User's manual
DC20

V1.0

IMPORTANT SAFETY INSTRUCTUIONS

Please read and observe all warnings and instructions given in this manual and those marked on the unit before use of the unit.

⚠ DANGER

★ Avoid direct contacts to water, moisture, any sorts of beverages, excessive heat and magnetic sources.

★ Do not handle the unit in with wet hands, especially when plugging or unplugging, to avoid electric shocks.

⚠ WARNING

★ Do not disassemble, modify, tamper or repair the unit yourself. Refer all servicing to qualified service personnel.

★ Do not drop or expose the unit to excessive shock.

★ Keep the device out of direct sun light, wind, high-humidity and dusts.

★ Plug in USB Transmitter properly. If reversely plugged, that may cause harmful damages.

★ Do not place the unit on hot area or block the ventilator of the unit to avoid overheat.

⚠ CAUTION

★ Do not relocate the unit while in use. That may cause malfunctioning of the unit.

★ Use the correct power source only.

★ Never place the unit or AC adaptor on a heat sensitive surface

★ Never allow any liquids to spill into any part of your product, and never expose the product to rain, water, seawater or moisture.

★ Never operate the unit during a thunderstorm.

FCC information
FCC notice "Declaration of Conformity Information"

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

FCC Conditions

This equipment has been tested and found to comply 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.

FCC Notice "Equipment Authorization" Information

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.
This device is authorized under Title 47 CFR 15.519 (the FCC Rules and Regulations).
The operation of this device is subject to the following restriction:
The changes or substitutions of the antennas which are furnished with the device is prohibited.
UWB devices may not be employed for the operation of toys. Operation onboard an aircraft, a ship or satellite is prohibited.

IC Statement

This UWB RF apparatus complies with Canadian RSS-GEN.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF exposure

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

EU Limitations

This device may not be installed into road or rail vehicles.

This product is sold to all CE countries.

BE	GE	CZ	DK	DE	EE	IE
EL	ES	FR	HR	IT	CY	LV
LT	LU	HU	MT	NL	AT	PL
PT	RO	SI	SK	FI	SE	UK

Declaration of conformity

We, DANBITECH CO.,LTD. of

120,Daeseong-ro 180beon-gil, Sangdang-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea
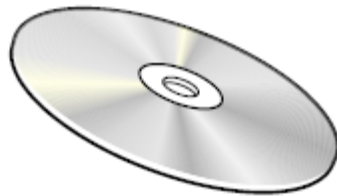
declare under our sole responsibility that our product.

Contents

1. Package Components

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2. Computer requirements

❖ 1.2 GHz or higher processor (Intel® Pentium®/Celeron® family, or AMD K6®/AMD Athlon™/AMD Duron™ family, or compatible processor recommended. Intel® Core™ 2 Duo 2.0 GB or higher processor recommended for optimal video performance.)

❖ 512 MB memory or higher (1 GB memory or higher recommended)

❖ USB 2.0 or USB 3.0 port

❖ 50 MB of available disk space

❖ Microsoft® Windows® XP (32-bit edition) with SP2/SP3, or Microsoft® Windows Vista® (32-bit or 64-bit editions) with SP1 or Microsoft® Windows 7, 8 ® (32-bit or 64-bit editions).

3. Summaries

3.1 Features

Pre-tested, pre-certified UWB Radio Module

☐ Removes the risk of RF layout and certifications (Quick TTM)

☐ WiMedia Band Groups 1, 3, and 6

☐ Single HW SKU for Worldwide use (FW programmable)

☐ USB 2.0 Downstream Interface

☐ WiMedia TFCs 1 - 10 in each band group (minimum of 10 channels anywhere in the world).

☐ All WiMedia Data Rates: 53.3 to 480 Mbps

3.2 Flexible use

Can be used as either a Host or Device Radio

☐ Supports Multiple FW options:

Wireless USB

- Host (HWA Firmware)

- Device (DWA Firmware)

Driverless type(NoWire™)

TCP/IP Firmware

3.3 Application

Host Side Radio: Notebooks, Tablets, HDTVs, Media Players, Set-Top-Boxes

☐ Device Side Radio: Monitors, Projectors, Docking Stations, Hard Drives

3.4 Description

The DC20 UWB Radio Module is a pre-test radio module which can be used for both host and device side applications. It supports both driver based solutions with Alereon's Wireless USB Manager User application for Microsoft operating systems or Alereon's NoWire™ driverless firmware solutions for OS independent Wireless USB or IP based WLP applications.

The DC20 is based upon Alereon AL5100 UWB Radio Transceiver and the Alereon AL6301 MAC/Baseband. It supports UWB/WiMedia Band Groups 1, 3 and 6 to provide 10 or more channels of

operation in any country of the world.   The card requires a single 3.3 volt power supply and provides a standard USB 2.0 downstream interface to USB devices.
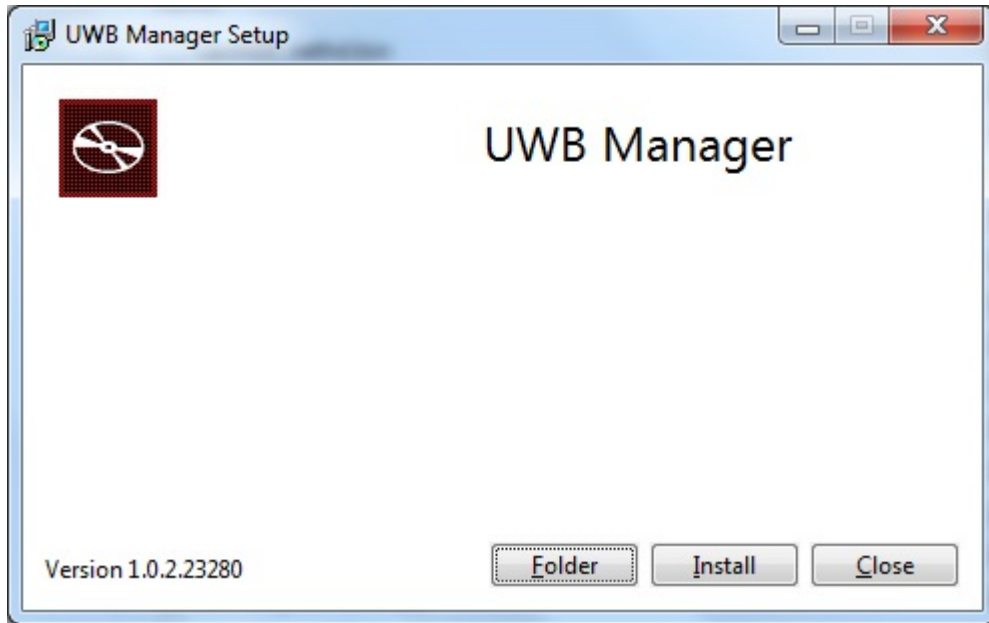
The DC20 is a versatile design that can support a variety of applications. There are several different Firmware (FW) options that can be selected depending on the specific application and product feature set requirements. For standard Wireless USB applications, the Host side radio but be programmed with HWA Firmware while the Device side radio must contain DWA Firmware. A strapping resistor must also be configured to determine either Host or Device operation (See Notes on Pin-out table below). Other driverless Firmware options are available depending on specific downstream class types, operating systems and protocol requirements for the specific application.
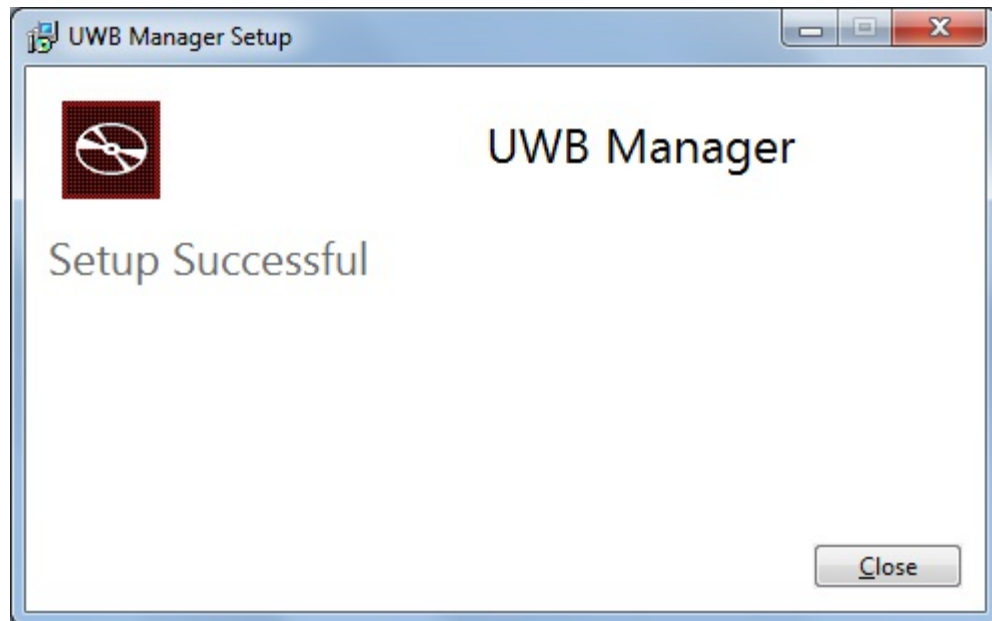
4. S/W installation

- Put the CD to computer CD driver which is provided.

- Click the installation program in the CD
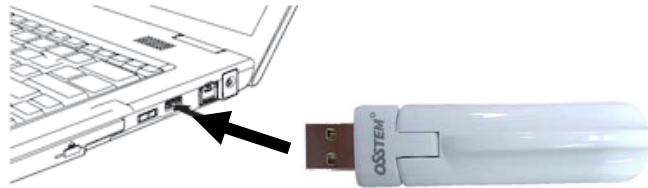
- Install Wireless USB driver.   Click Install

- Click the finish and complete the wireless manager program.

- Reboot the computer after finishing the installation.

5. Connecting Wireless USB dongle to USB port

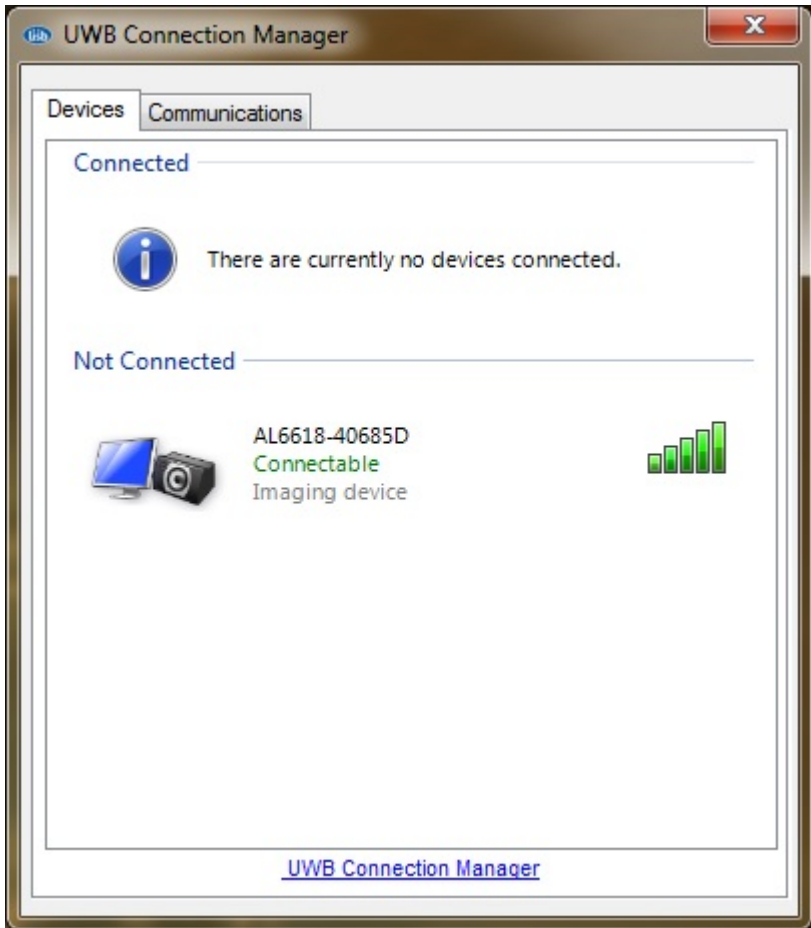● Plug the USB dongle to the USB port in computer.

NOTE: you can use USB extension cable if your computer is desktop PC. Be careful there is no object between USB dongle and receiver.
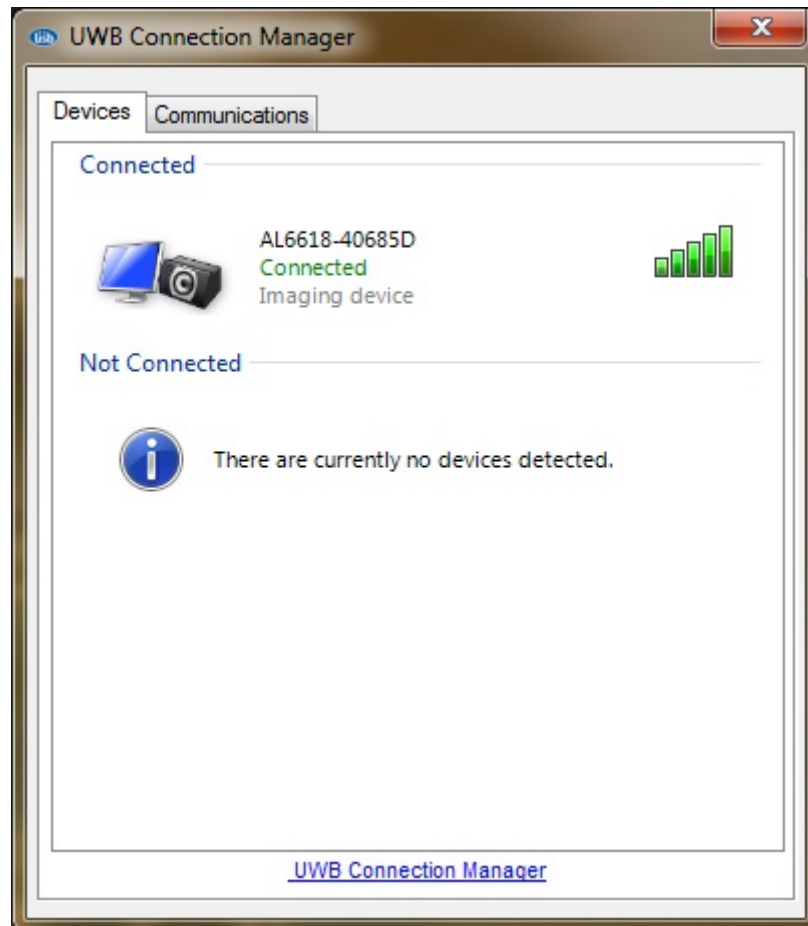
● New hardware device installation message is showed in the tray. Please wait until completing of the installation.

● If new device installation is completed, click the "wireless Connection Manager" for running the program. Then you can see the connectable imaging device.

(Wireless Connection Manager icon)

UWB Connection Manager

Devices | Communications

Connected

There are currently no devices connected.

Not Connected

AL6618-40685D
Connectable
Imaging device

UWB Connection Manager

- If you select and click the Imaging device and it becomes Connected Imaging device. If you want automatic connection, click the right button of mouse and select "Set as default".

6. Cautions

This device uses ultra high frequency radio. Therefore if there's an object like concrete wall or furniture etc, between USB dongle and receiver device, the radio performance will be decreased much. Any obstacle objects should not be between USB dongle and receiver. The operating range is 5~10m and it can be varied according the environment.

7. DC20 specification

Wireless USB dongle	
Model Name	DC20
Wireless Technology	UWB(Ultra Wide Band)/IEEE 802.15.3a
Data rate	53.3~480Mbps
Band Group (BG) for USA	3 (6.336 GHz ~ 7.920 GHz)
Band Group (BG) for Europe	3 (6.336 GHz ~ 7.920 GHz)
PC interface	USB 2.0
Power	5V d.c. (USB BUS power)
Operating System Support	Microsoft Windows XP with SP2 Microsoft Vista 32/64 Microsoft Windows 7, 8.1, 10
Operating condition	5 to 35℃(41 to 95 ℉) / 20 to 80 % relative humidity
Non-operating condition	-20 to 65℃(-4 to 149 ℉)/10 to 90% relative humidity
Dimension(mm) with cover	20.5(W) x 85.5(H) x 16(D)
Weight(g)	15.3