U1

Pin	Signal		Pin	Signal

ATmega2560V-8AU

TX_Out — 2 — PE0 (RXD0/PCINT8)
RX_In — 3 — PE1 (TXD0)
4 — PE2 (XCK0/AIN0)
5 — PE3 (OC3A/AIN1)
6 — PE4 (OC3B/INT4)
7 — PE5 (OC3C/INT5)
8 — PE6 (T3/INT6)
9 — PE7 (CLKO/ICP3/INT7)

PF0 (ADC0) — 97
PF1 (ADC1) — 96
PF2 (ADC2) — 95
PF3 (ADC3) — 94
PF4 (ADC4/TCK) — 93
PF5 (ADC5/TMS) — 92
PF6 (ADC6/TDO) — 91
PF7 (ADC7/TDI) — 90

12 — PH0 (RXD2)
13 — PH1 (TXD2)
14 — PH2 (XCK2)
15 — PH3 (OC4A)
16 — PH4 (OC4B)
17 — PH5 (OC4C)
18 — PH6 (OC2B)
27 — PH7 (T4)

PK0 (ADC8/PCINT16) — 89
PK1 (ADC9/PCINT17) — 88
PK2 (ADC10/PCINT18) — 87
PK3 (ADC11/PCINT19) — 86
PK4 (ADC12/PCINT20) — 85
PK5 (ADC13/PCINT21) — 84
PK6 (ADC14/PCINT22) — 83
PK7 (ADC15/PCINT23) — 82

SCK — 19 — PB0 (SS/PCINT0)
20 — PB1 (SCK/PCINT1)
MOSI — 21 — PB2 (MOSI/PCINT2)
MISO — 22 — PB3 (MISO/PCINT3)
23 — PB4 (OC2A/PCINT4)
24 — PB5 (OC1A/PCINT5)
25 — PB6 (OC1B/PCINT6)
26 — PB7 (OC0A/OC1C/PCINT7)

PA0 (AD0) — 78 — Enable
PA1 (AD1) — 77
PA2 (AD2) — 76
PA3 (AD3) — 75
PA4 (AD4) — 74
PA5 (AD5) — 73
PA6 (AD6) — 72
PA7 (AD7) — 71

35 — PL0 (ICP4)
36 — PL1 (ICP5)
37 — PL2 (T5)
38 — PL3 (OC5A)
39 — PL4 (OC5B)
40 — PL5 (OC5C)
41 — PL6
42 — PL7

PJ7 — 79
PJ6 (PCINT15) — 69
PJ5 (PCINT14) — 68
PJ4 (PCINT13) — 67
PJ3 (PCINT12) — 66
PJ2 (XCK3/PCINT11) — 65
PJ1 (TXD3/PCINT10) — 64 — TXD3
PJ0 (RXD3/PCINT9) — 63 — RXD3

43 — PD0 (SCL/INT0)
44 — PD1 (SDA/INT1)
RXD1 — 45 — PD2 (RXD1/INT2)
46 — PD3 (TXD1/INT3)
47 — PD4 (ICP1)
48 — PD5 (XCK1)
49 — PD6 (T1)
50 — PD7 (T0)

PC7 (A15) — 60
PC6 (A14) — 59
PC5 (A13) — 58
PC4 (A12) — 57
PC3 (A11) — 56
PC2 (A10) — 55
PC1 (A9) — 54
PC0 (A8) — 53

1 — PG5 (OC0B)
29 — PG4 (TOSC1)
28 — PG3 (TOSC2)
70 — PG2 (ALE)
52 — PG1 (RD)
51 — PG0 (WR)

VCC — 80
VCC — 61
VCC — 31
VCC — 10
AVCC — 100

RESET — 30 — RESET
AREF — 98

34 — XTAL1
33 — XTAL2

GND — 99
GND — 81
GND — 62
GND — 32
GND — 11

Y1 16MHz
C9 22pF
C10 22pF
GND

U2

RTX-MID-5V

ANT — 1
GND — 2
Data In — 4 — TXD3
TX/RX — 5 — RXD3
Enable — 6 — Enable
GND — 7 — GND
Analog Out — 8
Data Out — 9 — RXD1
VCC — 10 — 5V

P1 SMA 1056377

R1 47K
C2 1nF
R2 47K
GND

C1 100nF

R3 1K8
D1 Green
GND

R6 10K
RESET
S1 Tactile switch
GND

P2
ISP-Header

MISO — 1 — MISO | VTG — 2 — 5V
SCK — 3 — SCK | MOSI — 4 — MOSI
RESET — 5 — /RES | GND — 6 — GND

Decoupling

C3 100nF
C4 100nF
C5 100nF
C6 100nF
C7 100nF
5V

C8 100nF
GND

USB connector
X1

VCC — 1
D- — 2
D+ — 3
ID — 4
GND — 5
GND

5V
C11 100nF
GND

Y2 12MHz
C15 22pF
C16 22pF
GND

U3
USB to serial converter

D- — TXD — TX_Out
D+ — RXD — RX_In
XI — VCC — 5V
XO — 3V-Out
RS232_EN
RTS#
GND — DTR#
DCD#
RI#
DSR#
CTS#

R4 1K8
R5 1K8
5V
D2 Blue
D3 Blue

C14 100nF
C13 100nF
GND

Title	CWs RFLink	www.cwesystems.com
Size	Number	Revision
A4	1/1	1.0
Date: 2018-04-13		Sheet of
File: X:\Documents\..\CWs_RFLink_Schematic.sch	Drawn By: Christoffer Wennström	

Comment	Description	Designator	Footprint	LibRef	Quantity
Cap	Capacitor	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C13, C14, C15, C16	C-0805	Cap	15
Green	LED	D1	LED0805	LED	1
Blue	LED	D2, D3	LED0805	LED	2
SMA	SMA Rak kontakt	P1	SMA	SMA	1
ISP-Header	Header, 3-Pin, Dual row	P2	HDR2X3	ISP-Header	1
Res1	Resistor	R1, R2, R3, R4, R5, R6	res-0805	Res1	6
Tactile switch	Tactile Switch	S1	B3FS-1010	Tactile switch	1
ATmega2560V-8AU	8-bit AVR Microcontroller, 1.8-5.5V, 2MHz, 256KB Flash, 4KB EEPROM, 8KB SRAM, 86 GPIO pins, 100-pin TQFP, Industrial Grade (-40°C to 85°C), Pb-Free	U1	100A_N	ATmega2560V-8AU	1
RTX-MID-5V	Aurel RTX-MID-5V	U2	RTX-MID-5V	RTX-MID-5V	1
USB to serial converter		U3	SOIC16_M	CH340G	1
USB connector		X1	USBmicro	USB_connector	1
16MHz	Crystal Oscillator	Y1	5032 crystal	Kristall	1
12MHz	Crystal Oscillator	Y2	5032 crystal	Kristall	1