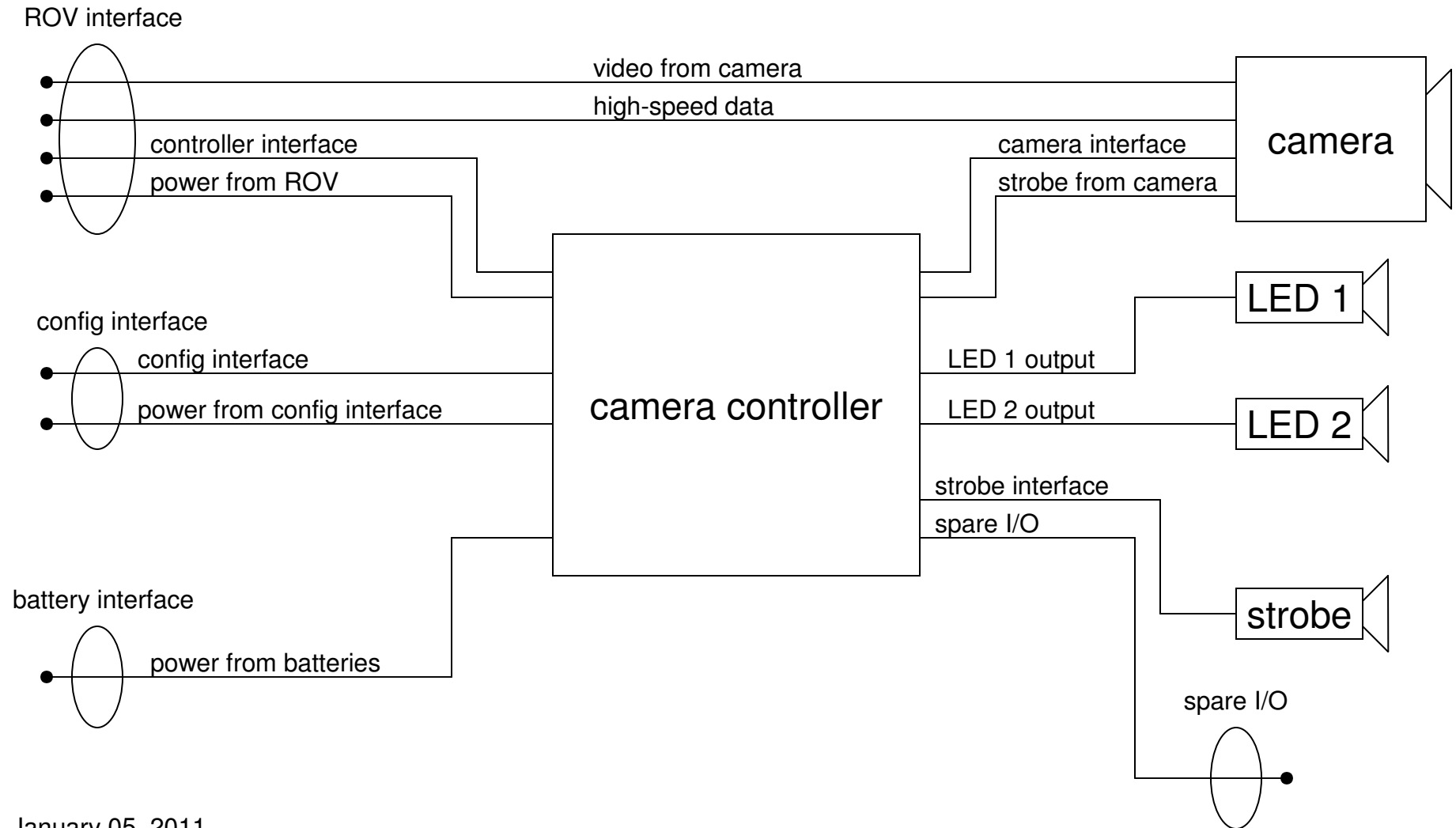


Preliminary Time Lapse Camera Design



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Preliminary Time Lapse Camera (TLC) Specification

The MBARI TLC shall be capable of recording both video and stills. The system shall be composed of a stand alone camera, time lapse controller, battery and illumination source(s). The total system shall be of a size to allow the ROV to deploy or recover the system in a single dive operation. An ROV interface (wet mate connector) shall be provided to allow real time video and control or setup of the camera once it has been deployed on the sea bed to insure proper framing, exposure and controller operation. This interface shall also allow periodic revisits with the ROV to download images in order to extend the duration of the system on site. In addition, this interface shall allow access to the time lapse controller for reprogramming of parameters. The battery shall also have a wet mate connector to allow periodic replacement or recharging to extend the duration of the system on site. The system shall provide detachable lighting so that the ROV can position lights for optimal scene illumination.

General Requirements are as follows:

of stills between downloads = ?
Length and # of video clips between downloads = ?
Battery capacity = ?
On board memory storage = ?
Depth rating = 4000 msw
Weight <= ?
Dimensions = ?
Optical zoom = ?
Minimum focus distance from dome = 6"?
Stills resolution >= 10mb
Video resolution = HD
Field of view >= ?

Remote camera functions:

- Zoom
- Focus
- F stop
- Shutter speed
- White balance
- Camera Menu items ?
- Others ?

Questions:

Is a strobe required or can we use LED lighting for both video and stills?
What type of interface will the ROV have with the camera? (No USB!)
What type of interface will the time lapse controller have with the camera?
What happens to camera settings when powered down?
How long will the camera's internal battery for the clock last?

