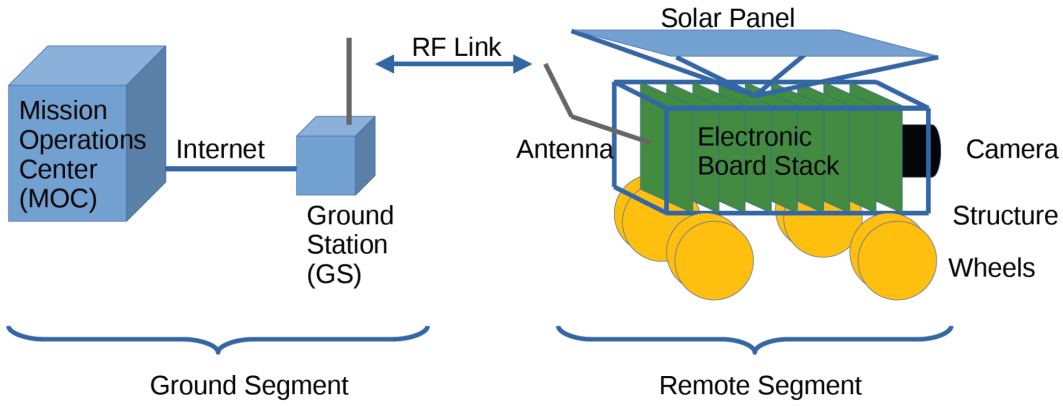
Source: [How to build an autonomous rover - drive.tech]

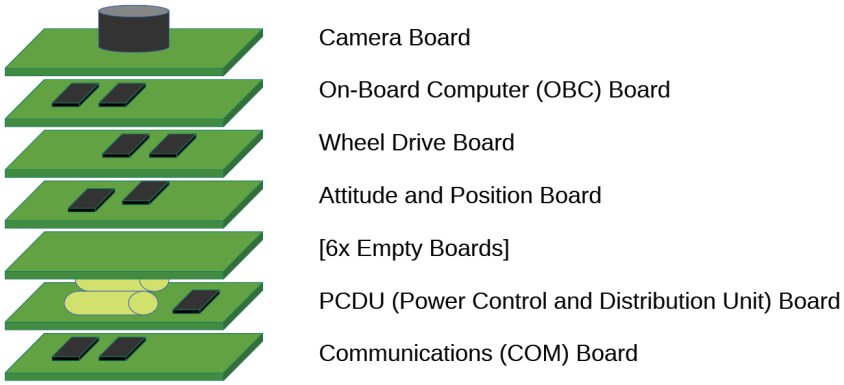
- important features: camera, software for human interaction, security systems (collision detection (distance sensor), error transmission (wireless) and energy reduction when being low on battery (solar cells))
- Raspberry Pi 3 → microcontroller; good proportion of computing power und power draw
- need long-lasting and precise motors, to provide a precise and reliable control
- maxon DC motors → will be used where precision and torque is needed (the tire drives and the "camera tower", where cameras and sensors will be located)

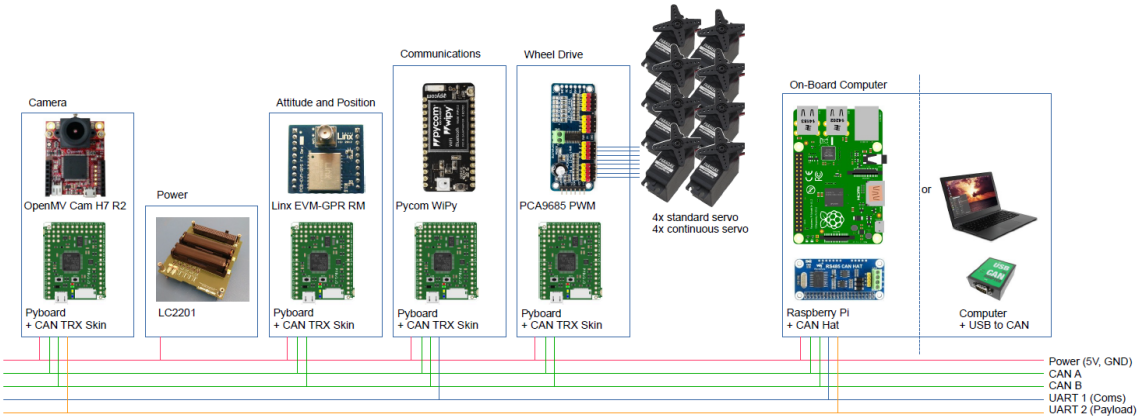
Source: [Rover - LibreCube Documentation]

- objective: develop an autonomous rover that can be easily adapted for various applications (ex: disaster relief support, Moon exploration missions, etc.)
- designed using space communication protocols and space engineering practices
- baseline model scenario:



- most of the functionality is implemented by electronic board stack; closer view:



    - OBC: On-Board Computer
    - PCDU: Power Distribution and Control Unit
    - COM: Communications Unit
- 3 on-board busses
    - **system bus** → OBC controls and monitors other boards; goal is to provide a reliable to to send commands to and get telemetry from other boards
    - **payload bus** → this is how the OBC interfaces with the camera; OBC uses this bus to send over the transfer of image data
    - **comms bus** → transports bit streams between OBC and COM board; COM board is used to send and receive data over radio link to ground station (external system)
- recommended setup to support the rover electronics stack development
    - 

- all work subdivided into smaller work packages (allocation)
    - example packages: electronics, mechanical, software