

UsbThumb & Shields Pinouts

This document describes how UsbThumb / Motion Gamepad and its shields interconnect with each other

Pin #	UsbThumb		acc_gyro		gyro_yaw		Motion Gamepad	
	Label	Function	Label	Function	Label	Function	Label	Function
1	GND3	Ground	NC1	Not connected			GND3	Ground
2	GND2	Ground	NC2	Not connected			GND2	Ground
3	VDD2	VDD, Built-In Voltage Regulator Output 3.3V	NC3	Not connected			VDD2	VDD, Voltage Regulator Output +3.3V
4	VDD	VDD, Built-In Voltage Regulator Output 3.3V	NC4	Not connected	NC4	Not connected	VDD	VDD, Voltage Regulator Output +3.3V
5	VPP	RA3/_MCLR/VPP	NC5	Not connected	NC5	Not connected	VPP	Button a-1(b-5) / PIC VPP / Pull-up VDD
6	RC5	RC5/CCP1/P1A/T0CKI	NC6	Not connected	NC6	Not connected	RC5	Button a-7(b-3) / Pull-up VDD
7	RC4	RC4/P1B/C12OUT/SRQ	NC7	Not connected	NC7	Not connected	RC4	Button a-6(b-2) / Pull-up VDD
8	RC7	RC7/AN9/SDO/T1OSCO	NC8	Not connected	GZ4	Gyro Amplified (x4) Z-axis Output (rotation in xy plane)	RC7	Button a-8(b-4) / Pull-up VDD
9	RB7	RB7/TX/CK	NC9	Not connected	NC9	Not connected	RB7	Button a-5(b-1)
10	PGD	RA0/D+/PGD	NC10	Not connected	NC10	Not connected	PGD	USB D+ / PIC PGD
11	PGC	RA1/D-/PGC	NC11	Not connected			PGC	USB D- / PIC PGC
12	NC12	Not connected	GY	Gyro Non-Amplified, Before Filter Y-axis Output			NC12	Not connected
13	NC13	Not connected	GYF	Gyro Non-Amplified, Filtered Y-axis Output			NC13	Not connected
14	NC14	Not connected	NC12	Not connected			NC14	Not connected
15	RC1	RC1/AN5/C12IN1-/INT1/VREF	GY4	Gyro Amplified (x4) Y-axis Output (rotation in yz plane)			RC1	Analog Input: Gyro Y (rotation in yz plane)
16	NC16	Not connected	VREF	Gyro Reference Voltage +1.25V fixed			NC16	Not connected
17	RC2	RC2/AN6/P1D/C12IN2-/CVREF/INT2	GX4	Gyro Amplified (x4) X-axis Output (rotation in xz plane)			RC2	Analog Input: Gyro X (rotation in xz plane)
18	NC18	Not connected	GXF	Gyro Non-Amplified, Filtered X-axis Output			NC18	Not connected
19	NC19	Not connected	GX	Gyro Non-Amplified, Before Filter X-axis Output			NC19	Not connected
20	NC20	Not connected	NC20	Not connected			NC20	Not connected
21	NC21	Not connected	NC21	Not connected			NC21	Not connected
22	NC22	Not connected	NC22	Not connected			NC22	Not connected
23	RB4	RB4/AN10/SDI/SDA	NC23	Not connected			RB4	Button a-2(b-6)
24	RB5	RB5/AN11/RX/DT	NC24	Not connected			RB5	Button a-3(b-7)
25	RB6	RB6/SCK/SCL	NC25	Not connected	NC25	Not connected	RB6	Button a-4(b-8)
26	NC26	Not connected	ST	Gyro Self Test (High = Self Test Mode)	ST	Gyro Self Test (High = Self Test Mode)	NC26	Not connected
27	NC27	Not connected	PD	Gyro Power Down (High = Power Down Mode)	PD	Gyro Power Down (High = Power Down Mode)	NC27	Not connected
28	NC28	Not connected	HP	Gyro High Pass Filter Reset (High = Reset HP Filter)	HP	Gyro High Pass Filter Reset (High = Reset HP Filter)	NC28	Not connected
29	NC29	Not connected	3V3	VDD / On-Board Voltage Regulator Output +3.3V	3V3	Supply Voltage +3.3V	NC29	Not connected
30	VIN	Supply Voltage Input +5V (4V-7V OK*)	5V	VIN Supply Voltage Input +5V (4V-7V OK*)	NC30	Not connected	VIN	Supply Voltage/USB VBUS +5V (4V-7V OK*)
31	GND	Ground	GND	Ground	GND	Ground	GND	Ground
32	RC0	RC0/AN4/C12IN+/INT0/VREF+	AZ	Accelerometer Z-axis Analog Filtered Output			RC0	Analog Input: Accelerometer Z
33	RC6	RC6/AN8/_SS/T13CKI/T1OSCI	AY	Accelerometer Y-axis Analog Filtered Output			RC6	Analog Input: Accelerometer Y
34	RC3	RC3/AN7/P1C/C12IN3-/PGM	AX	Accelerometer X-axis Analog Filtered Output			RC3	Analog Input: Accelerometer X

* check datasheet of the voltage regulator used on your board for full VIN range, do not exceed the maximum allowed ratings