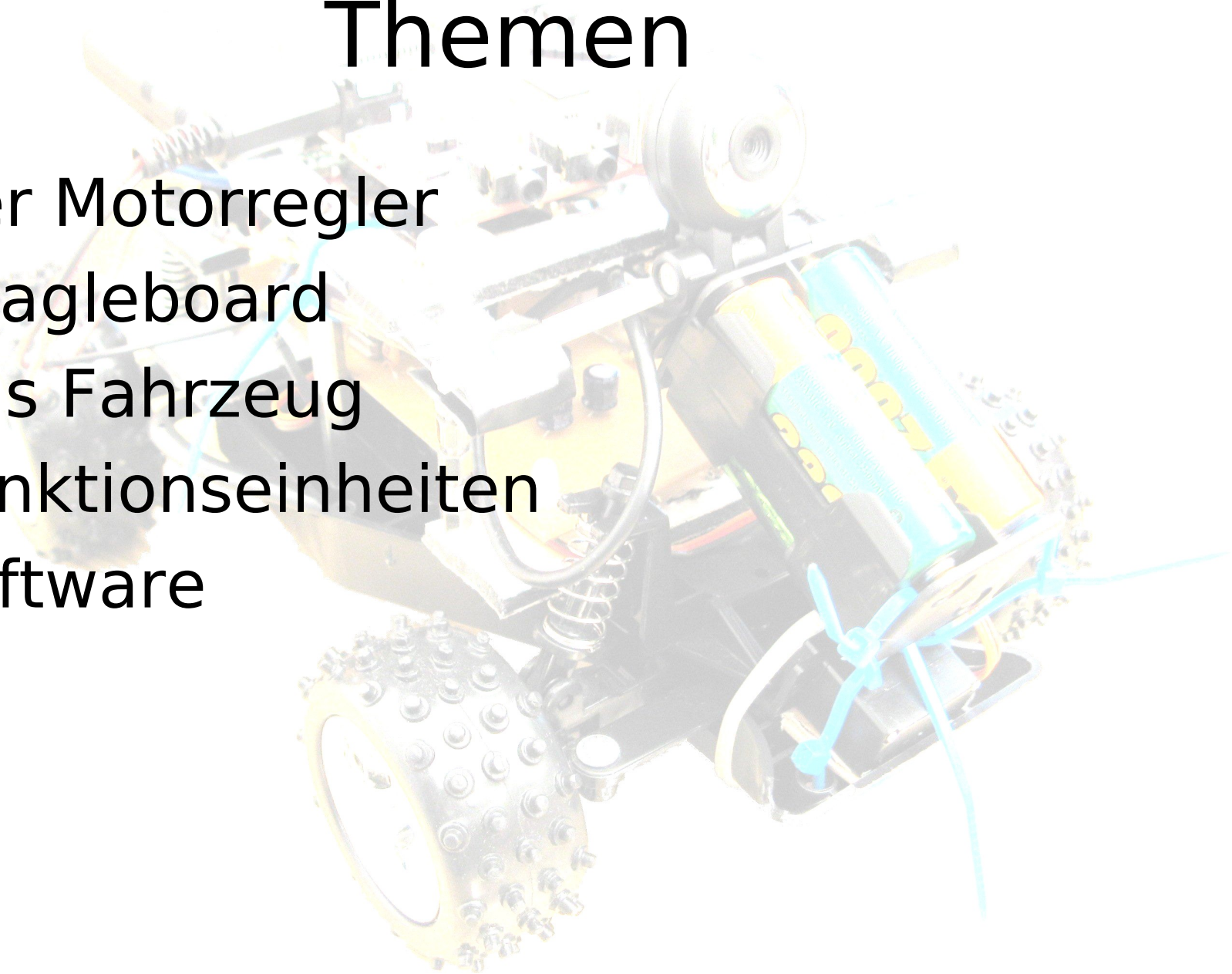


WLAN Controlled Car

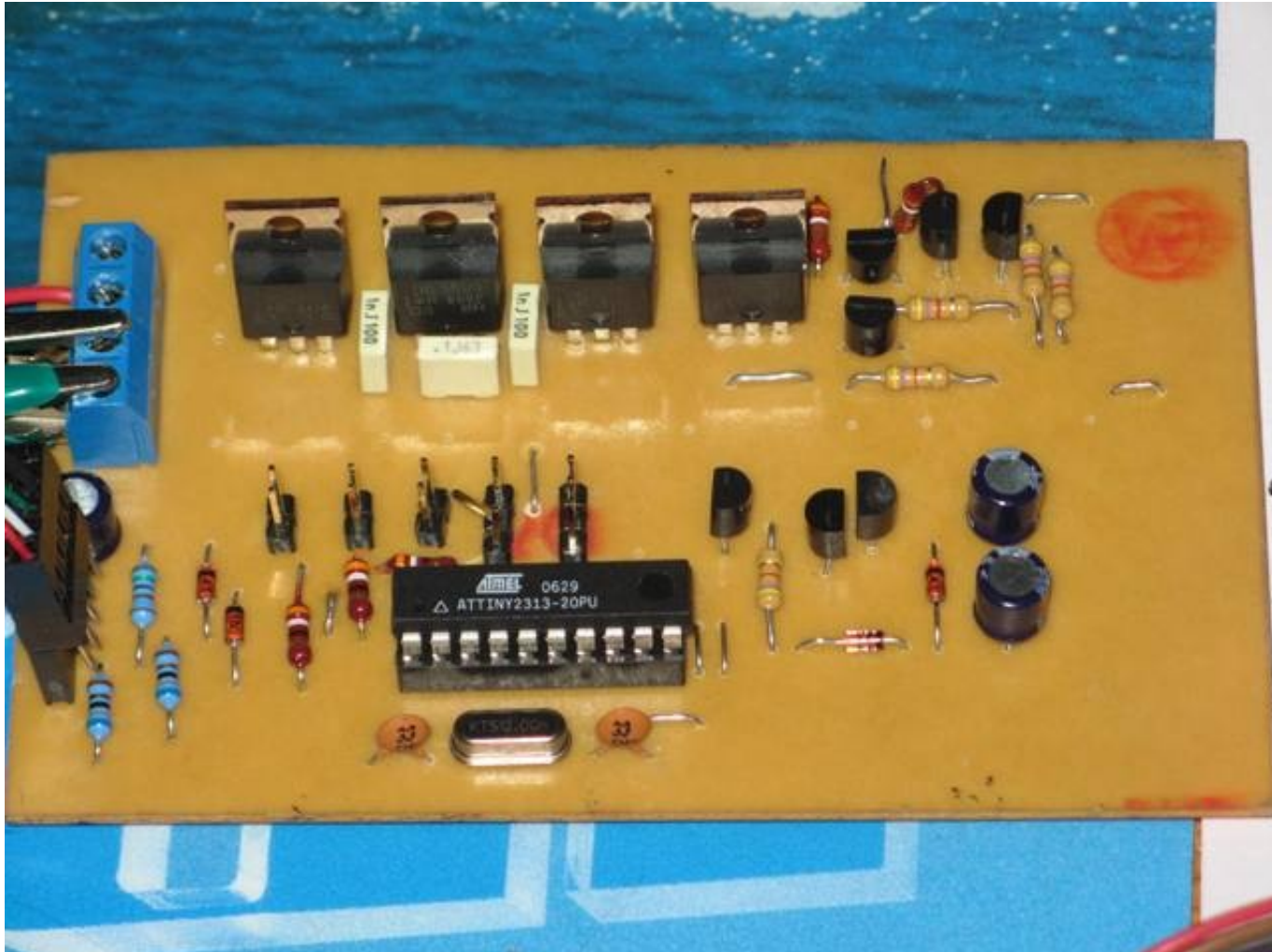


Themen

- Der Motorregler
- Beagleboard
- Das Fahrzeug
- Funktionseinheiten
- Software



Der Motorregler

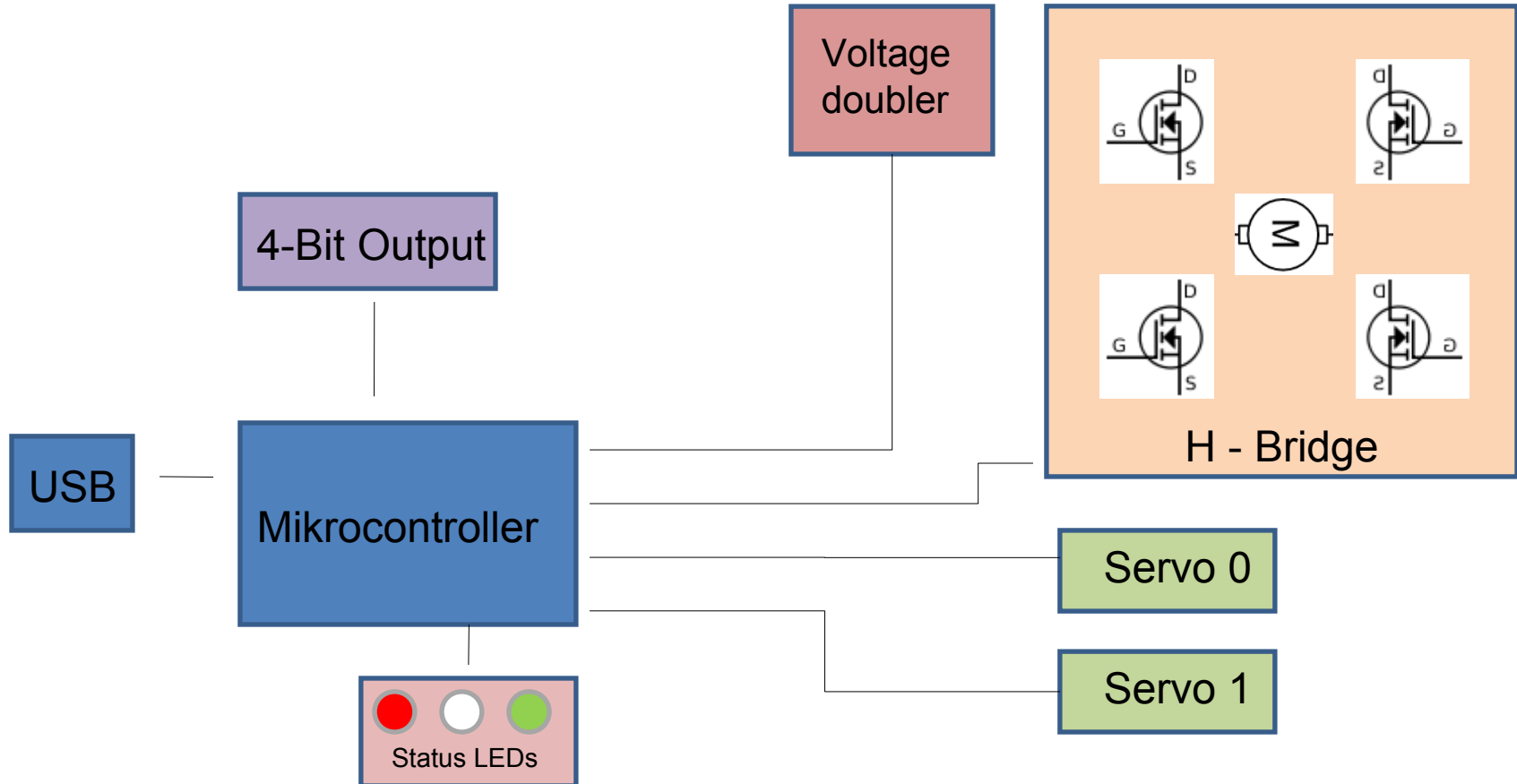


Der Motorregler

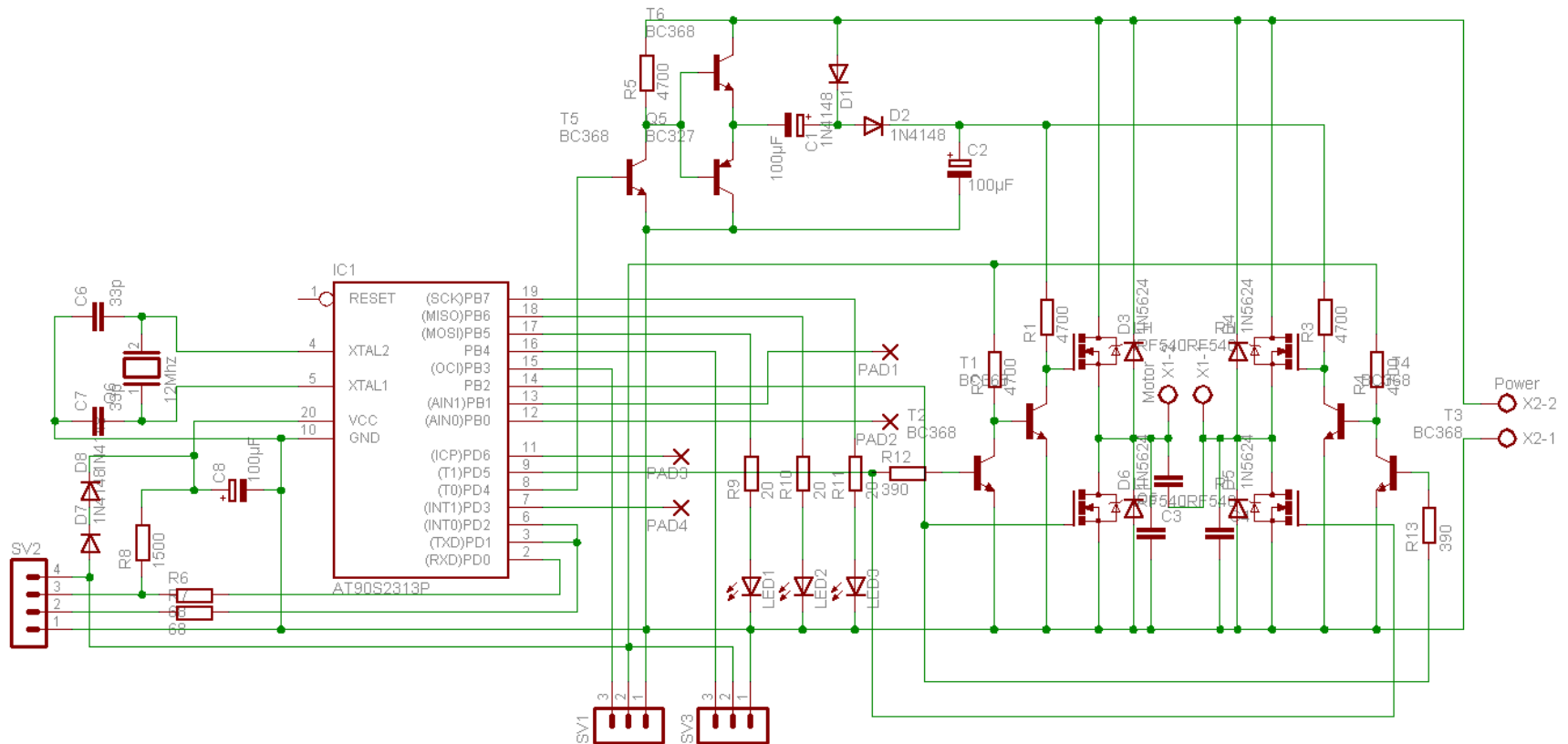
Features

- USB Interface
- Regelung DC Motor in ± 256 Schritten
- Ansteuerung von 2 Servos
- 4 Schaltausgänge
- 3x Status LEDs

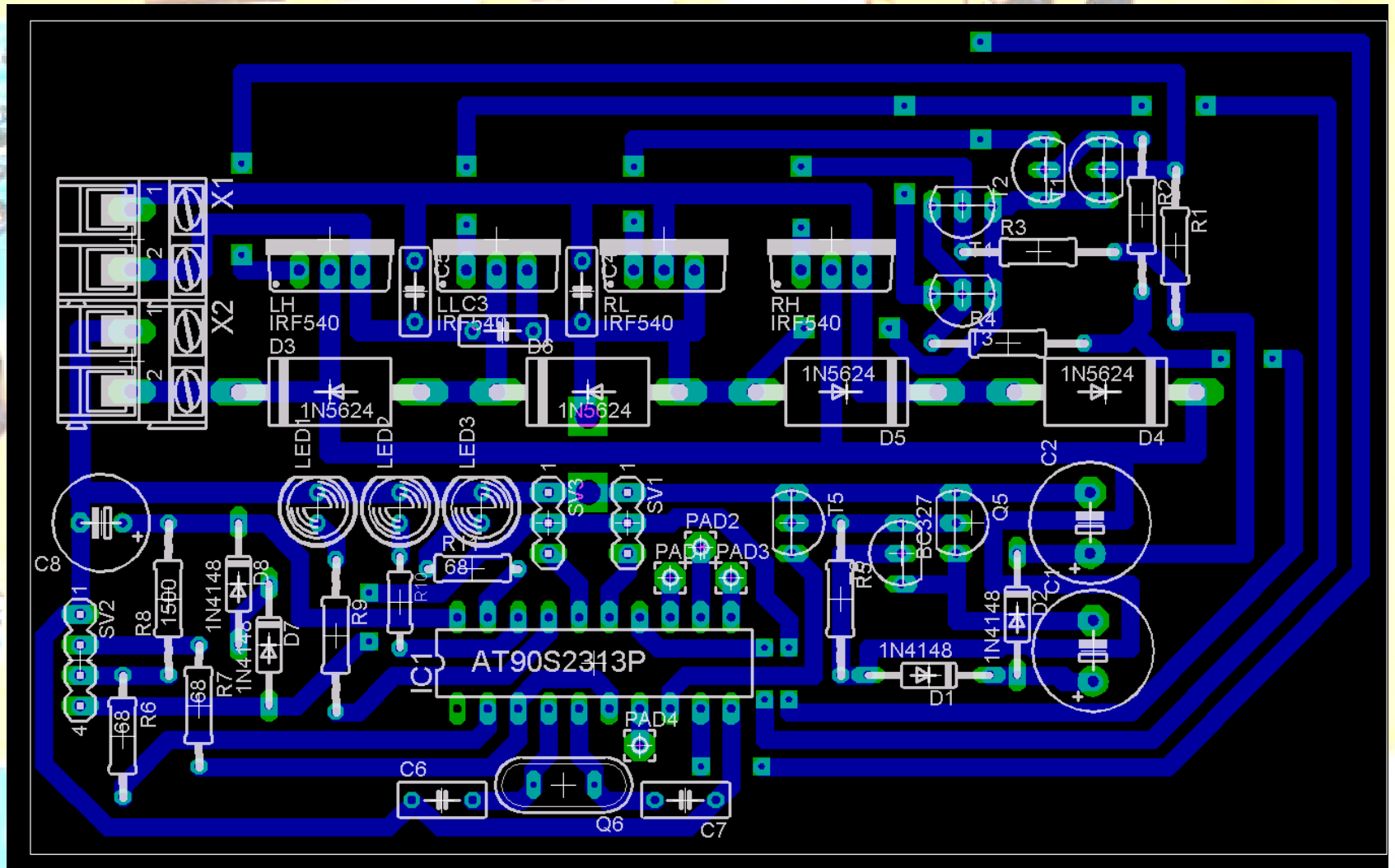
Blockschaltbild Motorkontroller

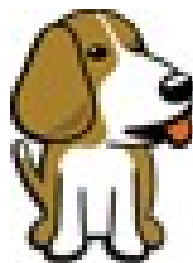


Schaltplan Motorregler



Layout Motorregler





beagleboard

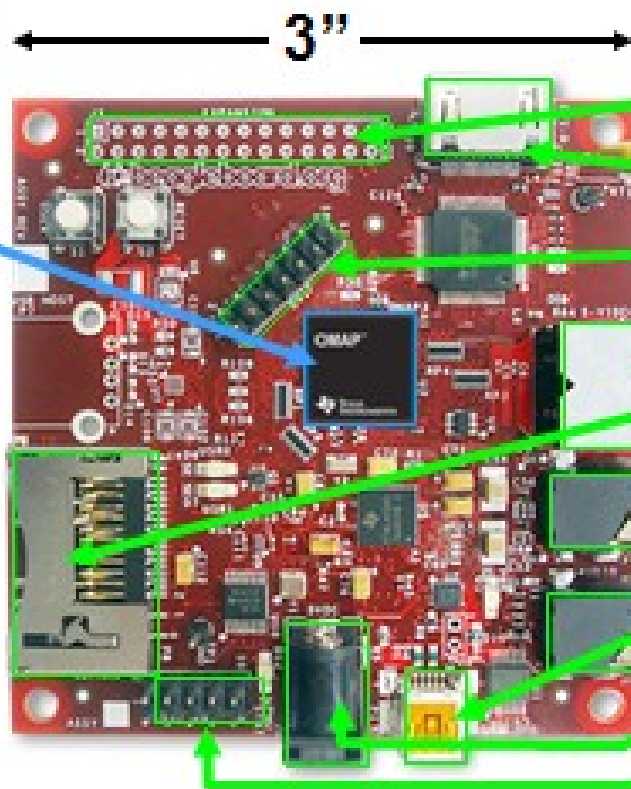
Laptop-like performance

TI OMAP3530

- 600 MHz superscaler ARM[®] Cortex[™]-A8
- More than 1200 Dhrystone MIPS
- Up to 10 Million polygons per sec graphics
- HD video capable C64x+[™] DSP core

Memory

- 128MB LPDDR RAM
- 256MB NAND flash



Flexible expansion

I²C, I²S, SPI, MMC/SD

DVI-D

JTAG

S-Video

SD/MMC+

Stereo Out

Stereo In

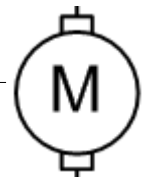
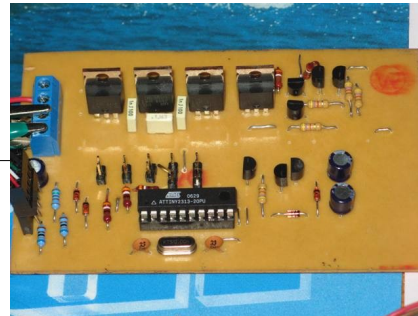
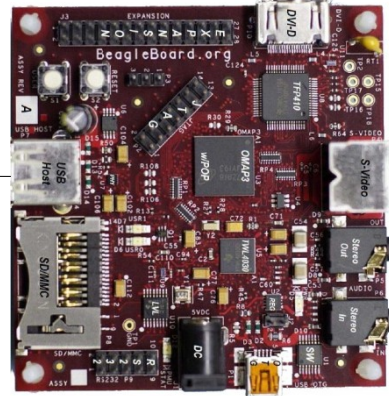
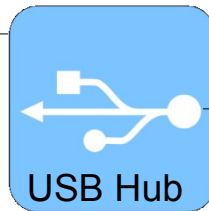
USB 2.0 HS OTG

Alternate Power

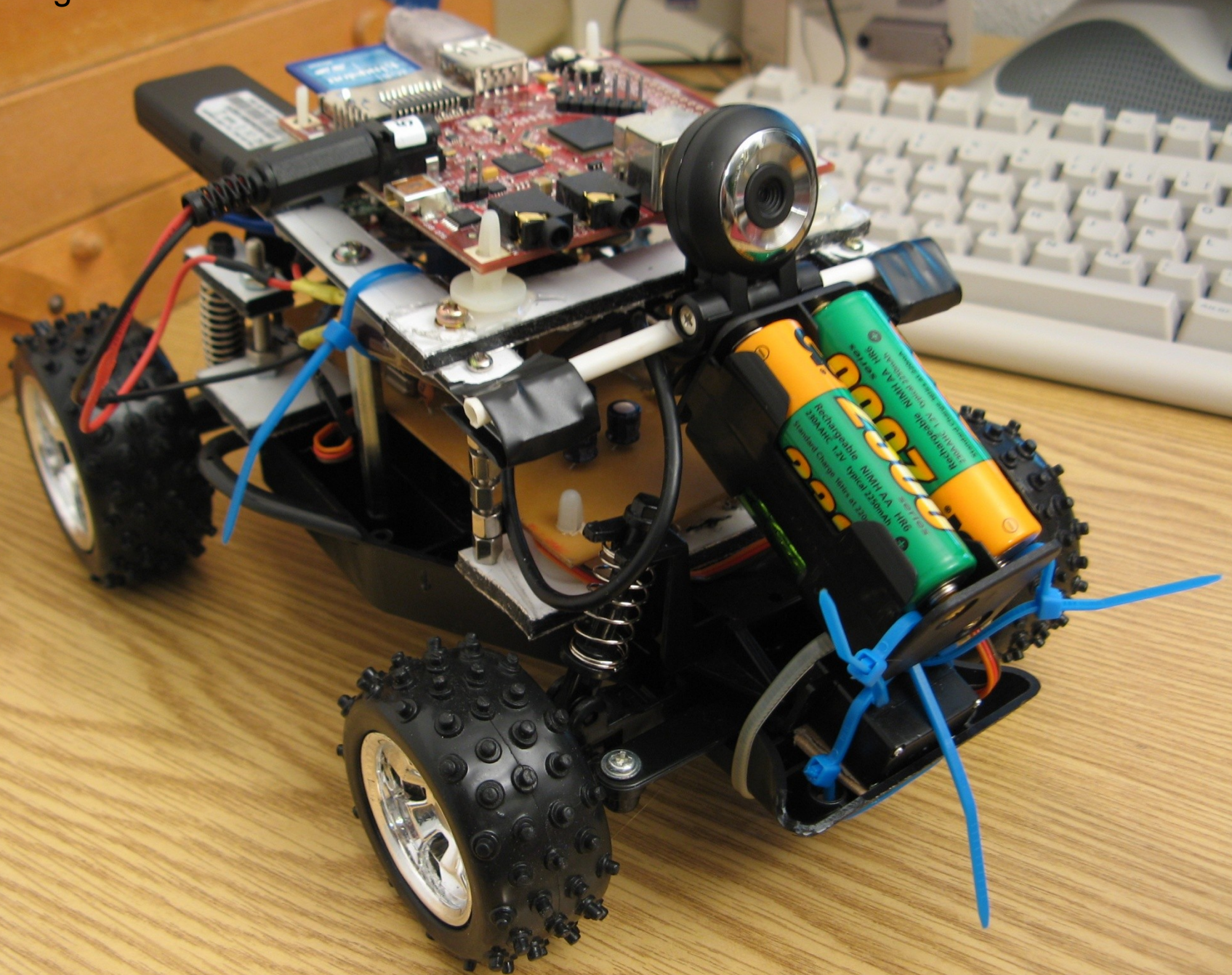
RS-232 Serial



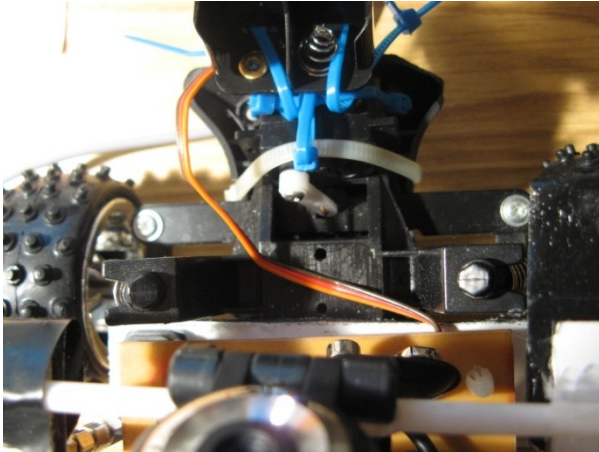
Funktionseinheiten



Das Fahrzeug



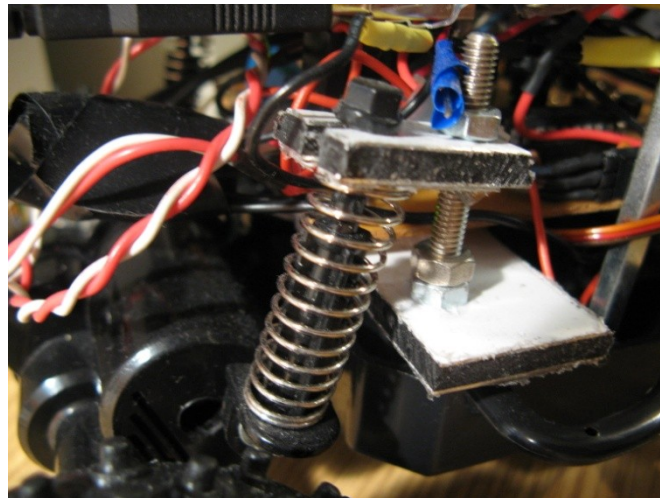
Die Lenkung



Der Motor



Die Federung



Software

CGINAV



WPA
supplicant



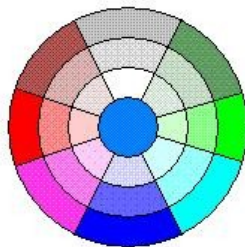
Palantir
MJPEG Streaming
Server

Network Stack



Linux (2.6.? ARM)

Das Webinterface



- speed = 0
- direction = 180

Optimierungspotential

- Docking Station
- Besseres Basisfahrzeug
 - stärkerer Motor
 - genauere Lenkung
- Steuerung per Joystick
- Flashsprogramm zur Fernsteuerung
- Beschleunigung der Befehlsübertragung