



A **THOMSON** COMPANY

Product Specifications Document

**Gyro-Equipped, Universal
Windows XP Media Center RCU
North American Version**



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I.

I. Product Description

This product is a universal 4-in-1 (3 IR devices + 1 RF device) Media Center Remote Control with an embedded MG1101 micro gyro for motion sensing, in-air control of floating cursor. The remote control features IR code database and IR learning capabilities to universally control standard home theater devices such as TVs, VCRs, cable/SAT boxes, etc. The remote control is also equipped with a 2.4MHz transceiver to send cursor movement information and other commands to the PC via a USB or embedded receiver.

A. **Key Product Features:**

- Gyration's patented, motion-sensing gyroscope for translating in-air motion into cursor control, gestural commands or other on screen controls
- Universal IR (with optional learning function) remote control functionality for communicating with home theater components and OEM device(s)
- RF transceiver for communicating with PC from up to 100' with no line-of-sight requirement
- Microsoft Windows XP MCE certification and Green Button (eHome) support
- Backlighting option
- Powered by two AA batteries

B. **Key Components:**

- 54 button remote
- Gyro activate with R/L mouse button cluster as per Microsoft XP MCE remote Control Specification Document
- 2.4GHz RF transceiver
- IR emitter and sensor for home theater device control & IR learning

C. **Design:**

- State-of-the-art aesthetic and ergonomic design performed by award winning industrial designers
- Ergonomically designed for the longer GUI-driven entertainment sessions that a remote control of this nature allows
- Includes all of the buttons and functions necessary for Microsoft certification, including official Green Button

II. Product Configuration Options

This document describes the premier, Gyro-equipped remote control. OEMs also have the flexibility to offer a choice of various levels of Gyration remote controls based on their customers' needs. This family approach allows a low-end sell-in with an upgrade path. The table below briefly describes the options and their associated components:

Description	Gyro	Protocol	Learn	PC Control
4-in-1 Universal, Gyro-Equipped	YES	RF + IR	YES	HTPC or XP MCE
Single device (PC), Gyro-Equipped	YES	RF	NO	HTPC or XP MCE
4-in-1 Universal, RF	NO	RF	NO	HTPC or XP MCE
4-in-1 Universal, IR	NO	IR	YES	NO
Single device, IR	NO	IR	NO	NO

III. Industrial Design



IV.Button Layout - Windows XP MCE Systems

Button Cluster Locations

	Button Cluster	Function
	A	RCU mode selection and power
	B	Transport control
	C	Menu navigation
	D	Gyro button cluster
	E	Volume and Channel control, eHome (MCE Green Button), Mute
	F	Media Center shortcuts
	G	Alpha-numeric keypad
	H	RF Connect, Setup, Last, DVD Menu, Input
		Additional buttons needed for RF setup, Media Center DVD and TV Input support

RCU Mode Selection



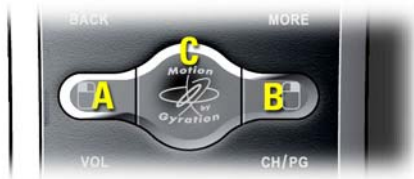
A	Puts RCU into <i>PC control mode</i> for communicating with Media Center PC via RF protocol.	
B	Puts RCU into <i>TV control mode</i> for communicating with TV via IR protocol.	
C	Puts RCU into <i>AUX control mode</i> for communicating with additional learned device via IR protocol.	
D	Puts RCU into <i>CAB/SAT control mode</i> for communicating with cable or satellite set-top box via IR protocol.	
E	PC, TV, AUX or CAB/SAT mode: Powers on/off the selected device.	PC Mode: Issues a standby command. If the system is active, the first button press puts it into standby mode and the second button press issues a power down command. If the system is already in standby mode, a button press will awaken.
F	Transmit LED indicator for RF and IR transmission	

Menu Navigation



	TV, AUX or CAB/SAT mode	PC Mode
A	No action, or as defined by selected device	Brings live TV to the front to the last channel user was watching.
B	No action, or as defined by selected device	Invokes the EPG
C	No action, or as defined by selected device	Goes back one location of the UI back stack
D	No action, or as defined by selected device	Provide information if available for the focus point
E	Menu Navigation Up	Moves the focus point up one location, if at top of the screen takes no action
F	Menu Navigation Right	Moves focus point right one position, if at rightmost position takes no action
G	Menu Navigation Down	Moves the focus point down one location, if at bottom of the screen takes no action
H	Menu Navigation Left	Moves focus point left one position, if at leftmost position goes back 1 page in the UI stack
I	Performs action indicated by focus point	Performs action indicated by focus point

Gyro Activation / Select



A	Simulates a left-mouse button-click in PC mode
B	Activates gyroscope for motion-sensing cursor control, motion-sensing menu navigation, or other motion-sensing features
C	Simulates a right-mouse button-click in PC mode

Channel / Volume Control & Media Center Green Button



	PC, TV, AUX or CAB / SAT mode	PC Mode
A	Go to Media Center Home page, launch Media Center if not running already	Go to Media Center Home page, launch Media Center if not running already
B	Increment the current channel by 1	Increment the current channel by 1, if in a list view move forward a page in the list
C	Decrement the current channel by 1	Decrement the current channel by 1, if in a list view move back a page in the list
D	Mute selected transport, if applicable	Mute the entire PC volume, toggle mute state
E	Decrement the current volume by 1 unit	Decrement the current volume by 1 unit, if muted, un-mute the volume first
F	Increment the current volume by 1 unit	Increment the current PC volume by 1 unit, if muted un-mute the volume first

MCE Shortcut Buttons



A	Acts as a shortcut to the "My Pictures" page
B	Acts as a shortcut to the "TV Home" page
C	Acts as a shortcut to the "Music" page
D	Acts as a shortcut to the "My Videos" page

Transport Control



	PC, TV, AUX or CAB/SAT mode:	PC Mode
A	Puts selected device into <i>Stop</i> mode, if supported	Stops media playback and positions pointer to start of media
B	Puts selected device into <i>Pause</i> mode, if supported	First button press pauses the media at present position. Subsequent button presses toggles between pause and playback at present position pointer.
C	Puts selected device into <i>Fast Forward</i> mode, if supported	First press speeds up the time base of the media stream to the first FF value (3X). If media is a slide show, skips to next picture. Subsequent button presses cycle through the FF speed values looping through 0 (normal speed) 3X, 20X, 60X. If slide show, skips to next picture.
D	Skip command, if supported by selected device	Skips ahead an increment: CD and Playlists skip to next song. DVD skips to next chapter. Slide show skips to next picture. PVR skips 29 seconds
E	Puts selected device into <i>Play</i> mode, if supported	Start (if paused, continue) playback of media at present position pointer. Used by Media Center for Media Center media, PVR, CD/DVD, playlists and slide shows.
F	Replay command, if supported by selected device	Rewinds the position pointer an increment: CD and Playlist rewinds to previous song. DVD rewinds to previous chapter. Slide show rewinds to previous picture. PVR rewinds 7 seconds
G	Puts selected device into <i>Rewind</i> mode, if supported	First press speeds up the time base and reverses direction of the media stream to the first rewind value (3X). If media is a slide show, skips to previous picture. Second press cycles through the Rwd speed values looping through 0 (normal speed) 3X, 20X, 60X. If media is a slide show, skips to previous picture
H	Puts selected device into <i>Record</i> mode, if supported	Records the TV show to disk. Starts recording at the beginning of the show as defined by the EPG (if the pause buffer enables it)

Numeric Keypad

		PC, TV, AUX or CAB / SAT mode:	PC Mode
	A	Standard 1-9, alphanumeric	Standard 1-9, alphanumeric
	B	Inserts a * symbol, if supported by selected transport	*
	C	Inserts a # symbol, if supported by selected transport	#
	D	Clear, if supported by selected transport	Clear
	E	Enter, if supported by selected transport	Enter

RF Sync, Setup, DVD Menu, Input

	A	Accesses the TV or other IR device's setup menu
	B	Toggles between previously viewed channels
	C	Synchronizes the RF remote with the RF receiver
	D	Toggles between TV inputs
	E	Invokes the DVD menu per the MS spec

V. RF Protocol Information

A. General Information

- 2.4 GHz protocol delivers a range of up to 100' with no line-of-sight requirement
- Small USB dongle style receiver
- Over 800 possible channels with interference avoidance algorithms
- Low current consumption
- Up to 100 foot range with no line-of-sight
- High resistance to interference from other 2.4GHz sources

B. *Synchronizing Remote Control with RF Receiver*

- 1) Insert batteries into remote
- 2) Connect USB transceiver to PC. Windows MCE will automatically detect the transceiver and load the appropriate device driver.
- 3) Press and release the connect button on the USB transceiver
- 4) Press the PC button at top of remote to put RCU into PC control mode and then press the Connect button on the RCU.

VI. IR Protocol Information

A. *Learning Procedure*

- 1) Simultaneously press and hold:
 - o The component button on the Gyration RCU that applies to the function you will be adding (TV, AUX, CAB/SAT).
 - o The RECORD button on the Gyration RCU.
- 2) Keep pressing both buttons until the component button light turns off, flashes, and turns off. Release both buttons.
- 3) On the Gyration RCU, press and release the button where you want to store the new function (the component button turns off and then back on).

Note: If you press an invalid button on the TV remote, the component button flashes 4 times to alert you. You'll have to repeat step 4.
- 4) Position the Gyration RCU and the source RCU facing each other with no more than 2 inches apart. Press and hold the button of the source RCU that has the functionality you are recording. Keep pressing the button until the Gyration RCU component button light turns off and back on (the function has been saved to the TV remote).

Note: If all component buttons flash 4 times, the function wasn't learned. Try again starting with Step 4.
- 5) The Gyration RCU remains in "learning mode" so you can continue adding functions to different buttons by repeating steps 3 and 4. Or, press CLEAR to exit learning mode.

FCC Interference Statement

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Regulatory Information

Attention! This device emits radio frequencies and has not been certified by the FAA for use onboard aircraft. Do not use this device at any time onboard civil aircraft. To minimize the possibility of interference, power off the Media Center Remote to ensure the device remains off during flight.

FCC Statement

The Media Center Remote and Receiver have 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 radiates 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 (television, radio, etc.).
- 2.** Increase the separation between the equipment and receiver.
- 3.** Connect the equipment to 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 additional help.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Contact Gyration, Inc., 12930 Saratoga Avenue, Bldg. C, Saratoga CA 95070. Technical Support: 408-973-7086. These devices comply with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. these devices may not cause harmful interference, and
2. these devices must accept any interference received, including interference that may cause undesired operation.

The Media Center Remote operates in the frequency band of 2.403 to 2.479 GHz with RF output power of less than 0.62 Milli Watts.

Warning: Using these products in any way other than as described in this manual or altering the antenna in any way may violate FCC rules. **FCC ID: SKORC24112005A Media Center Remote; Receiver: AS00764-001**

Declaration of Conformity

We: Gyration, Inc.
12950 Saratoga Avenue, Suite C
Saratoga, CA 95070

Declare under our sole responsibility that the product

USB MINI DUAL RECEIVER
PART NO. AS00764-001

Complies with Part 15 of the FCC Rules

Operation is subject to the following two conditions:

1. these devices may not cause harmful interference, and
2. these devices must accept any interference received including interference that may cause undesirable operation.

Canadian Radio Interference Regulations

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.