Microcontroller

+3V3 +3V3

L1

U2

7	VCC	PD0	2 RXD
20	AVCC	PD1	3 TXD
21	AREF	PD2	4 D2
		PD3	5 D3
D8 14	PB0	PD4	6 D4
D9 15	PB1	PD5	11 D5
NSS 16	PB2	PD6	12 D6
MOSI 17	PB3	PD7	13 D7
MISO 18	PB4		
SCK 19	PB5	PC0	23 A0
9	PB6	PC1	24 A1
10	PB7	PC2	25 A2
		PC3	26 A3
		PC4	27 SDA
8	GND_2	PC5	28 SCL
22	GND	PC6	1 RESET

Q3

C4 C5 C6 C7 C8

GND GND GND GND GND GND

ATMEGA328P-PU

Power Supply

Power Input

+12V

JP1
1
2

GND

Voltage Regulator

+12V   +3V3

U1
1	VIN	
	GND_(TAB)	VOUT 3
2 4	GND_(TAB)_2	

C1 C2   C3
10uF

GND GND GND   GND

MCP1703-5002E/DB

SPI Devices

SPI Device enable/disable

JP2
MOSI	1	2	MOSISW
MISO	3	4	MISOSW
SCK	5	6	SCKSW

EEPROM

+3V3 +3V3   +3V3

IC1
3	WP	VCC	8
D9 1	CS		
MOSISW 5	SI	SO	2 MISOSW
SCKSW 6	SCK		
7	HOLD	GND	4

C9

25LC080P

GND   GND

EEPROM Array

Transceiver Module

+3V3

U3
2	3.3V	DIO0	9 D2
		DIO1	11
MISOSW 8	MISO	DIO2	10
MOSISW 5	MOSI	DIO3	4
SCKSW 6	SCK	DIO5	12
NSS 7	NSS		
		GND	14
		ANT	1
13	RESET	GND	3

SMA-142-0711-821/826

X1

RFM69CW

GND

Programming

Serial

+3V3

R1

RESET

C10

+3V3

JP7
1
2
3
4
5
6
TXD
RXD

GND

ISP

+3V3

JP6
MOSI	1	2	
	3	4	
RESET	5	6	
SCK	7	8	
MISO	9	10	

ISP

GND

Sensor Interface

+12V +3V3

JP3
1
2
3

R2

Q1
BS250

D7

Q2
BS170

GND

JP8
D8	1
RXD	2
SENSRXD	3

K1
1
2
3
SENSRXD

C11 C12

GND

Real Time Clock

1	RTC-1
D3 2	RTC-2
SDA 3	RTC-3
SCL 4	RTC-4
VCC 5	RTC-5
6	RTC-6
7	RTC-7

GND

Additional I/Os

Digital

JP4
D6	1
D5	2
D4	3

Analog

JP5
A3	1
A2	2
A1	3
A0	4