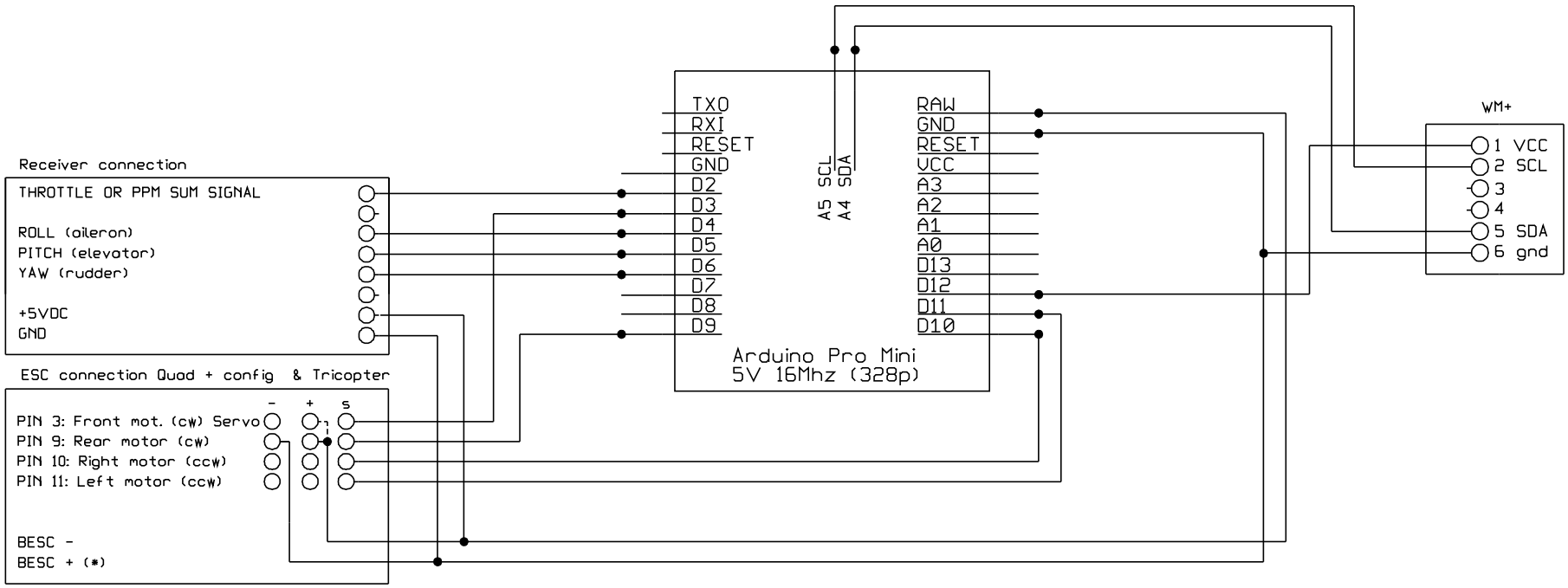


Note: ESC connection for Quad X config is different:

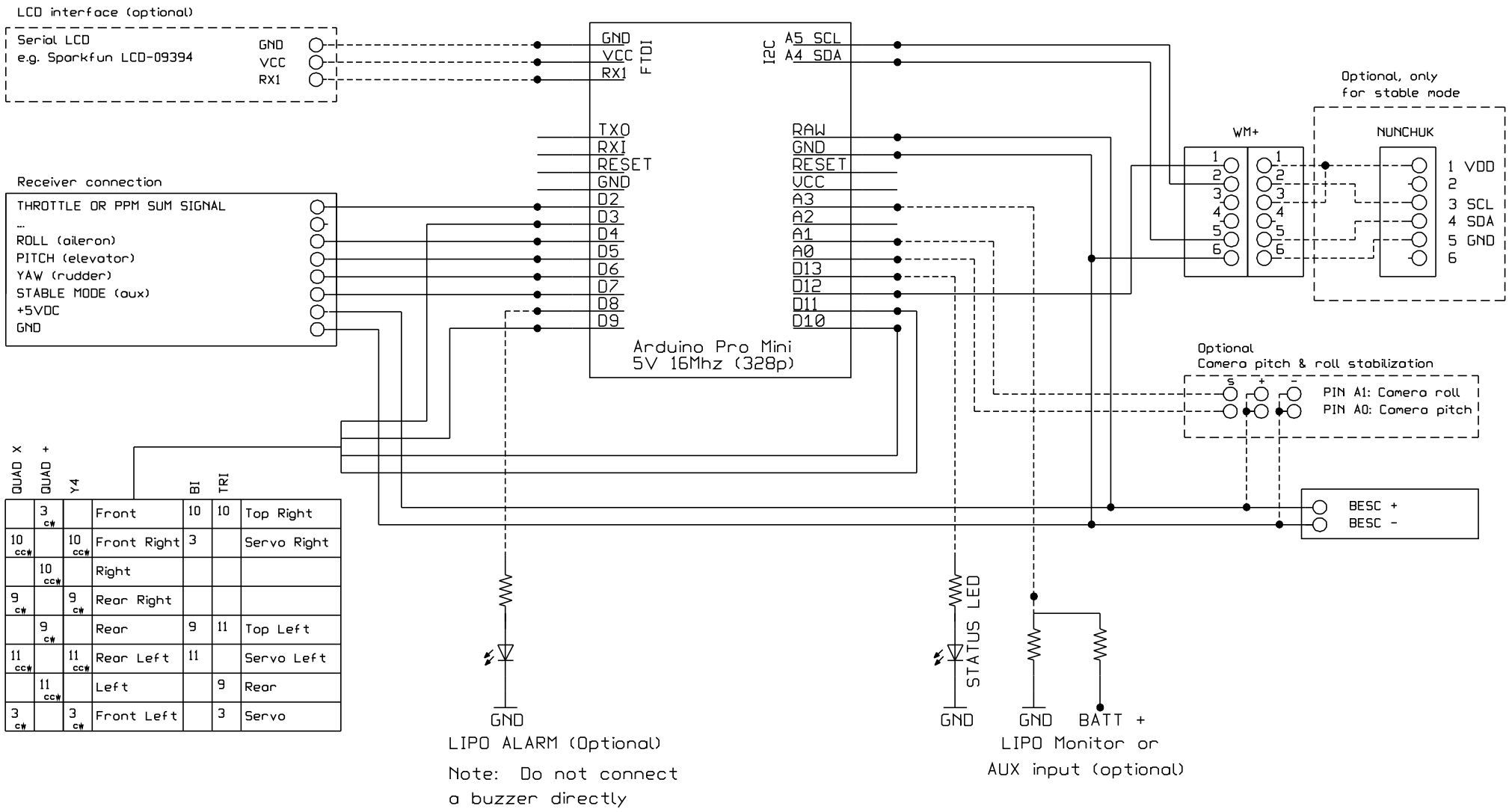
PIN 3: Front left motor (cw)
PIN 9: Rear right motor (cw)
PIN 10: Front right motor (ccw)
PIN 11: Rear left motor (ccw)

(*) BESC GND & + wires should not be connected in parallel.
The dashed line is for the supply of the servo only.
In a quad config it must not be connected.

Basic MultiWii connection diagram:

This is the most basic version of the MultiWii, it uses only the gyros from the Wii Motion Plus (WM+) and 4 input channels from the receiver.

Circuit Diagram		Drawing – number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date	BASIC connection diagram Tri or Quad copter	Revision	Sheet
26-04-11		1.7.1	1

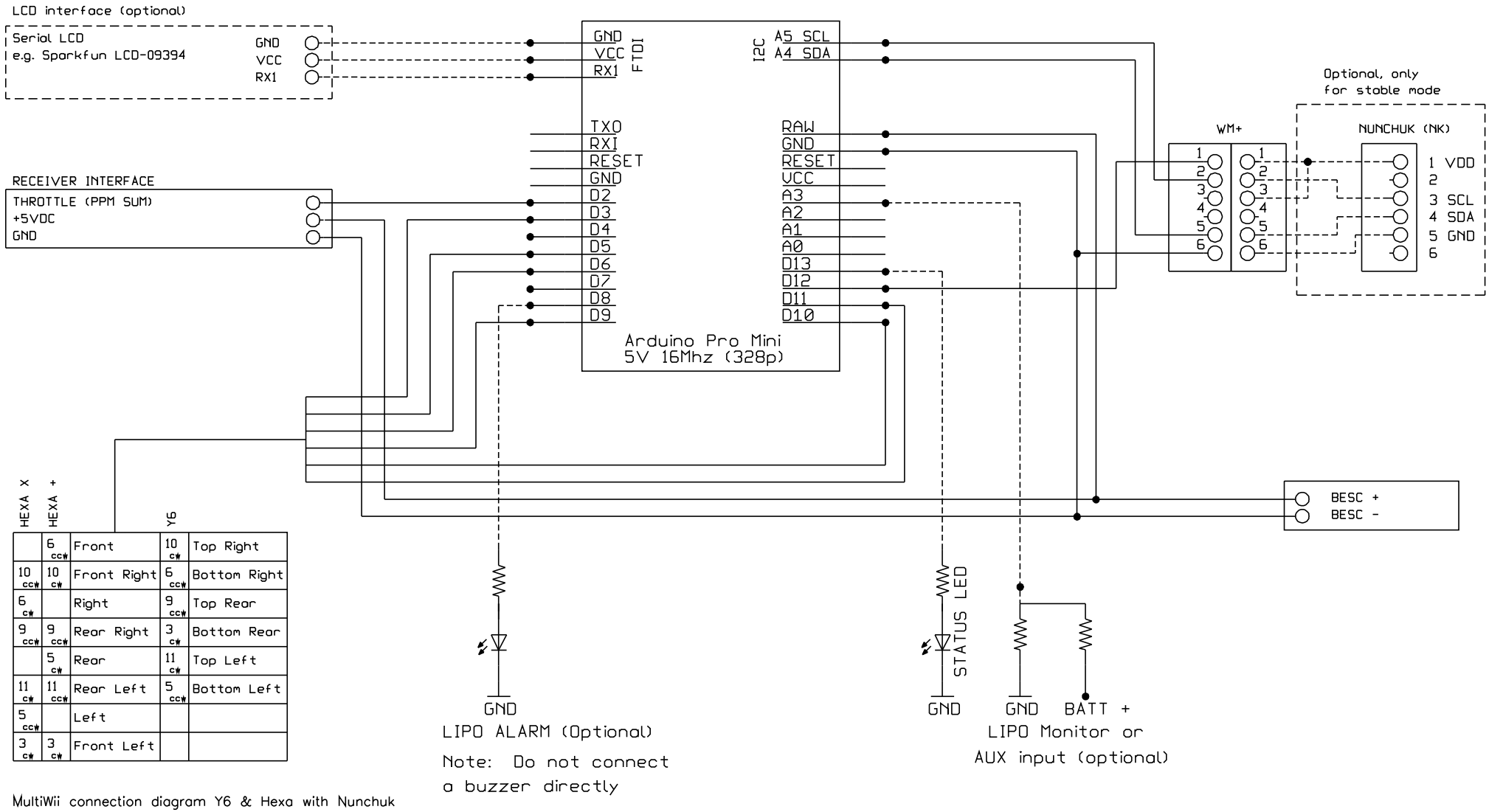


QUAD X	QUAD +	Y4		BI	TRI	
	3 cw		Front	10	10	Top Right
10 ccw		10 ccw	Front Right	3		Servo Right
	10 ccw		Right			
9 cw		9 cw	Rear Right			
	9 cw		Rear	9	11	Top Left
11 ccw		11 ccw	Rear Left	11		Servo Left
	11 ccw		Left		9	Rear
3 cw		3 cw	Front Left		3	Servo

MultiWii connection diagram with Nunchuk

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+), 5 input channels from the receiver and the accelerometer from the Nunchuk (NK) to achieve an auto stable mode. Optional is a battery voltage monitor with alarm, an external status led, camera pitch & roll stabilization & a LCD interface for PID tuning.

Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date	Full connection diagram Tri or Quad copter	Revision	Sheet
26-04-11		1.7.1	2

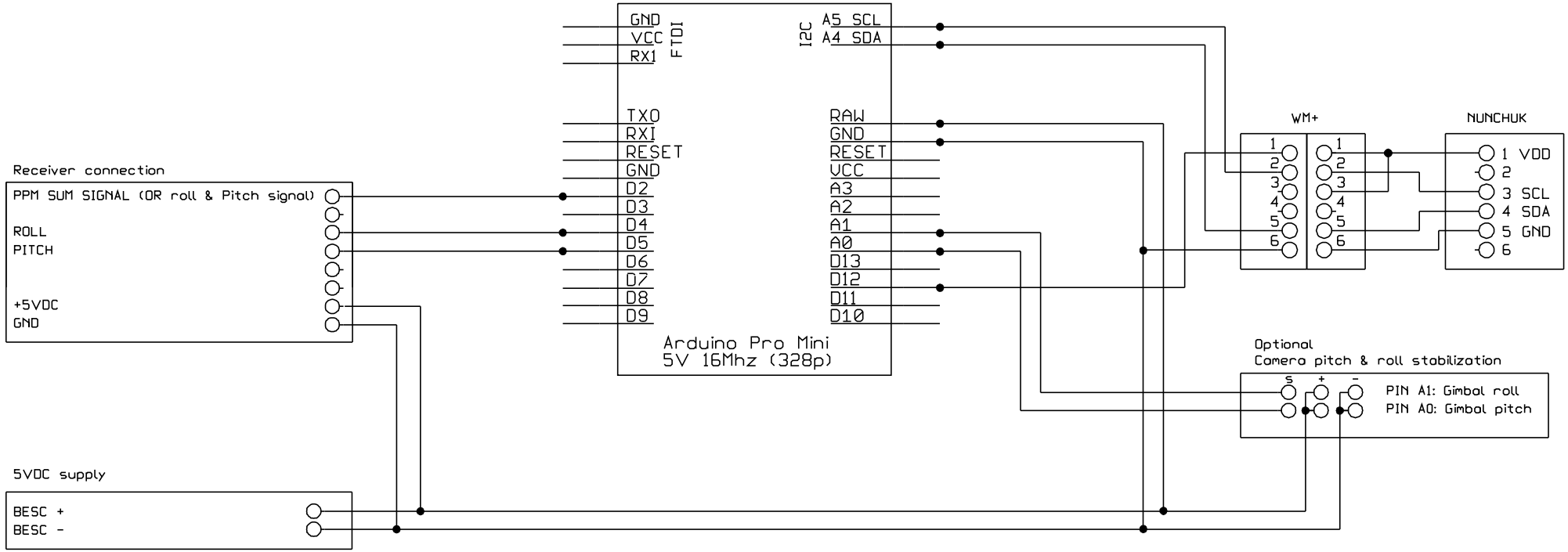


HEXA X	HEXA +		Y6	
	6 ccw	Front	10 cw	Top Right
10 ccw	10 cw	Front Right	6 ccw	Bottom Right
6 cw		Right	9 ccw	Top Rear
9 ccw	9 ccw	Rear Right	3 cw	Bottom Rear
	5 cw	Rear	11 cw	Top Left
11 cw	11 ccw	Rear Left	5 ccw	Bottom Left
5 ccw		Left		
3 cw	3 cw	Front Left		

MultiWii connection diagram Y6 & Hexa with Nunchuk

This version of the MultiWii uses the gyros from
the Wii Motion Plus (WM+), 1 PPM stream input from the receiver
and the accelerometer from the Nunchuk (NK) to achieve an auto stable mode.
Optional is a battery voltage monitor with alarm, an external status led,
and a LCD interface for PID tuning.

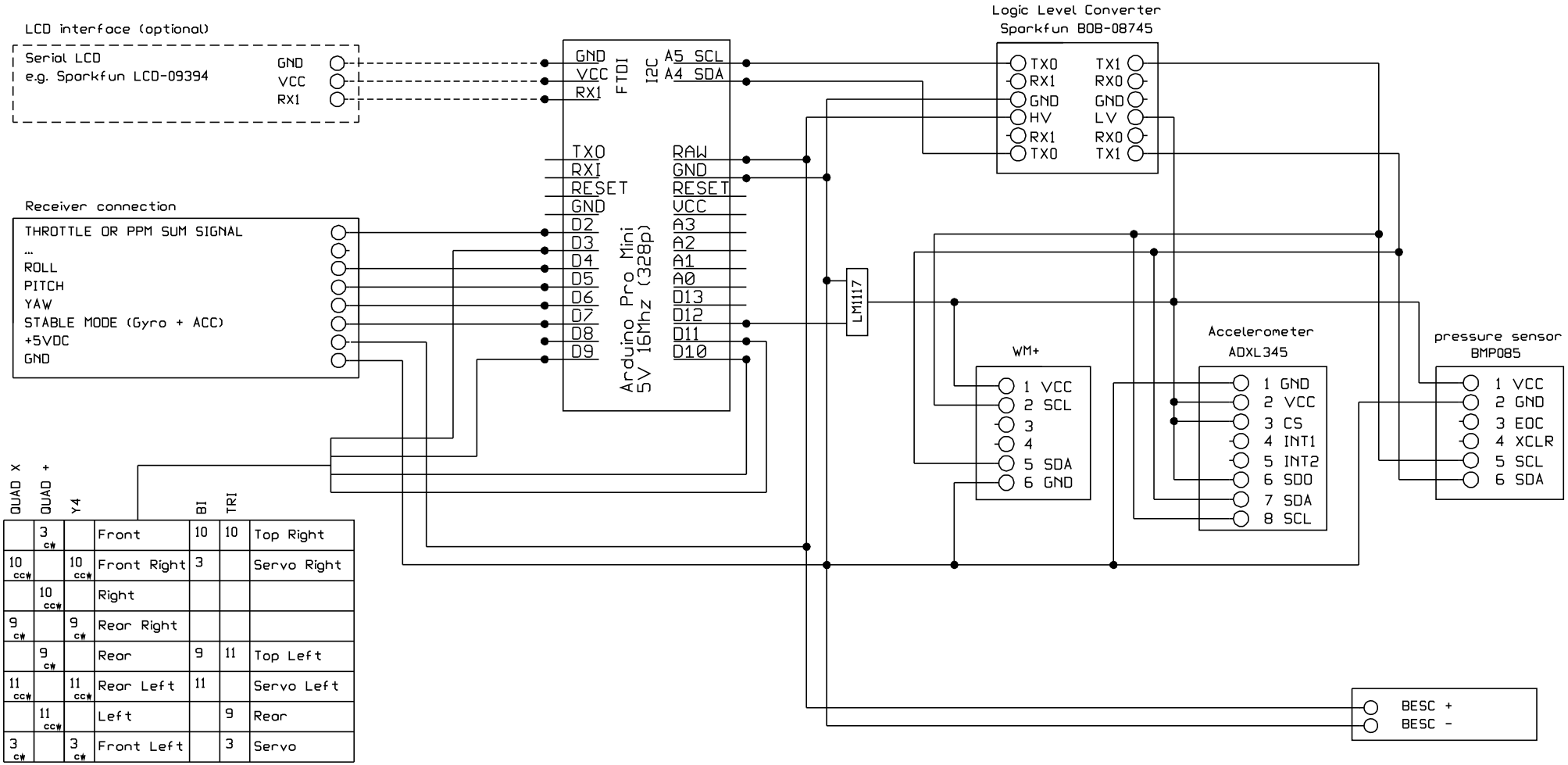
Circuit Diagram		Drawing – number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Y6 & Hexa layout	Berkely
Date		Revision	Sheet
26-04-11	Full diagram Y6 & Hexa	1.7.1	3



MultiWii Gimbal only connection diagram

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+), 2 input channels from the receiver (or the PPM sum signal) and the accelerometer from the Nunchuk (NK) to drive a gimbal pitch & roll stabilization.

Circuit Diagram: MultiWiiCopter (Alexinparis RC Groups)		Drawing – number: MultiWii Tri/Quadcopter	Drawn by: Berkely
Date: 26-04-11	Gimbal connection diagram	Revision: 1.7	Sheet: 4



QUAD X	QUAD +	Y4		BI	TRI	
	3 cw		Front	10	10	Top Right
10 ccw		10 ccw	Front Right	3		Servo Right
	10 ccw		Right			
9 cw		9 cw	Rear Right			
	9 cw		Rear	9	11	Top Left
11 ccw		11 ccw	Rear Left	11		Servo Left
	11 ccw		Left		9	Rear
3 cw		3 cw	Front Left		3	Servo

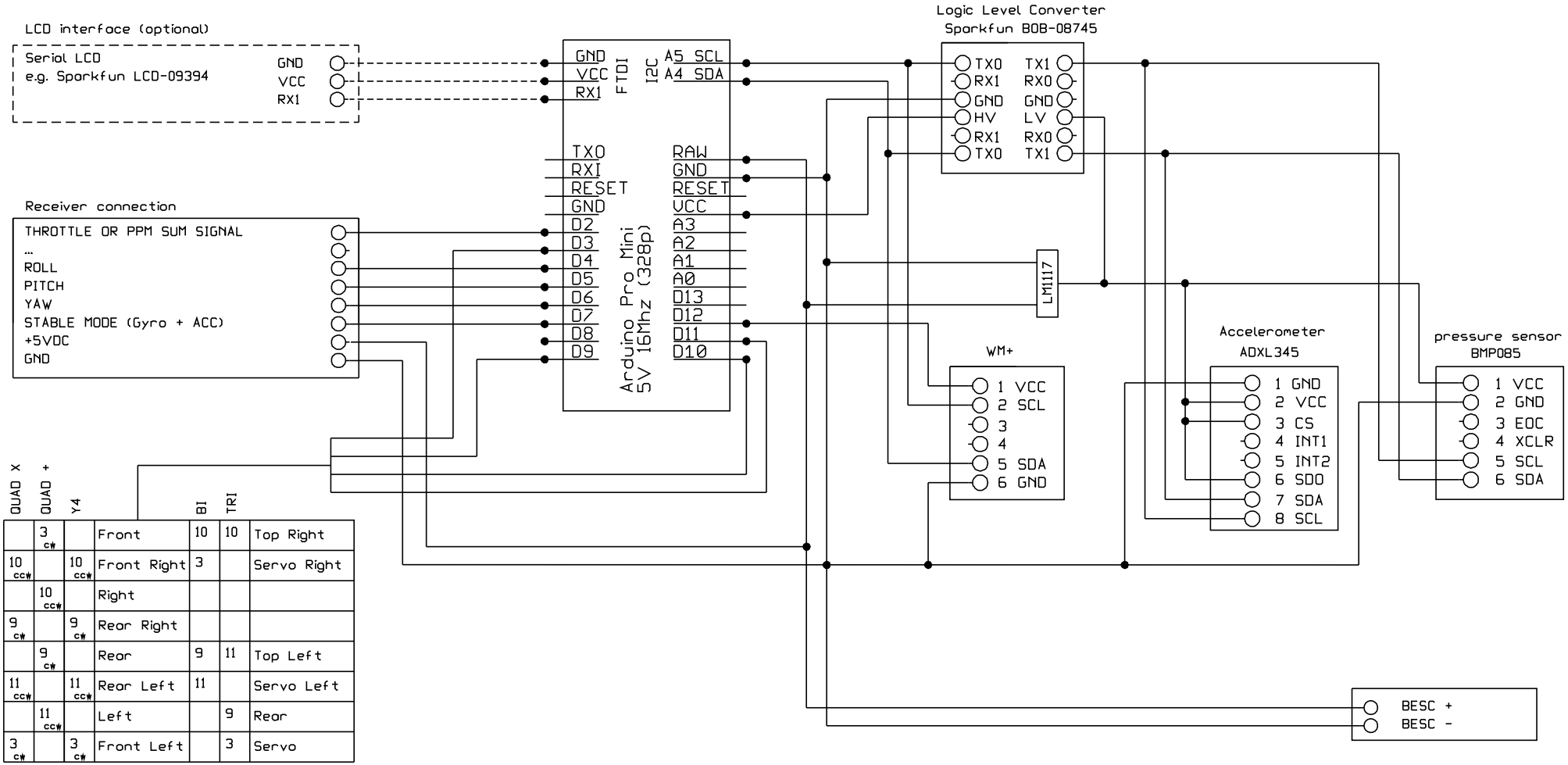
MultiWii connection diagram with Sparkfun ADXL345 & BMP085 integration

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+),
5 input channels from the receiver and an ADXL345 accelerometer to achieve an auto stable mode.
Furthermore a digital pressure sensor is integrated.

These sensors cannot be powered with 5V. A voltage regulator and logic level converter is used to lower the 5V to 3.3V & connect the I2C bus to the Arduino.

In this diagram, all I2C devices are powered & reset by pin 12 through a 3.3V regulator.

Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date	Connection diagram with LLC ADXL345 & BMP085 (option 1)	Revision	Sheet
26-04-11		1.7.1	5



QUAD X	QUAD +	Y4		BI	TRI	
	3 ccw		Front	10	10	Top Right
10 ccw		10 ccw	Front Right	3		Servo Right
	10 ccw		Right			
9 ccw		9 ccw	Rear Right			
	9 ccw		Rear	9	11	Top Left
11 ccw		11 ccw	Rear Left	11		Servo Left
	11 ccw		Left		9	Rear
3 ccw		3 ccw	Front Left		3	Servo

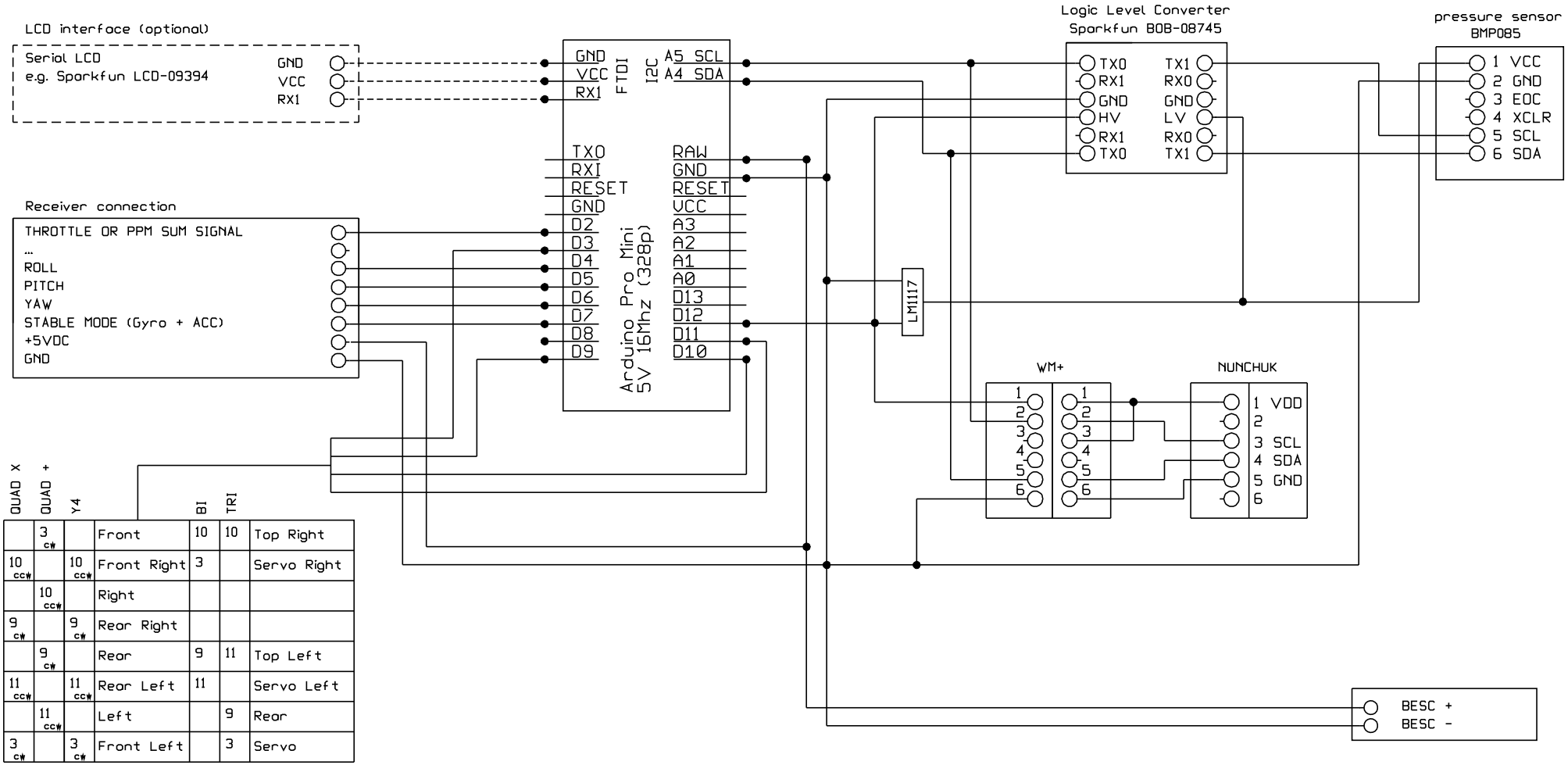
MultiWii connection diagram with Sparkfun ADXL345 & BMP085 integration

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+),
5 input channels from the receiver and an ADXL345 accelerometer to achieve an auto stable mode.
Furthermore a digital pressure sensor is integrated.

These sensors cannot be powered with 5V. A voltage regulator and logic level converter is used to lower the 5V to 3.3V & connect the I2C bus to the Arduino.

In this diagram, the WM+ is still powered & reset through pin 12 while the other sensors are powered separate by a 3.3V regulator.

Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date	Connection diagram with LLC ADXL345 & BMP085 (option 2)	Revision	Sheet
26-04-11		1.7.1	6



QUAD X	QUAD +	Y4		BI	TRI	
	3 ccw		Front	10	10	Top Right
10 ccw		10 ccw	Front Right	3		Servo Right
	10 ccw		Right			
9 ccw		9 ccw	Rear Right			
	9 ccw		Rear	9	11	Top Left
11 ccw		11 ccw	Rear Left	11		Servo Left
	11 ccw		Left		9	Rear
3 ccw		3 ccw	Front Left		3	Servo

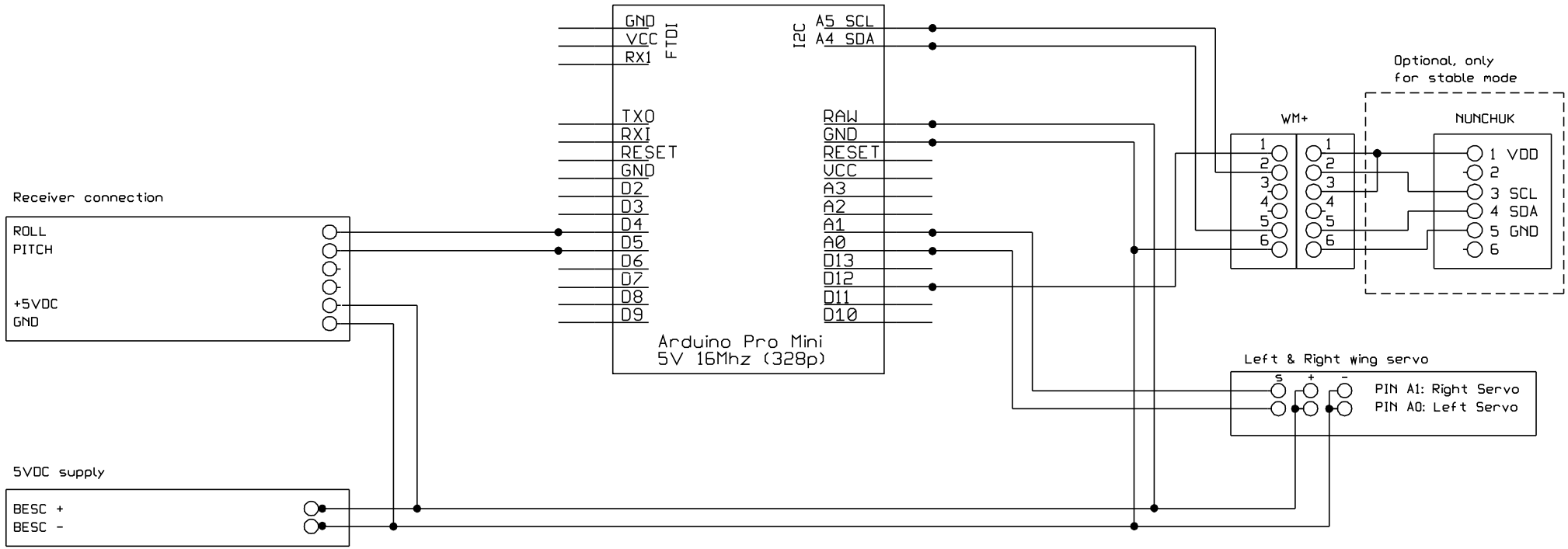
MultiWii connection diagram with WM+, NK & Sparkfun BMP085 integration

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+),
5 input channels from the receiver and the NK accelerometer to achieve an auto stable mode.
Furthermore a digital pressure sensor is integrated.

These pressure sensor cannot be powered with 5V. A voltage regulator and logic level converter is used to lower the 5V to 3.3V & connect the I2C bus to the Arduino.

In this diagram, all I2C devices are powered & reset by pin 12.

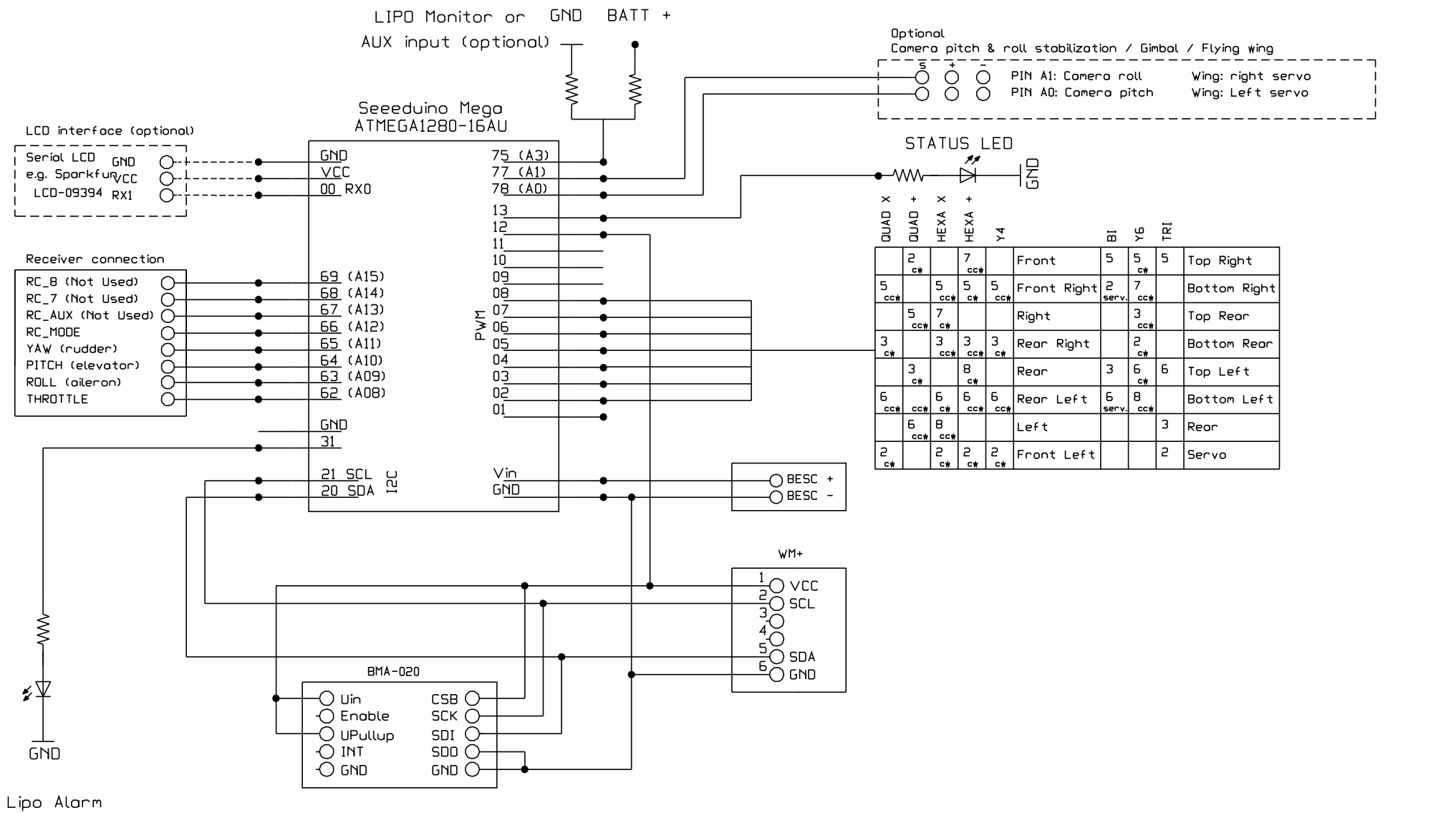
Circuit Diagram		Drawing – number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date	Connection diagram with WM+, NK, LLC & BMP085	Revision	Sheet
26-04-11		1.7.1	6B



MultiWii Flying wing connection diagram

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+), 2 input channels from the receiver and the accelerometer from the Nunchuk (NK) to drive 2 servo's controlling a flying wing.

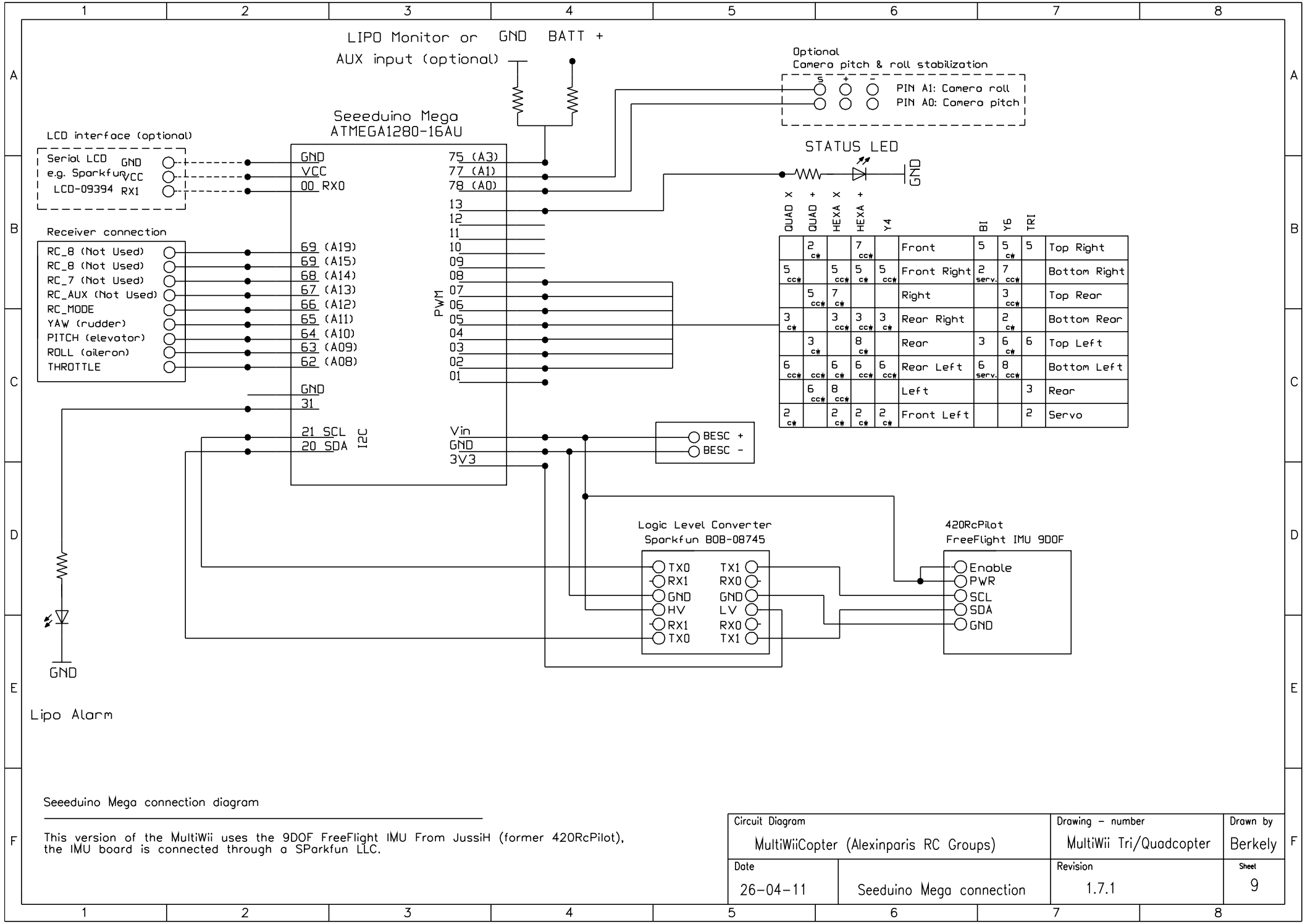
Circuit Diagram		Drawing – number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date		Revision	Sheet
26-04-11	Wing connection diagram	1.7	7



Seeeduino Mega connection diagram

This version of the MultiWii uses the gyros from the Wii Motion Plus (WM+), the accelerometer from the BMA020 all connected to the Seeeduino Mega.
The BMA-020, WM+ combo connection is the same for the Arduino Pro Mini.

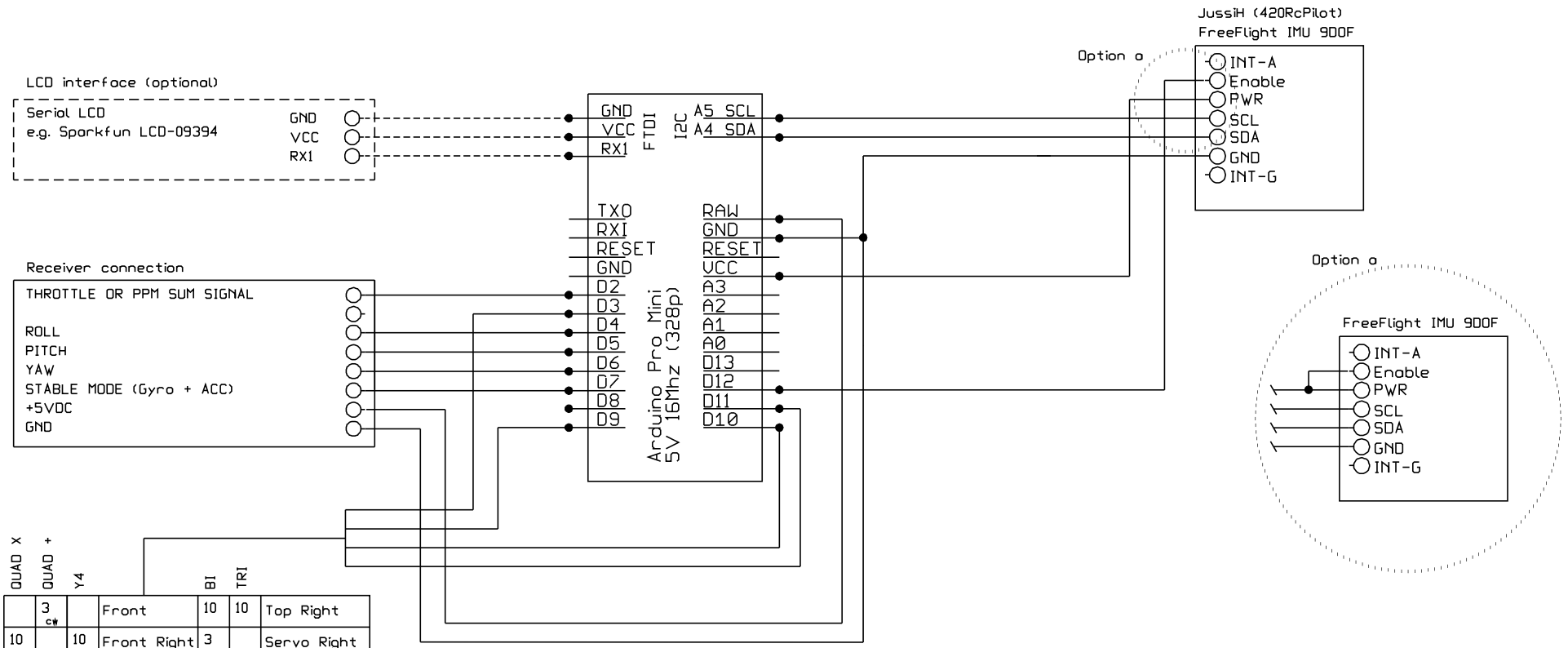
Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date		Revision	Sheet
26-04-11	Seeduino Mega connection	1.7.1	8



Seeeduino Mega connection diagram

This version of the MultiWii uses the 9DOF FreeFlight IMU From JussiH (former 420RcPilot), the IMU board is connected through a SParkfun LLC.

Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date	Seeduino Mega connection	Revision	Sheet
26-04-11		1.7.1	9



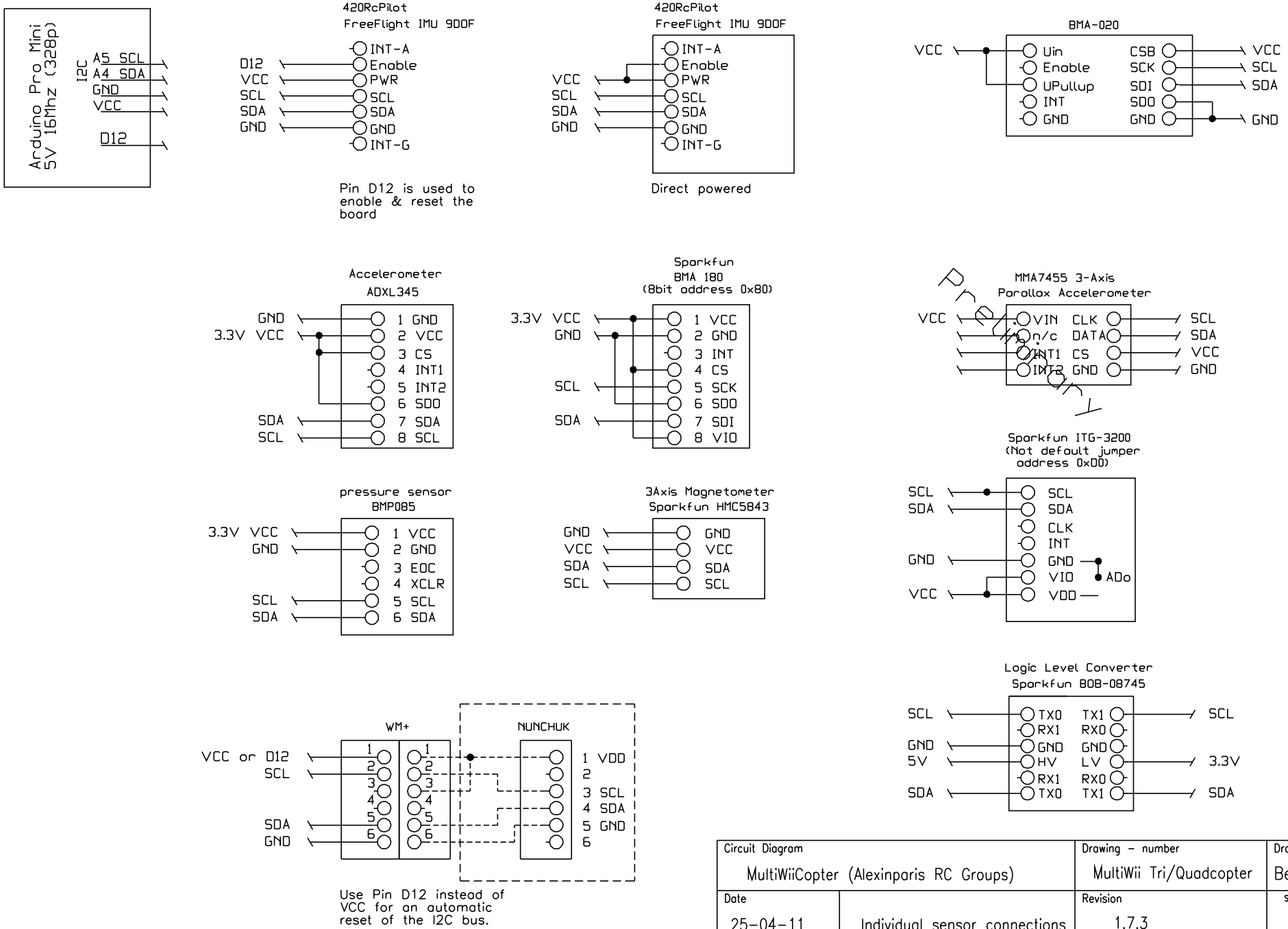
QUAD X	QUAD +	Y4		BI	TRI	
	3 cw		Front	10	10	Top Right
10 ccw		10 ccw	Front Right	3		Servo Right
	10 ccw		Right			
9 cw		9 cw	Rear Right			
	9 cw		Rear	9	11	Top Left
11 ccw		11 ccw	Rear Left	11		Servo Left
	11 ccw		Left		9	Rear
3 cw		3 cw	Front Left		3	Servo

MultiWii connection diagram with Arduino Pro Mini & FF IMU

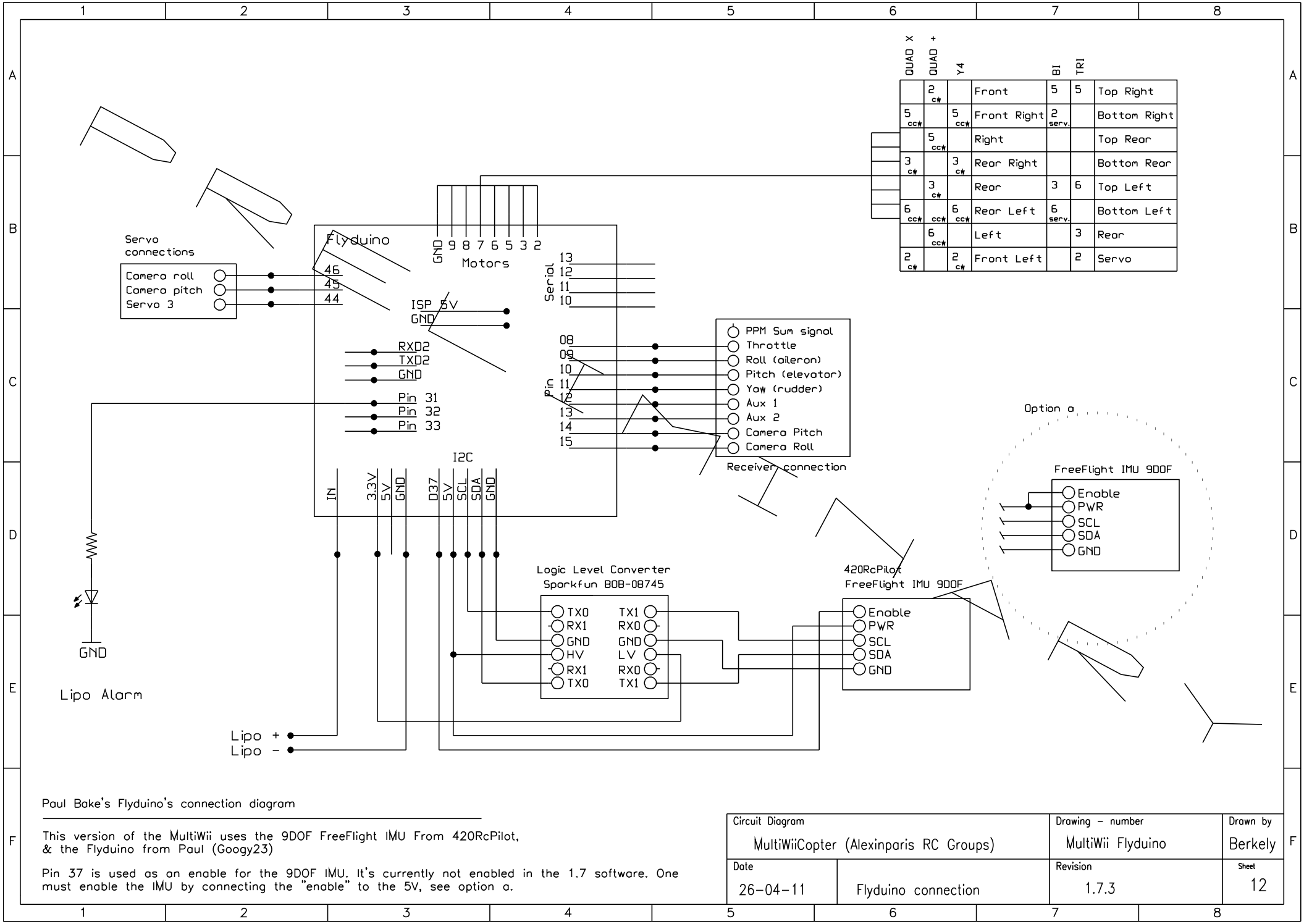
This version of the MultiWii uses the 9DOF FreeFlight IMU From 420RcPilot without LLC. Ensure the internal pull-up resisters are disabled in the software for this setup.

Option a.
In case the enable or automatic reset of the I2C bus through pin d12 is not required, one can connect the enable directly to the power input of the FFIMU.

Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Tri/Quadcopter	Berkely
Date		Revision	Sheet
08-04-11	Arduino FFImu connection	1.7	10



Circuit Diagram: MultiWiiCopter (Alexinparis RC Groups)		Drawing – number: MultiWii Tri/Quadcopter	Drawn by: Berkely
Date: 25-04-11	Individual sensor connections	Revision: 1.7.3	Sheet: 11



Paul Bake's Flyduino's connection diagram

This version of the MultiWii uses the 9DOF FreeFlight IMU From 420RcPilot, & the Flyduino from Paul (Googy23)

Pin 37 is used as an enable for the 9DOF IMU. It's currently not enabled in the 1.7 software. One must enable the IMU by connecting the "enable" to the 5V, see option a.

Circuit Diagram		Drawing - number	Drawn by
MultiWiiCopter (Alexinparis RC Groups)		MultiWii Flyduino	Berkely
Date		Revision	Sheet
26-04-11	Flyduino connection	1.7.3	12