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| Ref | Description | Parameter Name | Protocol | Comment |
| Camera Settings | | | | |
| 1.1 | Get/set recorded bit depth | BIT\_DEPTH | info.mdepths defines available memory depths.  cam.membpp is “Bit depth into image memory”. |  |
| 1.2 | Get/set number of memory partitions (Default is 1) | NUM\_PART | Set: partition <n>  Get: cam.cines |  |
| 1.3 | Put camera into acquisition mode | *ACQUIRE* | rec <n> | Standard parameter? |
| 1.4 | Send software trigger signal to camera | TRIGGER | trig |  |
| 1.5 | Send an abort recording signal to stop acquisition if required. | ABORT | ? | *Not found in protocol document?* |
| Cine Settings | | | | |
| 2.1 | Get/set cine number (i.e. the partition into which the cine should be recorded) | CINE\_NUMBER | Parameter to the rec command |  |
| 2.2 | Get/set cine name | CINE\_NAME | ? | No cine names supported? |
| 2.3 | Get/set resolution | RESOLUTION | defc.res = “Image size in pixels” |  |
| 2.4 | Get/set sample rate in frames per second | FRAMES\_PER\_SEC | defc.rate = “Frame rate in pictures/second” |  |
| 2.5 | Get/set exposure time in microseconds. | *ACQ\_TIME* | defc.exp is “Exposure time in ns” | Standard parameter? |
| 2.6 | Get/set Extended Dynamic Range in microseconds | EDR\_USECS | defc.edrexp is “EDR Exposure time in ns” |  |
| 2.7 | Command camera to perform a “Current Session Reference” (CSR) | CSR | Probably the bref command? | The bref command performs a “black reference”. |
| 2.8 | Get/set image range and trigger position | ? | defc.ptframes is “number of post-trigger frames? | *Unclear what this means. “Image range” for save is defined in 5.6.* |
| 2.9 | Delete current cine from on-board memory (e.g. prior to starting a new recording) | DELETE\_CINE | del <n> |  |
| 2.10 | Select autosave to on-board flash memory |  | auto.filesave “When non-zero, a camera will save the cine to an attached storage device” |  |
| 2.11 | Set restart recording options if autosave is set |  | auto.acqrestart “When non-zero, the camera will restart acquisition after a successful automatic save” |  |
| Flash Memory *The protocol document does not refer to “flash memory”. It mentions “cinemag” as well as “attached storage device”. Unclear which is actually used?* | | | | |
| 3.1 | Save image cine from camera buffer to flash memory | SAVE\_TO\_FLASH | cfsave command? | cfsave command is to “save to an attached storage device”. |
| 3.2 | Get flash memory size | FLASH\_MEMSIZE | cf.size is “Size of currently attached storage device in kB” |  |
| 3.3 | Get remaining flash memory available | FLASH\_MEM\_FREE | cf.size is “Size of the used space on the currently attached storage device in kB” |  |
| 3.4 | Get number of files in flash memory | FLASH\_NUM\_FILES | Not directly supported | Use cfls command? |
| 3.5 | Get names of files in flash memory | FLASH\_FILENAMES | cfls command? | cfls command is “List files on attached storage device” |
| 3.6 | Erase flash memory | FLASH\_MEM\_ERASE | cfrm command? | cfrm command is to “remove file from the attached storage device”. |
| Advanced Settings | | | | |
| 4.1 | Get/set external sync type (Internal, External) | EXTERNAL\_SYNC | cam.syncimg is “Frame sync mode” |  |
| 4.2 | Get/set frame delay | FRAME\_DELAY | cam.frdelay is “Delay between sync and start of exposure in ns” ” |  |
| 4.3 | Get camera temperature | *TEMPERATURE* | info.camtemp is “Camera temperature measured inside the body” | Standard parameter? |
| 4.4 | Get sensor temperature | *TEMPERATURE\_ACTUAL* | info.snstemp is “Sensor die temperature” | Standard parameter? |
| 4.5 | Get/set trigger to rising or falling edge | TRIG\_EDGE | cam.trigpol is “Trigger polarity” | Trigger polarity; when 0, the camera triggers on the falling edge of the trigger signal; when 1, on the rising edge |
| 4.6 | Get/set trigger filter time | TRIG\_FILT\_TIME | cam.trigfilt is the “Minimum time in μs the trigger signal has to be asserted continuously in order to be recognised” |  |
| 4.7 | Get/set ready signal ends at: Trigger or Recording end | RDY\_SIGNAL\_END | cam.longready is “Ready becomes inactive at end of recording instead of trigger time” |  |
| 4.8 | Get/set what the Aux pin is set to (Strobe, Event or Memory Gate) | AUX\_PIN | cam.aux1mode is “Function of the aux1 signal (pin 6)” | There is also cam.aux1mode for pin 5. |
| Image Saving | | | | |
| 5.1 | The commercial PCC software enables saving in a variety of file types, but not hdf. If possible, an hdf writer shall be provided, so that an image sequence downloaded from the camera is saved to HDF format, along with the camera metadata. | | | |
| 5.2 | Select image file to download to central storage (e.g. the one in the camera buffer or one stored in Flash Memory) | DOWNLOAD\_IMAGE |  |  |
| 5.3 | Get/set image download file path | DOWNLOAD\_FILE\_NAME |  |  |
| 5.4 | Get/set file type (default to HDF if possible) | *FILE\_FORMAT* |  | Standard parameter? |
| 5.5 | Get number of stored images in on-board cine file | NUM\_IMAGES | cX.frcount “Number of frames recorded” | What are “stored” images? Is it the current number of recorded frames |
| 5.6 | Get/set output image range (Full cine or user defined) | OUT\_IMAGE\_RANGE | Parameters first\_frame, frame\_count in img command |  |
| 5.7 | Set 16 bit depth | DEPTH ? | Parameter format in img command. Either P16 or P16R. |  |
| 5.8 | Get/set output file name | *FILE\_NAME* | - | Standard parameter? |
| 5.9 | Option of automated file saving at end of recording |  |  | *Not supported by camera protocol.* |
| 5.10 | Get/set restart recording options  *How does this compare with 2.11?* |  |  |  |
| 5.11 | Save images to external storage |  | img command | Implicit in functional specification |