



FORMULA TECHNION 2019

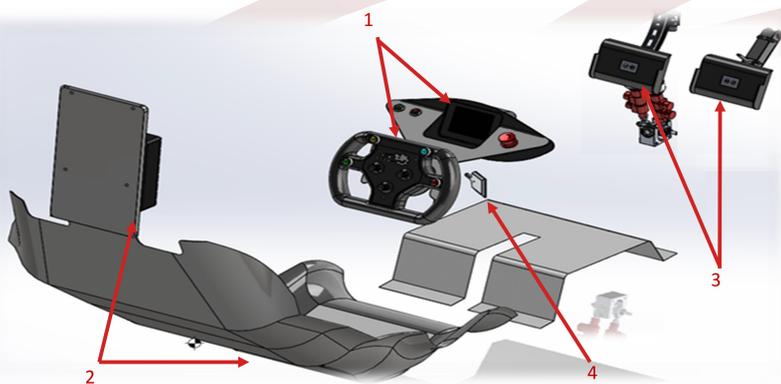
Driver Interface

Driver Interface

Main Achievements:

- Comfortable and intuitive to the driver
- Easy to calibrate and maintain
- High factor of safety
- Near optimal positioning of center of gravity in respect to the driver

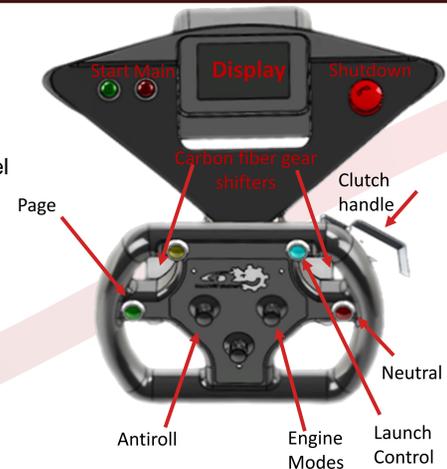
Components	Weight [gr]
1 Steering wheel and dashboard	1200
2 Driver seat and headrest	1400
3 Pedals	600
4 Clutch lever mechanism	35



Steering Wheel & Dashboard

Main Features:

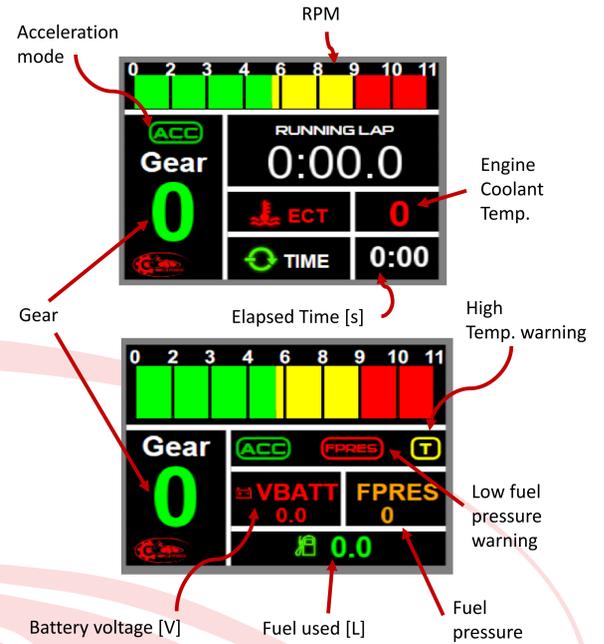
- Ergonomic grip
- Dash display
- Carbon fiber shifters
- Clutch handle behind steering wheel
- In-column wiring



Dash Display

Main Features:

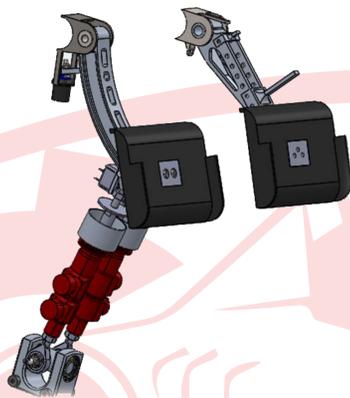
- Screen information is updated through the ECU.
- CAN refresh speed is 200 Hz.
- Screen refresh speed is 60 Hz.



Pedals

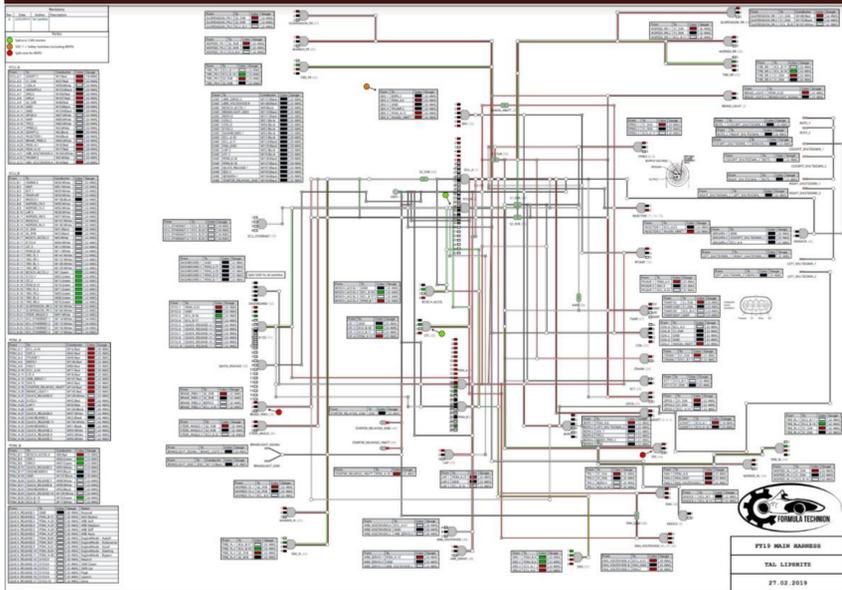
Main Features:

- Top mounted pedals
- Adjustable throttle sensitivity
- 50% weight reduction
- Pedal mounted overtravel switch
- Custom balance bar



Electronics & Control

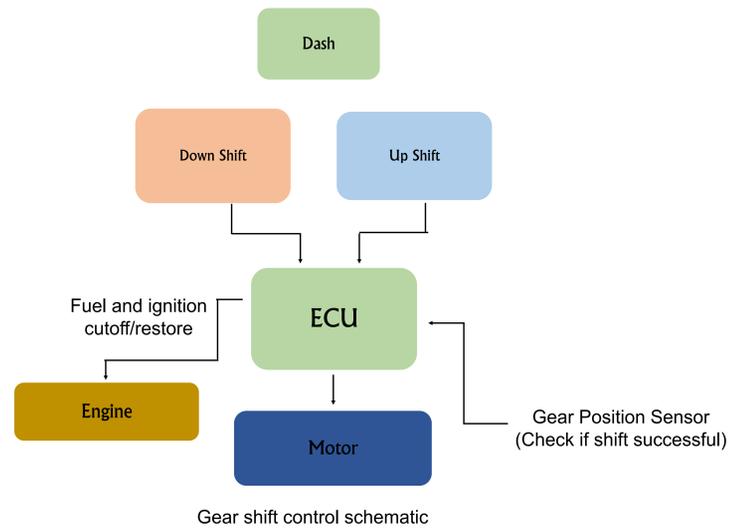
RapidHarness



Electric Gear Shift Control

Goal:

Electrically actuate gear shifting to reduce weight and shifting time



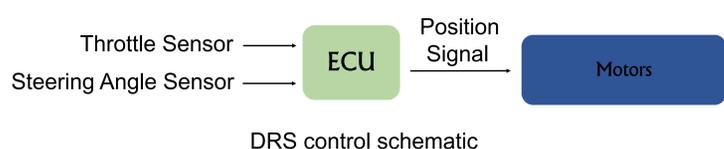
Time frame:

Pre-Shift	Shift	Recover
10 ms	Up	Down
	1 → 2: 40 ms	2 → 1: 60 ms
	2 → 3: 30 ms	3 → 2: 45 ms
	3 → 4: 30 ms	4 → 3: 45 ms
		→ 10 ms

Drag Reduction System (DRS)

Goal:

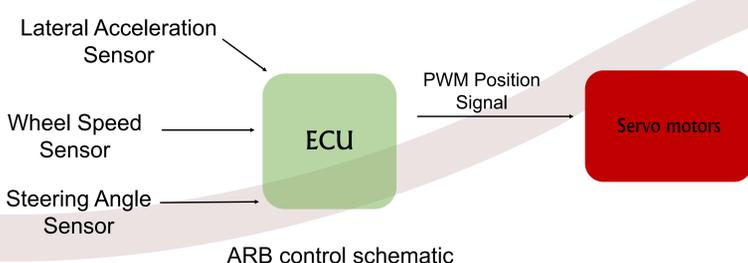
To reduce the drag force on the vehicle in straights without losing downforce in corners.



Anti Roll Control

Goal:

To balance oversteer-understeer behavior by controlling the ARB's roll stiffness.



Electrical Components

