ICPSprogress

Rev.B 2023/11/17

Kenji Kaneko

Main progress (2023/11/10-2023/11/16) and future plans

1. Mobile base (no manipulator)

1-1. Last reportedRevA04Continued development of

however,ZEDminiRegarding the mobilization actuator ofJ.R.L.Multiple opinions within 1-2.

ZEDminiComparison of proposed mobilization

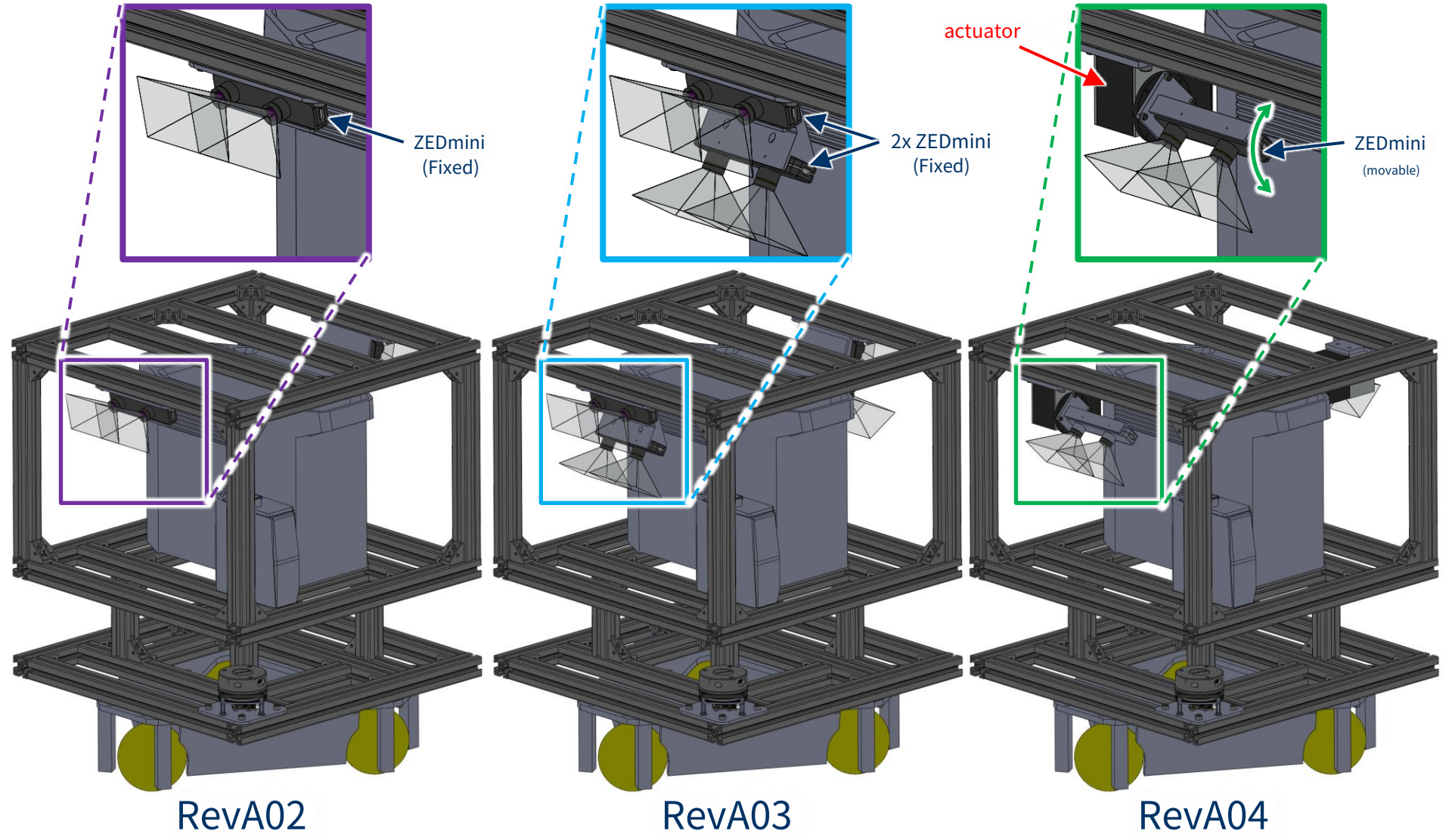
1-3.ZEDminiMobilization of [Robotis MX-64AR] 1-4. Equipped with a portable power supply [owned by Mr. Tanigawa]EcoFlow EFDELTA]

2. Future plans

2-1. Selecting a computer to be mounted on the mobile base (Rafa(currently inquiring)

2023/11/10 改定版

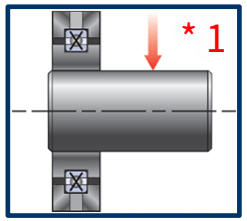
Mobile base (without manipulator)RevA02～RevA04The difference of



ProposedZEDminiMobilization (draft)

Sustainable RoboticsMade:SPU-01c

(https://www.sustainable-robotics.com/products_panunit.html (borrowed from)



・power supply: DC 9～30V or ACadapter

→ ExistingDC24VWith power supply

・PCCommunication with:RS232C

→ USB-Connect with serial conversion cable

・Moo * 1 Moment load: Estimated210gx35mmis within the acceptable range*2 *3

→ (60g+44g)x65mmis also acceptable

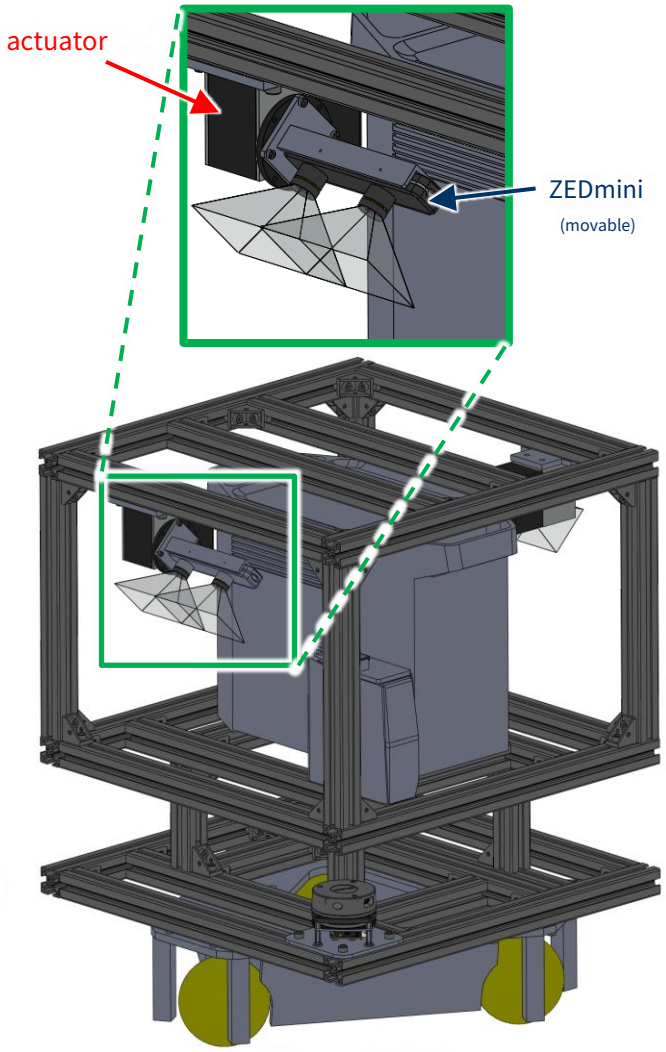
・design: integrated

→ Easy to design, neat finish

・remarks: With timing input function

*2
URGweight:210g
Bracket weight: unknown
Moment load:35mm(estimated)

*3
ZEDminiweight:60g
Bracket weight:44g
Moment load position:65mm



RevA04

ZEDminiComparison of mobilization (plan)

Kaneko plan

Sustainable RoboticsMade:SPU-01c

(https://www.sustainable-robotics.com/products_panunit.html (borrowed from)

・power supply: DC 9～30V or ACadapter
→ ExistingDC24VWith power supply

・PCCommunication with:RS232C
→ USB-Connect with serial conversion cable

* 1
• Moo Mean load: Estimated210gx35mmis within the acceptable range
→ (60g+44g)x65mmis also acceptable

・design: integrated
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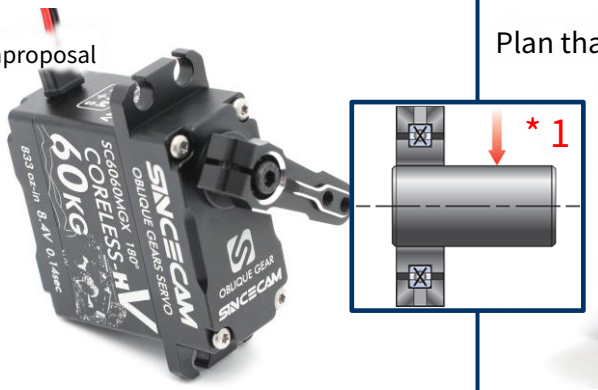
Rafaproposal



SincecamMade60kg

(https://www.sincecam.com/products/sincecam-60kg-waterproof-high-speed-brushless-servos-hv-digital-high-torque-steering-servo-all-metal-oblique-gear-aluminum-case-suitable-1-8-1-10-rc-road-crawler180-black (borrowed from)

DC 6～8.4V
→ newDCRequires power

Nothing
→ Separate controller required

not clear
→ If necessary, use both

Separate actuator/controller/power supply etc.
→ Increased design/maintenance burden

Waterproof function available

Plan that Kaneko did not adopt

RobotisMadeMX-64

(https://e-shop.robotis.co.jp/product.php?id=254 (borrowed from)

DC 10～14.8V
→ newDCRequires power

RS485
→ USB-Serial conversion cable

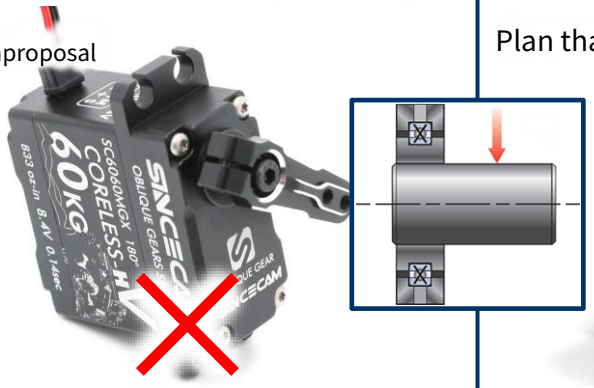
not clear
→ If necessary, use both

Separate actuator/controller/power supply etc.
→ Increased design/maintenance burden

Z

comparison

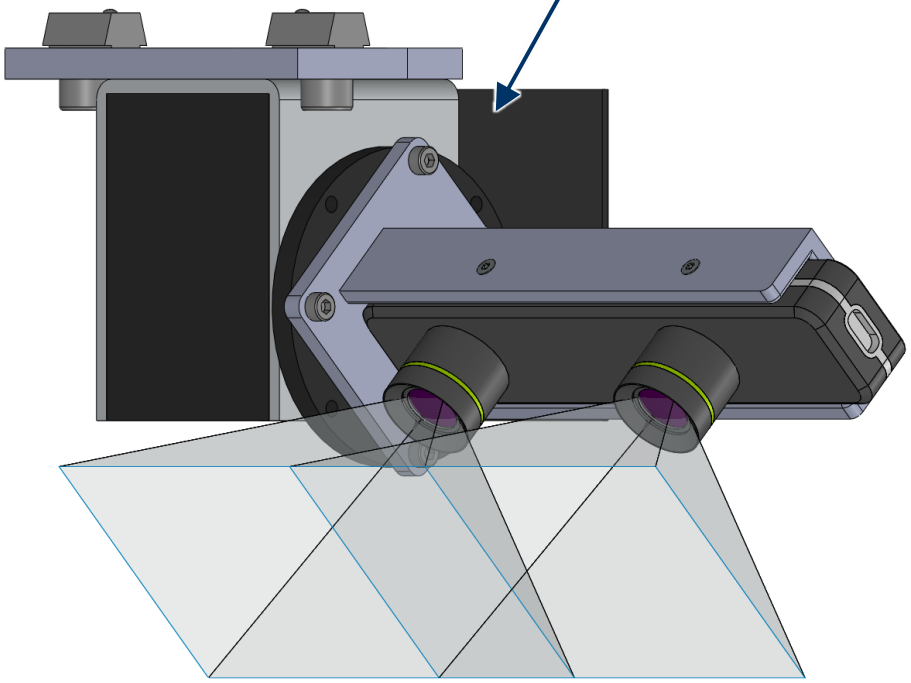
Kaneko's personal opinion (judgment)

	Kaneko plan	Rafaproposal	Plan that Kaneko did not adopt
			
	Sustain SPU-01c (https://w t.html(borrowed from)		
・power supply:	DC 9～30V or ACadapter → ExistingDC24VWith power supply ○	DC 6～8.4V → newDCRequires power ×	DC 10～14.8V → newDCRequires power ×
・PCCommunication with:	RS232C → USB-Connect with serial conversion cable ○	Nothing → Separate controller required ×	RS485 → USB-Serial conversion cable○
・Moo	* 1 Mean load: Estimated210gx35mmis within the acceptable range → (60g+44g)x65mmis also acceptable ○	not clear → If necessary, use both ○?	not clear → If necessary, use both○?
・design:	integrated → Easy to design, neat finish○	Separate actuator/controller/power supply etc. → Increased design/maintenance burden ×	Separate actuator/controller/power supply etc. → Increased design/maintenance burden ×
・remarks:	With timing input function	Waterproof function available	

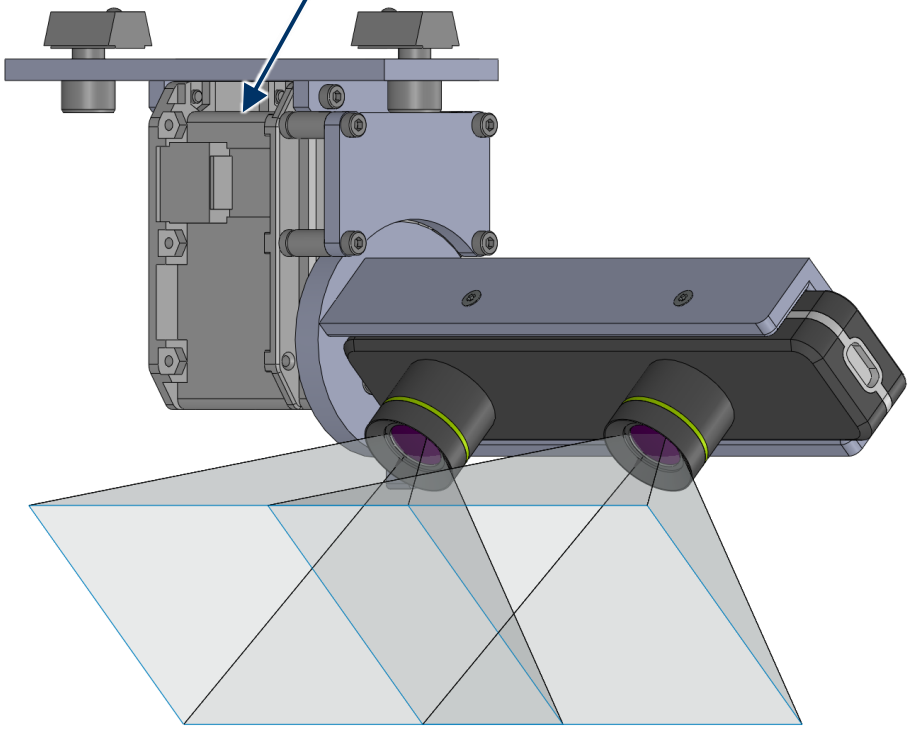
ZEDminiMobilization (draft)

2 types of designs

Sustainable RoboticsMade:SPU-01c



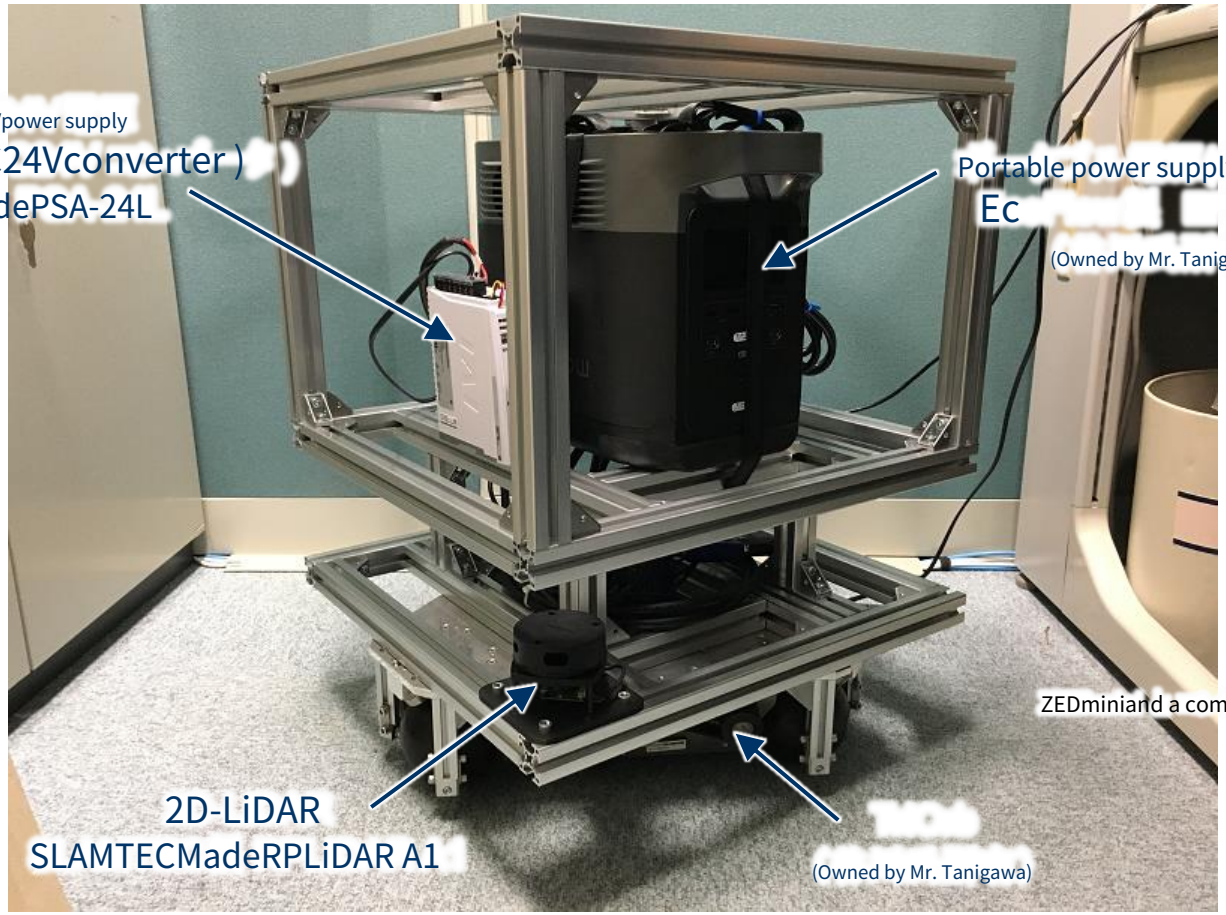
RobotisMade:MX-64AR



(NewDC12power supply

Work record: Mobile base (no manipulator)RevA04

Equipped with portable power supply



Mobile base (without manipulator) RevA04 Equipped with portable power supply

photograph:2023/11/15Laboratory(3301Photographed in room)

(File:IMG_2389.JPG)

Work implementation date:2023Year11Month15Day