Microsoft

MOTION CONTROLLER MANUAL

Document Version 1.0

Distribution:

Internal Only ☐

External All ☐

External Restricted ☒   If restricted, specify restricted to whom:

Quanta Computer Inc.

CONTENTS

MOTION CONTROLLER REQUIREMENTS

Motion controller proper operation requires:

- Windows Mixed Reality compatible PC
- Windows Mixed Reality compatible Head Mounted Display (HMD)
- Windows 10 creators update software release

MOTION CONTROLLER LAYOUT

FIRST RUN EXPERIENCE

CONNECTING YOUR CONTROLLER

The first run experience will guide the user through powering on and connecting the controller. It's also possible to power on and connect the controller through the native Bluetooth page in Windows Settings.
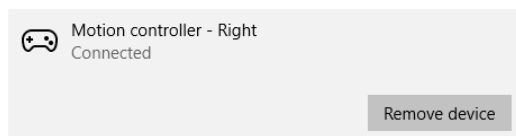
BEFORE SETUP

Before pairing, you will need:

- Two motion controllers.
- Batteries for the controllers. Each controller takes two AA batteries.
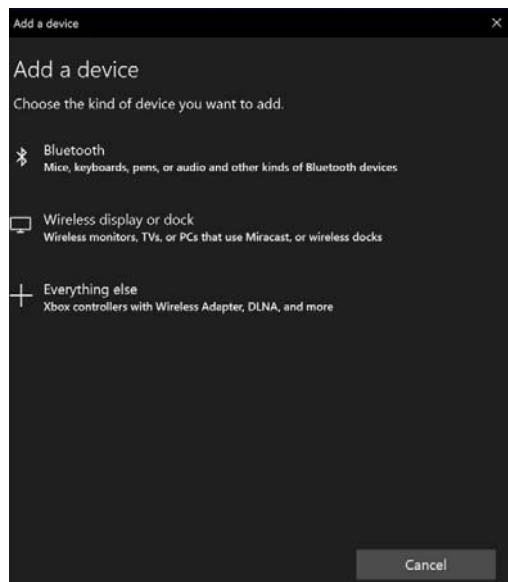- A Bluetooth dongle (if your machine doesn't support Bluetooth).

PAIRING YOUR CONTROLLERS FOR THE FIRST TIME

1. Choose one of the controllers to pair. We'll run through this process for each controller.
2. **Turn the controller on** by pressing the Windows button for 2 seconds. You should see the LEDs on the constellation flash and device vibrate, indicating that the device is on.
3. Go to **Settings** -> **Devices** -> **Bluetooth and other devices.**
4. **Remove old controllers,** if necessary. If you've already paired a different controller in the past, remove it by clicking on the controller that appears in the panel and choosing 'Remove Device'.
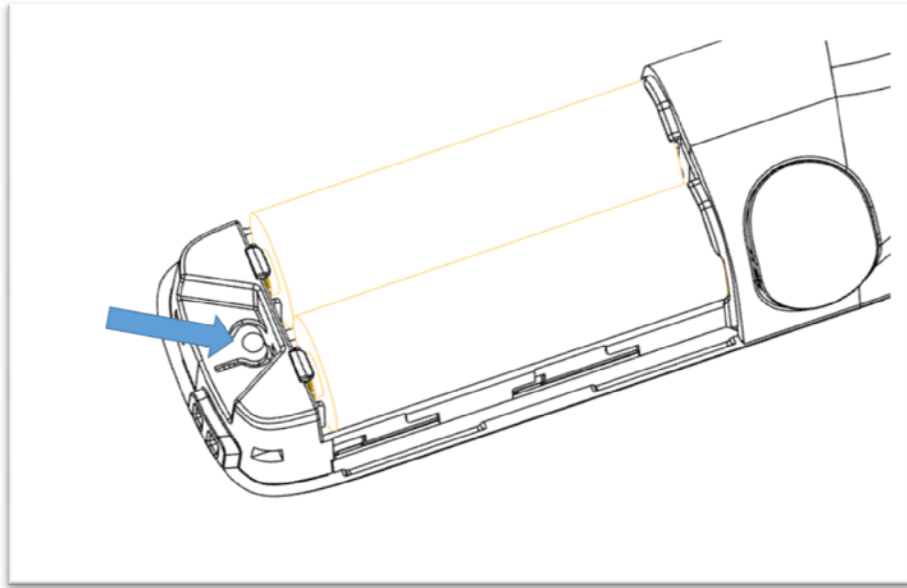

5. **Pairing Your Device**
   1. Click **Add Bluetooth or other device** on the Settings menu.

   2. Choose Bluetooth
   3. Remove the battery cover.

4. Press pairing button more than 3 seconds on one device.
   - The pairing button is located underneath the battery door next to the batteries.

5. Device LED constellation will blink, indicating that device is in pairing mode. Device is on pairing mode 60 seconds at the time.
6. You should see "Motion Controller - Left" or "Motion controller - Right" appear in the Bluetooth menu.
7. Select "Connect", device will make single vibrate when connected. Windows Bluetooth settings should indicate state as 'Connected'.
8. Replace the battery cover.
9. Repeat these steps to pair the other motion controller.

Device can be bonded with single host PC at the time.

You can un-pair device by removing controller from Windows Bluetooth setting or setting the device again into pairing mode.

RECONNECTING AFTER FIRST PAIRING

- After device has been successfully paired with host, it will reconnect next time when powered on.

POWERING OFF CONTROLLER

- Press Windows button for 4 seconds to power off the controller. The device will vibrate twice and the LEDs will turn off.
- If device is not tracked or it is motionless 30 seconds, controller will move to low power state to save power, picking up controller or pressing button will wake up the device.
- Your device will also automatically power off if there has not been motion for 10 minutes.

DEVICE INDICATORS

Motion controller uses LED constellation ring and haptics for indicating about its state.

Activity	Trigger	Indication
Power on/off	Windows button press	LED goes on/off and device vibrates 2 times
Idle	Controller not tracked by HMD or motionless for 30 seconds	Light blink slowly every 3 seconds to indicate the device is in idle mode
Pairing	Pairing button press	Lights slowly pulse when the device is in pairing mode
Connect/Disconnect	Controller connected or disconnected to/from host PC	Device vibrates once
Low Battery Level	During power on when battery level is "Low"	Lights blink twice when the device is turned on
Critical Battery Level	During power on when battery level is "Critical"	Light will blink three times when turned on if the battery is critically low. It will then turn off by itself.
Device Update	When firmware update started	LED constellation has circular blinking pattern

DEVICE RECOVERY

If the controller isn't working correctly and you're unable to update the device, you can always restore the device to factory conditions. To Recover your device:

1. Power off device

2. Open battery cover (Ensure you have good batteries when performing device recovery)

3. Press pairing button

4. Keep the pairing button pressed and power on the device by pressing home/Windows button for 4 seconds

5. Release both buttons and let the device power on, It's ok if it takes a few seconds for it to turn on (there is no indication during device recovery process)

6. Once the recovery is complete, you'll need to pair the controller to your PC again

7. After connecting with host and HMD device will update firmware to latest available

UPDATING DEVICE FIRMWARE

Motion controller firmware will be updated automatically when there is new firmware available through Windows Update service.

Firmware update will happen immediately after establishing connection with HMD and controller cannot be used during the update. Update duration depends on new firmware to be programmed and is indicated by illuminating LED constellation in circular blinking pattern.

After update is completed device re-connects to host PC and is ready to use.

Federal Communication Commission Interference 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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 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 Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Radiation Exposure Statement :

The product comply with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Battery

This product use non- chargeable AA battery 2 pcs per controller.

"Use only batteries listed in the user-instructions" .

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED
BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING
TO THE INSTRUCTIONS

CE

Declaration of Conformity

Hereby, Quanta Computer Inc. declares that the radio equipment type A85 CyK is in compliance with,

EMCD Directive: 2014/30/EU

- EN 300 328 V2.1.1: 2016-11

RED Directive 2014/53/EU

- EN 301 489-1 V2.2.0 2017-03 (draft)

- EN 301 489-17 V3.2.0 2017-03 (draft)

- EN 55032:2015+AC:2016-07

- EN 61000-4-2 : 2009

- EN 61000-4-3: 2006+ A1: 2008 + A2: 2010

LVD Directive 2014/35/EU

- EN 60950-1: 2006/ A11: 2009 / A1:2010 / A12: 2011 / A2: 2013

Year to begin affixing CE marking 2017.

Radio Type / Description		Transmitter Frequency (MHz)	Maximum Outut Power
Bluetooth	BR + EDR	2402 ~ 2480	12 dBm