

Projektgruppe FastSense

Abschlusspräsentation

11. März 2021

Motivation

- TODO

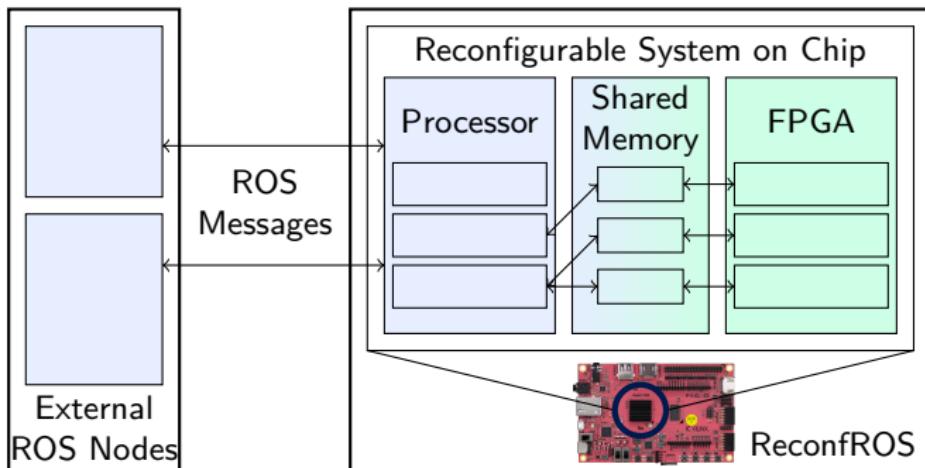
Problematik

TODO

Ziele

TODO

MS1: Trail Detection



Camera image



Removing noise



Trail pixel extraction



Thresholding

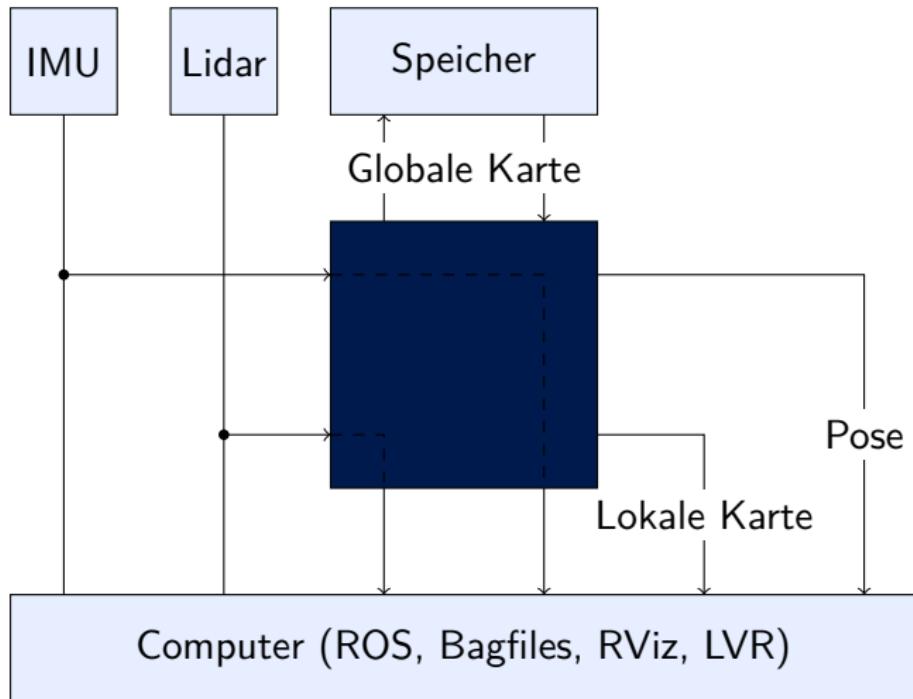


Remove fragments

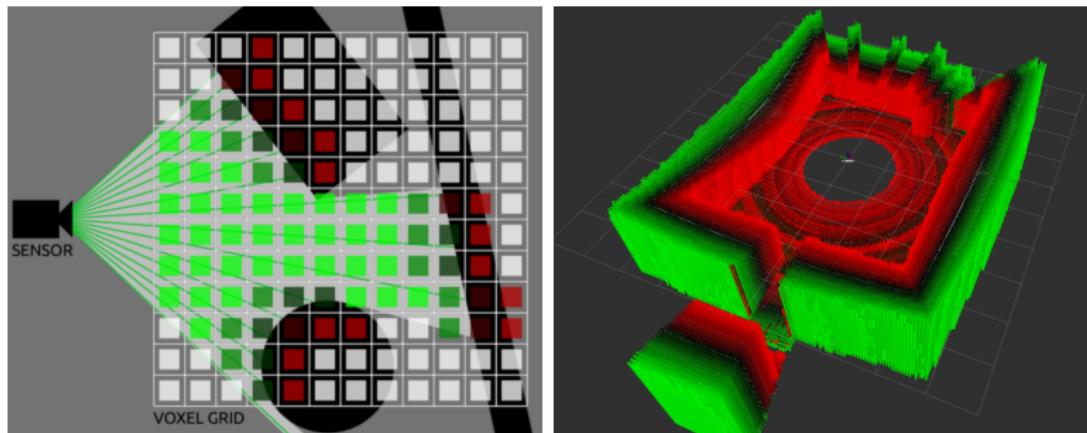


Trail direction

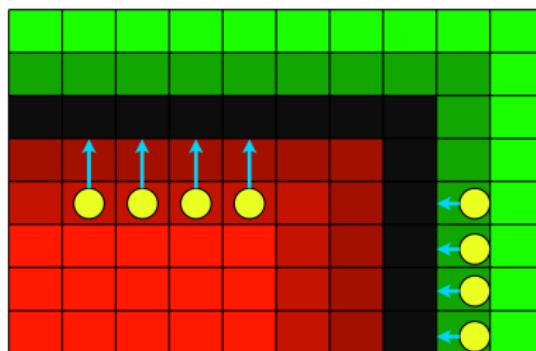
SLAM-Box



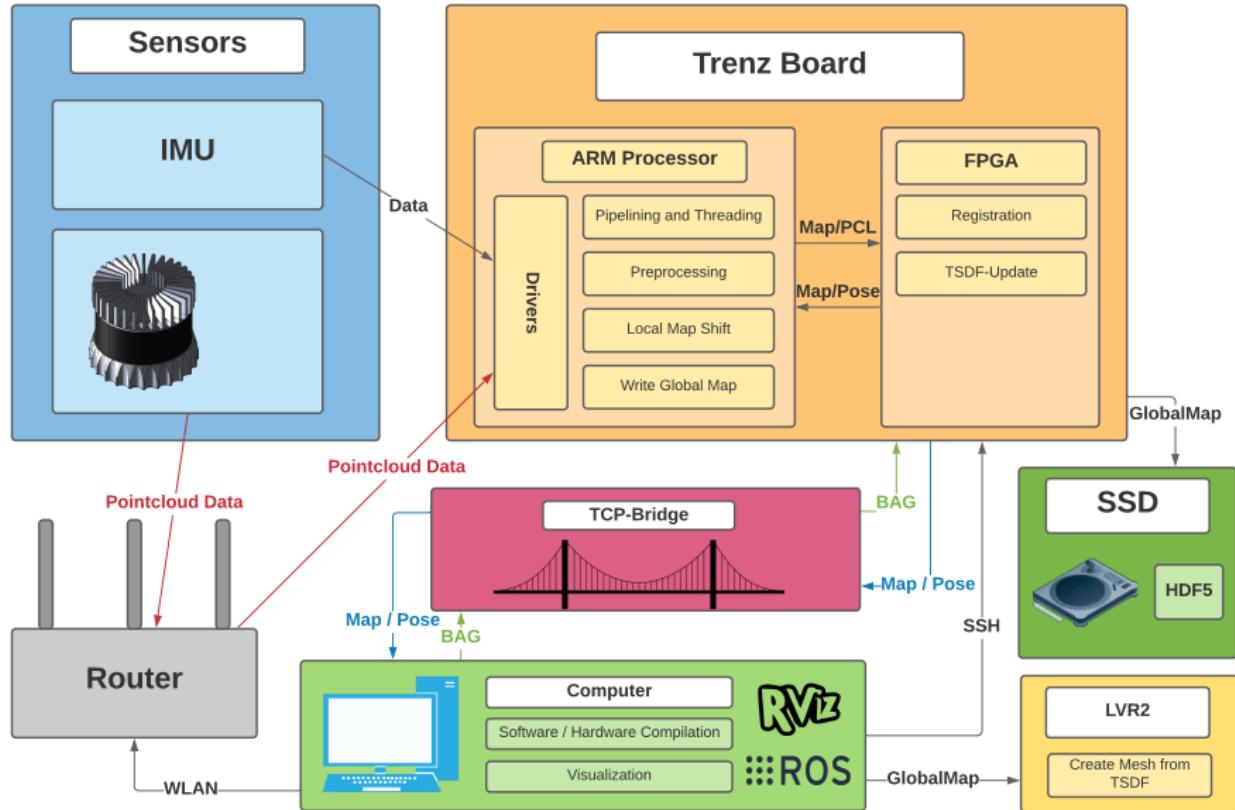
TSDF



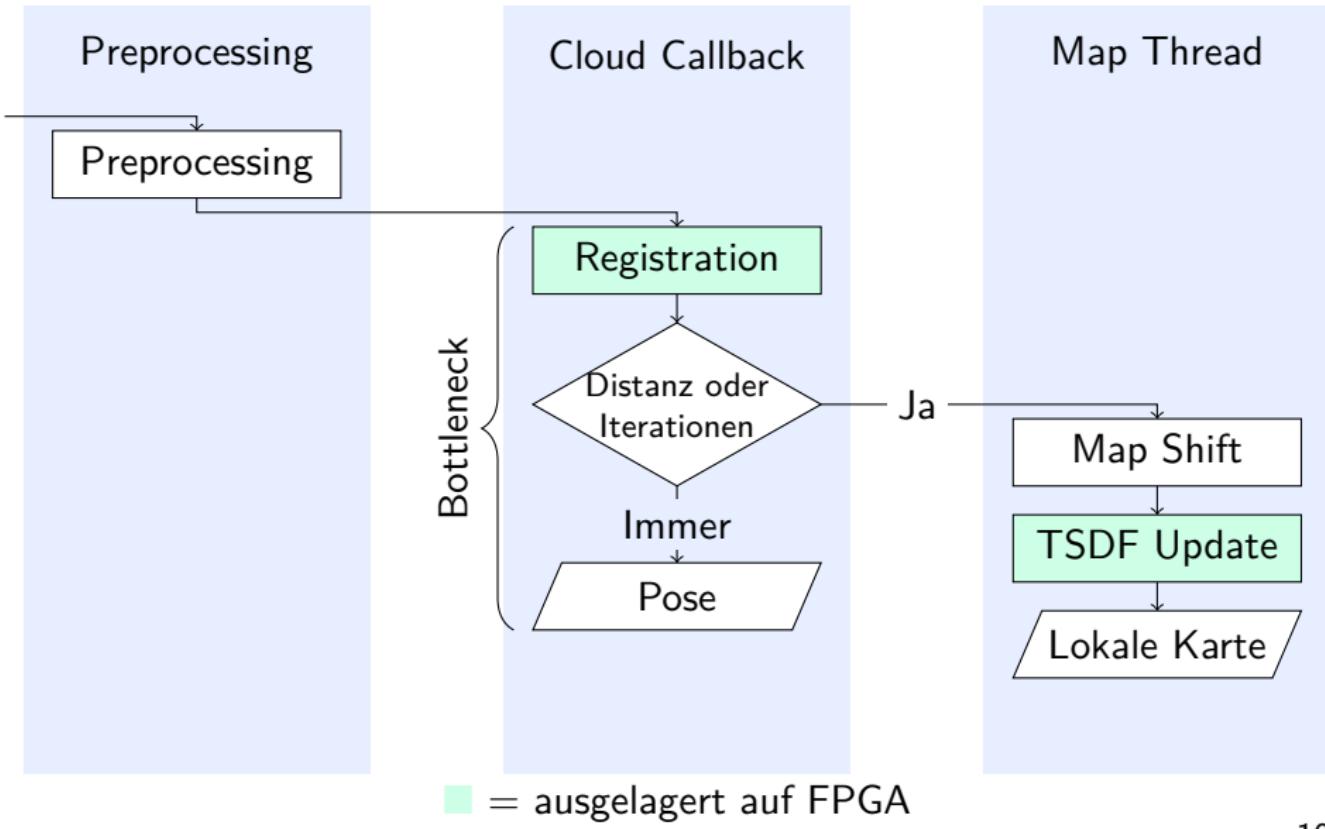
Point-to-TSDF Registrierung



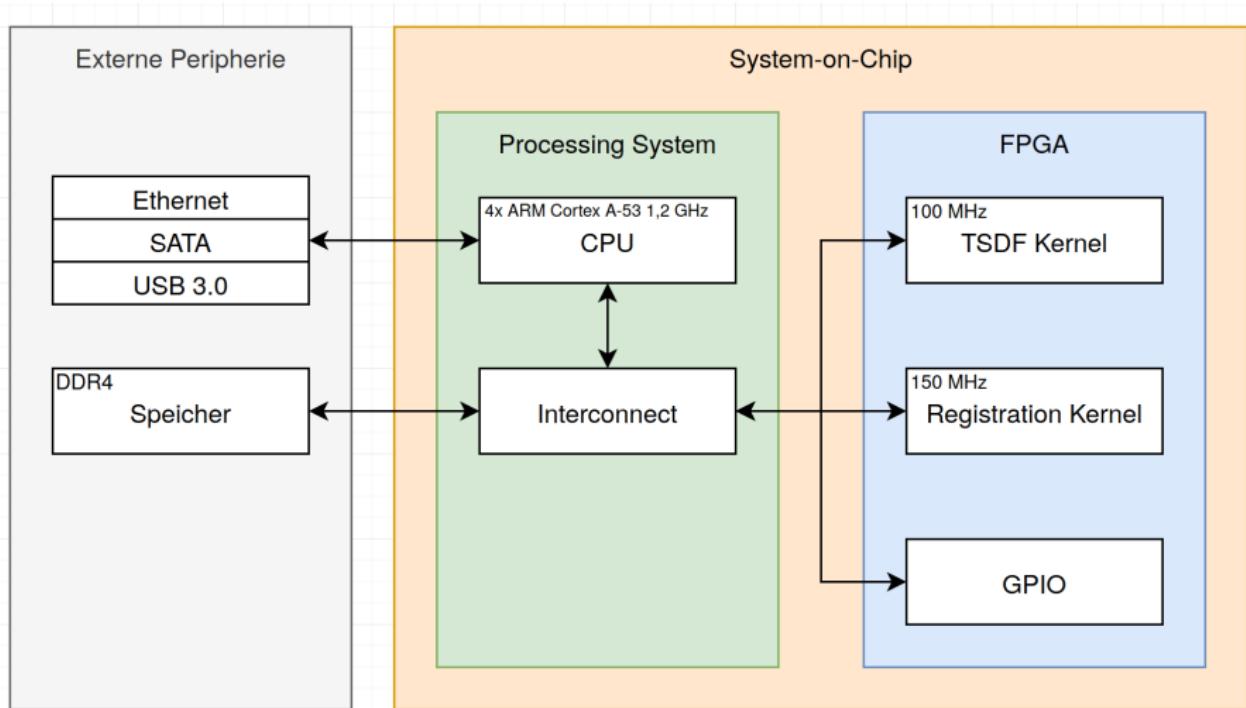
Komponenten



Algorithmus



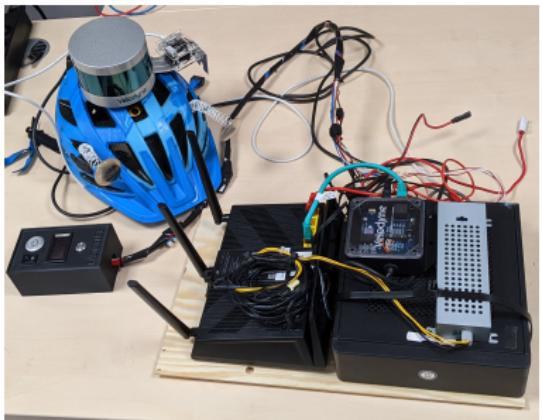
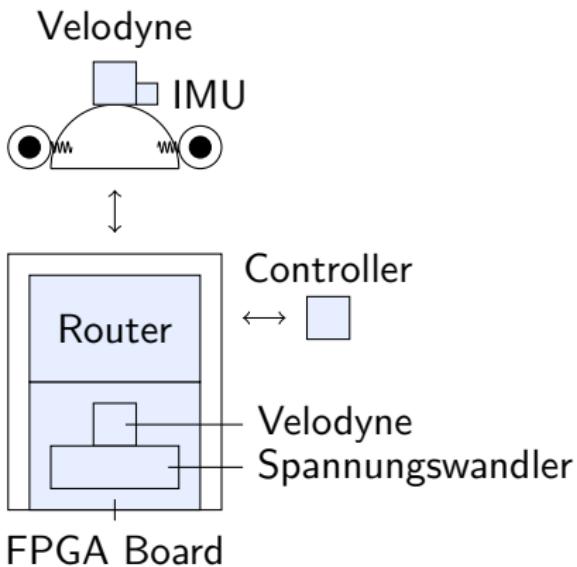
Hardware Architektur



Vorgehen

TODO

Aufbau



Evaluation: Zeit

TODO

Evaluation: Power Consumption

TODO

Evaluation: Genauigkeit

- 6. Stockwerk (Distanzabweichung in Meter)

ε	0,01	0,04
	0,0615	0,0505
Geschw.	langsam	schnell
	0,0505	0,0437

- gesamt (langsam, $\varepsilon = 0,04$): 0,075349
- 8 Meter Labortest (Distanzabweichung in Meter)

	hin	zurück	gesamt
langsam	0,0548	0,0650	0,0861
schnell	0,1676	0,0459	0,1320

- Leerlauf (nach einer Stunde, $\varepsilon = 0,04$): 0,156095

Fazit

TODO

Ausblick

TODO