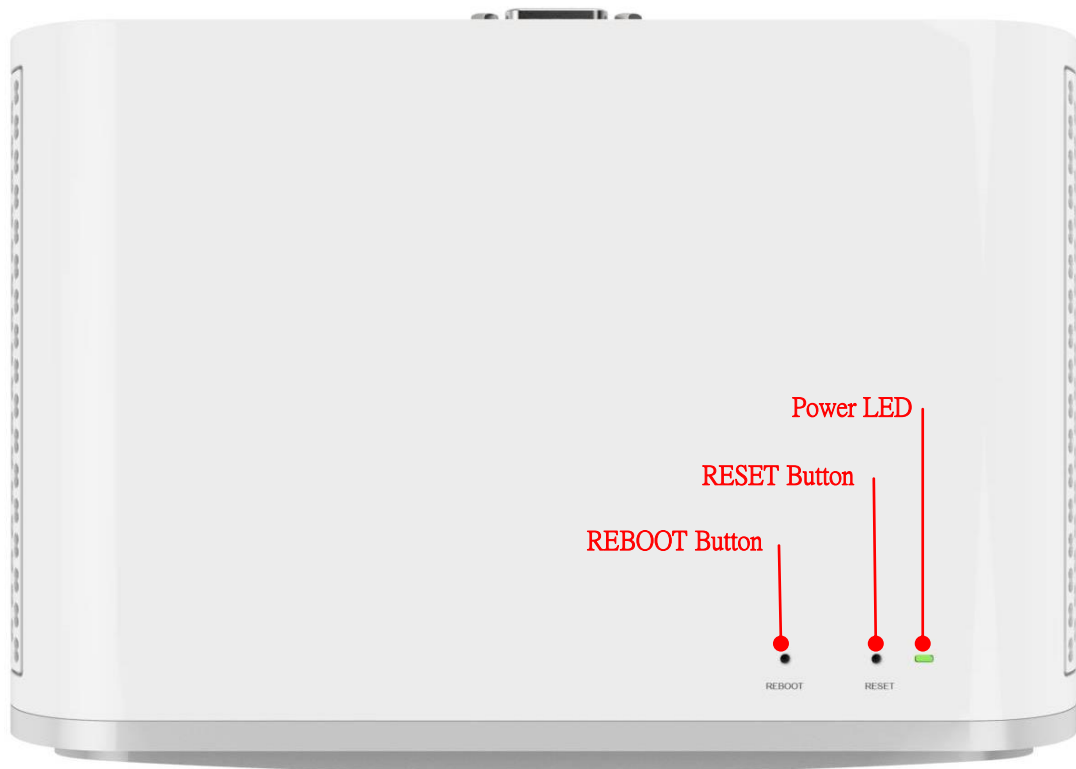When placed upright on the desktop, the GWS-QX top side appears as shown in Figure 2.1.
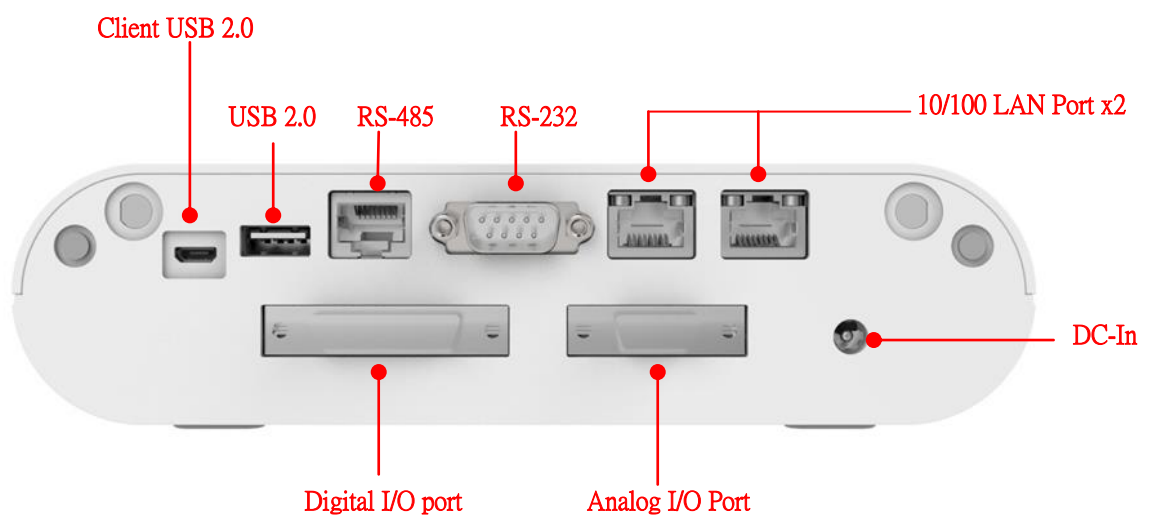

Figure 2.1 Top View

Figure 2.2   IO Side View

www.ECS.com.tw

Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.

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