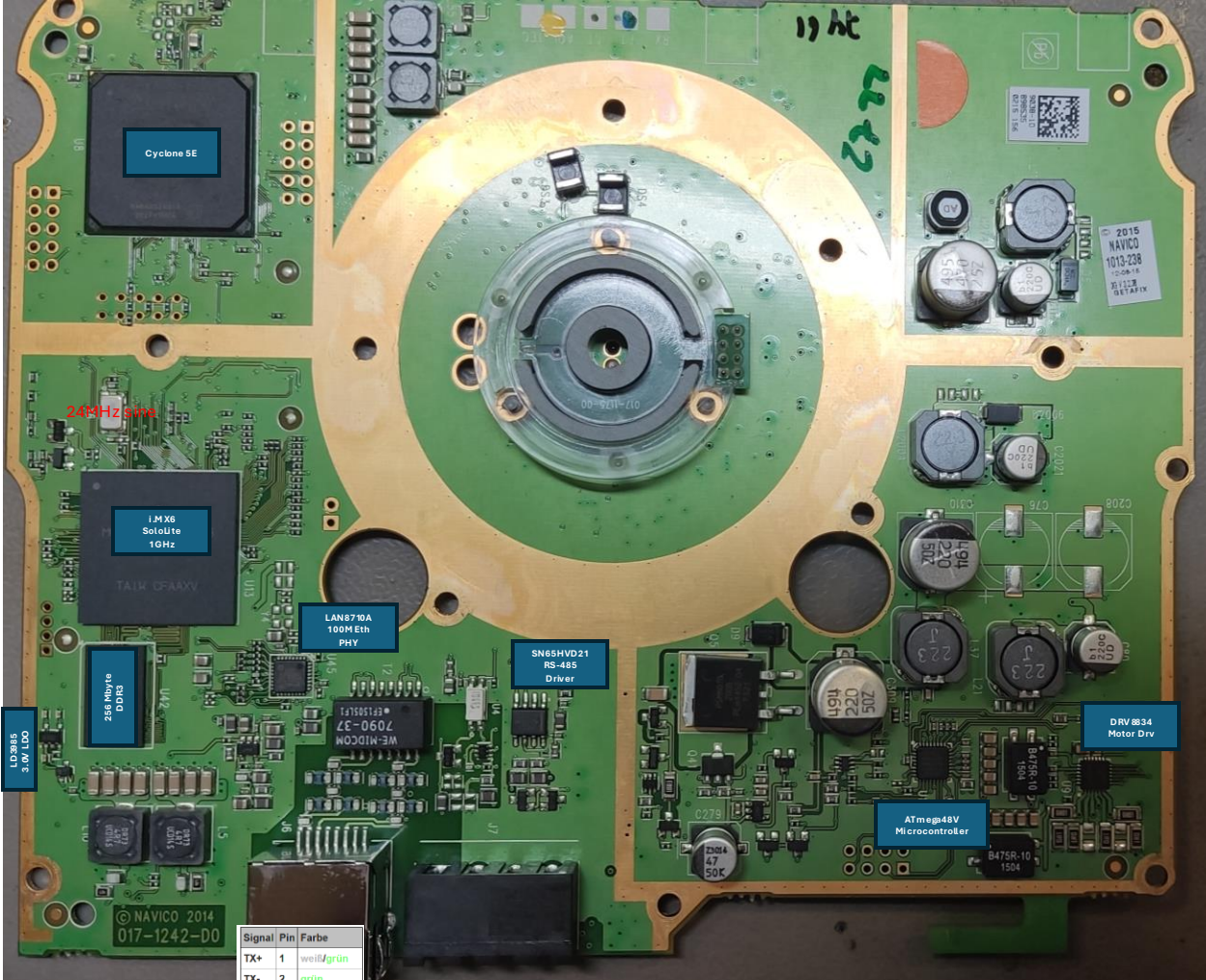
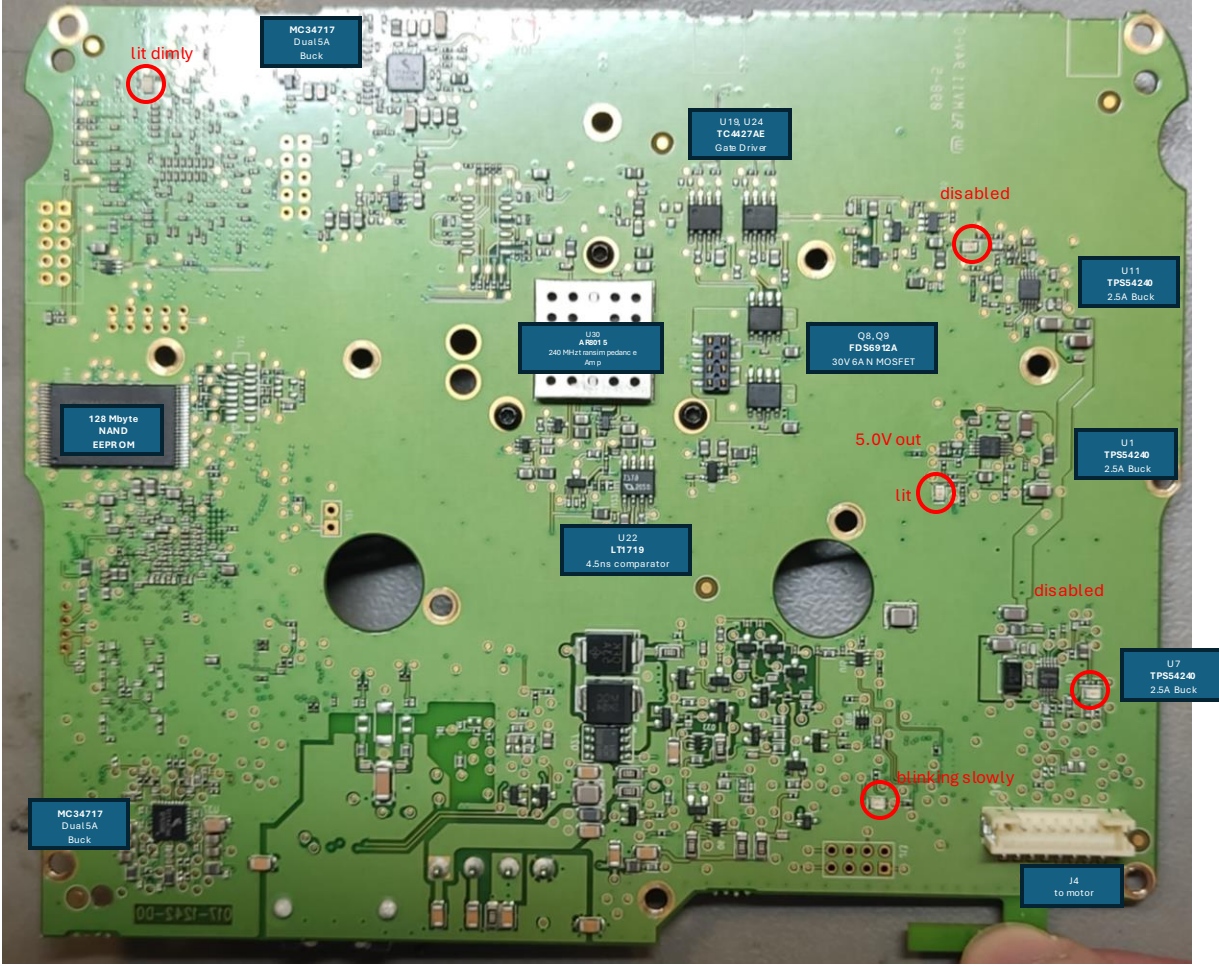


Mirrored:

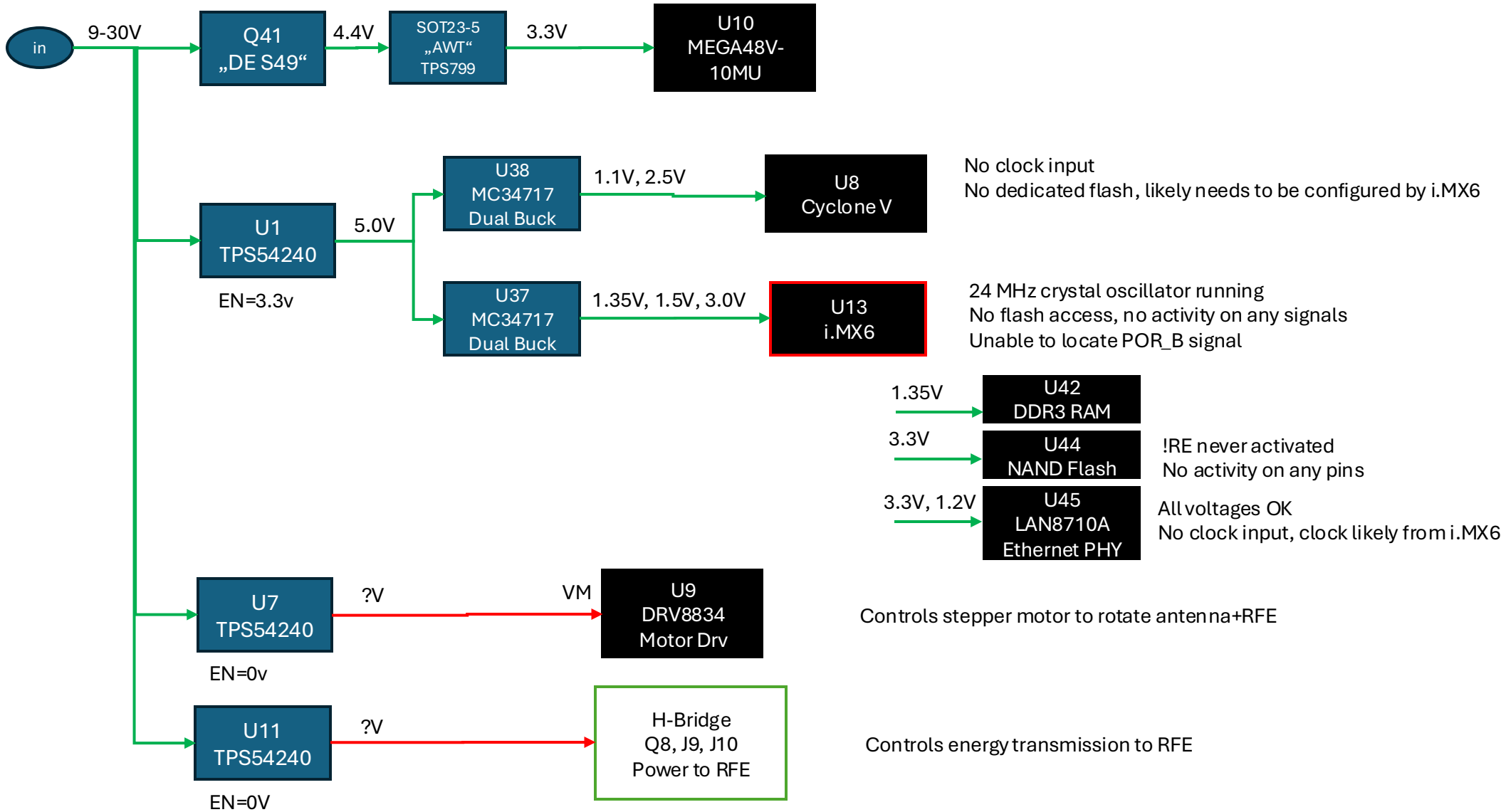


Signal	Pin	Farbe
TX+	1	weiß/grün
TX-	2	grün
RX+	3	weiß/orange
Opto	4	blau
Opto	5	weiß/blau
RX-	6	orange
RS-485	7	weiß/braun
RS-485	8	braun



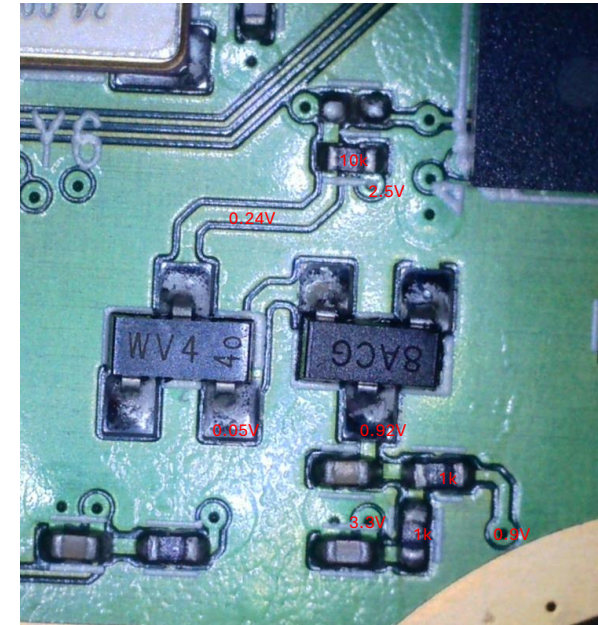
Designator	Package	Pins	Marking	Manufacturer	MPN	Description
Q27			P506T VC50 F7240	IR		
Q5			PSMND70			
Q8			FDS6912A	on semi		Dual n-ch mosfets, 30V, 6A
Q9			FDS6912A	on semi		Dual n-ch mosfets, 30V, 6A
U1			TI 5420		TPS54240	2.5A Buck
U10	QFN		Mega48V	Atmel		Microcontroller
U11			TI 5420		TPS54240	2.5A Buck
U13			Mcimx6s5dvm10ab	Freescale		i.mx6 SoloLite 1GHz; 1.2-1.4V Vcore, 1.5V VDDR3
U15	Sot23		VG		74LVC1G32	
U19	soic8		tc4427ae	Microchip		MOSFET driver
U22	soic8		LT1719	Linear	LT1719	4.5ns comparator
U23	Sot-23		LKEB		LP5951	2.5V LDO
U24			tc4427ae	Microchip		MOSFET driver
U26	SOIC8		VP21	TI	SN65HVD2x	RS-485 transceiver
U30	soic8		8015AR	ADI	AD8015	240MHz transimpedance amplifier
U35	Sot23-5		BH00	semtech	SC4503	12V boost converter
U37			MC34717			Dual 5A Buck
U38			Mc34717 bdcpq	Freescale		Dual 5A Buck
U42			5gk77 d9ptk	Micrel	MT41K128M16JT	256mByte DDR3 RAM
U44	tssop		tc58nvg0s3hta00	Toshiba		128MByte NAND EEPROM
U45	QFN		smc 8710a-ezk	smc / Microchip	LAN8710A	100M Ethernet PHY
U6	Sot23-5		L0UA	TI	LP2985AIM5-5.0	5V, 150mA LDO
U7			TI 54240	TI	TPS54240	2.5A Buck
U8			Cyclone v 5cefa4f23c6n	Altera		FPGA Cyclone 5E FBGA484, 1.1V Vcore, 2.5V Vaux
U9	QFN		Drv8834	Ti		Motor driver

# Navico 017-1224-D0 Power Tree

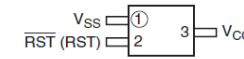


## i.MX6 SoloLite

- 1.35 and 1.5V supply voltages stable
- Crystol oscillator running
- No other activity, especially no read access to NAND flash
- Important signals:
  - POR\_B – don't know how to locate
- i.MX6 behaves like it's held in reset
- Circuit on the right might have sth. to do with reset...  
function unclear  
BC846 pinout doesn't seem to fit.....
- Desoldered 8ACG
  - Now we see activity on Flash !RE
  - After a few seconds, LED under FPGA starts blinking -> FPGA configured!
  - Power consumption ~0.14A @ 13.8V
  - Power rails for RFE + motor briefly turn on , then off again
  - H-Bridge starts switching, shuts off after 700ms
  - ~~Still no Ethernet link~~
  - Ethernet link pulses observed on RJ45
  - No Ethernet link established with Dell laptop on-board Eth
  - Ethernet link established with USB-Ethernet Adapter
  - pyOpenBR24 works: can start radar, shows scanline data
- Put STM809T back in
  - On bench:
    - Voltage on "mysterious\_via" is not stable: sometimes 2.3v, sometimes 3.3v
    - Leads to sporadic resets of i-mx6
  - After mounting PCB into housing, i.mx6 seems to be stuck is reset again
- With STM809T removed, voltage v1 is stable at 3.3V!



8AC: BC846E STM809T



WV4: BAT54S

