API Version 2

Works with BackyardEOS 3.1.10 or higher
Works with BackyardNikon 2.0.3 or higher

The API can be described has having 2 sets of commands.

Set #1 is series of get commands that returns a value. These commands are sent synchronously and a return value will always be sent back to the calling application.

Set #2 are action commands that do not return a value. They are processed asynchronously in a fire and forget fashion.

Command Set #1 (synchronous)

getstatus: this command return the status of the API.

IN: n/a
OUT: (string) “idle”, “busy”, or “error”

When an error is encountered by the API the **getlasterror** command can be used to retrieve the error message.

getlasterror: this command returns the last error message encountered by the API.

IN: n/a
OUT: (string)

getispictureready: this command returns true or false indicating if a picture is ready. This command will always return false during a **takepicture** execution and will only return true once the picture is ready, or false if there was an error.

IN: n/a
OUT: (string) “true” or “false”.

getistcpclientreachable: this command returns true or false indicating if the tcp client is reachable.

IN: n/a
OUT: (string) “true” or “false”.

getfolderpath: this command returns the full folder path where the images are downloaded.

IN: n/a
OUT: (string)

getpicturesizex: this command returns width of the last image taken by the **takepicture** command. You'll need to cast the return value into an integer.

IN: n/a
OUT: (string)

getpicturesizey: this command returns height of the last image taken by the **takepicture** command. You'll need to cast the return value into an integer.

IN: n/a
OUT: (string)

getpicturepath: this command returns the full picture file name, including drive and path, the last image taken by the **takepicture** command.

IN: n/a
OUT: (string)

getcameramodel: this command return the camera model.

IN: n/a
OUT: (string)

getcamerapixelsize: this command returns the camera sensor pixel size in micron. This can be useful when using the API for plate solving.

IN: n/a
OUT: (string)

Command Set #2 (asynchronous)

abort: send this command to abort any picture in progress taken with the **takepicture** command.

IN: n/a
OUT: n/a

connect: send this command to simulate a button click on the camera connect button. This is useful when the application is running and you want to connect the camera to the application. The camera must be properly connected to the computer and turned on.

This command is ignored if a camera is already connected to the application.

Warning:
The camera sdk selection must have been previously selected and saved. For BackyardNIKON, the actual camera selection must also be previously selected and saved.

IN: n/a
OUT: n/a

disconnect: send this command to simulate a button click on the camera disconnect button.

This command is ignored if a camera is not already connected to the application or if the application is busy imaging.

IN: n/a
OUT: n/a

toggledither: send this command to simulate a button click on the dither on/off button. This command is ignored if the dither button is disabled.

IN: (string) “ON” or “OFF”.
OUT: n/a

Examples:
“**toggledither** ON”

toggletheme: send this command to simulate a button click on the theme/night vision on/off button. This command is ignored if the theme/night vision button is disabled.

IN: (string) “ON” or “OFF”.
OUT: n/a

Examples:
“**toggletheme** OFF”

takepicure: send this command to take a picture.

IN: <<paramters>>
OUT: n/a

The **takepicture** command has several parameters, they are:

target:{name}
duration:{duration in seconds, default is 1}
iso:{100, 400, 800, 1600, default is 1600}
quality:{jpg, raw, default is jpg}
exposures:{number of images to take, default is 1}
imagetype:{1=preview, 0=capture, default is 1}

Examples:
“takepicture target:M33 duration:300 iso:800”
“takepicture duration:15 iso:1600”
“takepicture duration:15”
“takepicture quality:raw iso:1600”
“takepicture target:M13 duration:300 iso:800 imagetype:0”

Warning:
When using imagetype=0 (capture) all synchronous commands will no longer work; getstatus, getlaterror, etc. This is because all images taken with this flag ON are processed in BYE/BYN by the background worker process and this process is not aware of the API calls.

Use this flag only if you want BYE/BYN to process the image information and you want the FULL image file name to respect your settings in BYE/BYN. If you need to know when the image is fully processed and available in your download folder you will need to implement a FileWatcher process in your application.