Electric mobile chair for disabled people

Technical Specification:
- Width 64 cm
- Length 108 cm
- Height 92 – 100 cm
- Seat width 45 cm
- Seat length 40 cm
- Weight 65 kg
- Weight capacity 136 kg
- Maximum speed of 4 mph.
- Maximum range of 24 Km on a full battery charge.
- Designed for indoor and limited outdoor use.
- Rear wheel drive system.
- Electromagnetic brakes and emergency brakes.
- Programmable controller.
- De-clutch operation to enable you to safely freewheel the chair where and when required.
- Solid front 20 cm castors with 32 cm solid rear tires provide durability and low maintenance.
- Off board charging with folding battery tray (2 x 34Ah Batteries).

Scanning Laser Rangefinder - Hokuyo URG-04LX-UG01

- Power source: 5VDC±5%(USB Bus power)

- Light source: Semiconductor laser diode(λ=785nm), Laser safety class 1
- Measuring area: 20 to 5600mm(white paper with 70mm×70mm), 240°
- Accuracy: 60 to 1,000mm : ±30mm, 1,000 to 4,095mm : ±3% of measurement
- Angular resolution: Step angle : approx. 0.36°(360°/1,024 steps)
- Scanning time: 100ms/scan
- Noise: 25dB or less
- Interface: USB2.0/1.1[Mini B](Full Speed)
- Command System: SCIP Ver.2.0
- Ambient illuminance: Halogen/mercury lamp: 10,000Lux or less, Florescent: 6000Lux(Max)
- Ambient temperature/humidity: -10 to +50 degrees C, 85% or less(No condensation, no icing)
- Vibration resistance: 10 to 55Hz, double amplitude 1.5mm each 2 hour in X, Y and Z directions
- Impact resistance: 196m/s2, Each 10 time in X, Y and Z directions
- Weight: Approx. 160g

8. Structura hardware si software pentru conducerea scaunului cu rotile - Implementarea in timp real a algoritmilor de optimizare si control a proceselor neliniare.

- Encoders with a resolution up to 10 000 pulses for speed and position tracking at any time.
- Servo amplifiers for controlling the DC motors.
- EmbededPC (intel i3) with the necessary dimensions (L: 17 145 x W: 17.145 cm) so that it can be attached on the wheelchair without affecting the normal behavior of this kind of system.
- PCI data acquisition board, type DAQ NI 6024E.
- TFT 7" display used for GUI (Graphical User Interface).
- Laser sensor Hokuyo for obstacle avoidance.