Device: Bolin VCC-7HD30S-3SMN

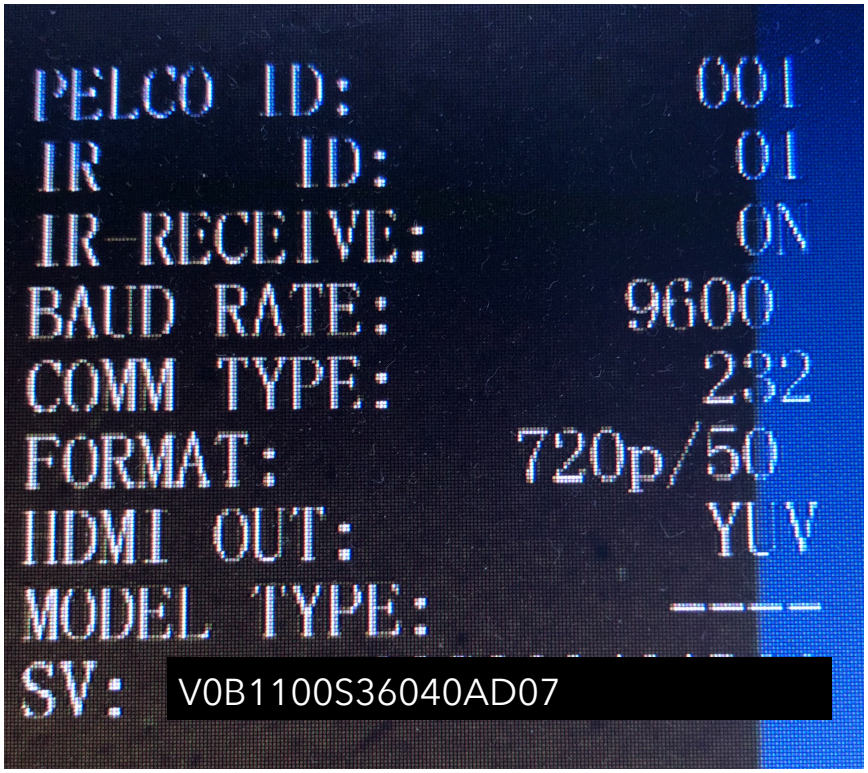
Introduction

A large number of parameters can be controlled on the Bolin VCC-7HD30S-3SMN. Control is via VISCA over IP (and not NDI). The Device Core is still in beta with few bugs to get sorted out.

Please notice currently the Bolin camera do not support block inquiry commands over IP, so not all current settings on the camera will be transmitted back to our controllers. Examples

- When our controller connects to the camera some settings will not be in sync with the actual state of the camera. The shutter speed on our controller could reflect one setting, while the actual shutter speed on the camera could be different until the shutter speed has in fact been set from our controller
- If multiple SKAARHOJ controllers are connected to the same camera they will not be in sync, and control might not be possible
- If changes are made in the OSD these will not necessarily be reported back to the SKAARHOJ controller

Please notice originally the implementation was done for cameras with Firmware version V0B1100S36040AD06 however in order to improve user experience when multiple controllers where connected to the same camera, we got a updated beta version of the firmware to support Block Inquiry commands. We are in the process of integration this. The implementation is done on Bolin VCC-7HD30S-3SMN Firmware version SV: V0B1100S36040AD07



Please see the "PTZ Manual" at https://www.skaarhoj.com/support/manuals/ to learn more about PTZ control in general from SKAARHOJ controllers and in particular network recommendations.

In this manual it is worth noticing that one should not add *additional* Device Cores to control multiple cameras. This is possible from the same Device Core but proper steps should be ensured (consecutive IP addresses on the cameras) for a good user experience.

Device Configurations

Device configuration options exist:

- Index 1: **Video Standard**
  - If "0" = Reserved
  - If "1" = Pal mode
  - If "2" = NTSC mode
- Index 4: **Block Inquiry delay (set to 500ms per default**
  - If "-250-10000" = Sets Block Inquiry delay between 250ms and 10000ms. A slower inquiry delay (larger number) will prompt a more stable connection but reduce the responsiveness of the system). This also entails that checking if the camera is online and connected goes from 5 seconds to 11 seconds. Where normally if we have not heard from the camera within 5 seconds it will show as disconnected, while with this approach it takes 11 seconds. It also means that it takes much longer before the cameras appears as connected on the controller. Up to 45 seconds or more.

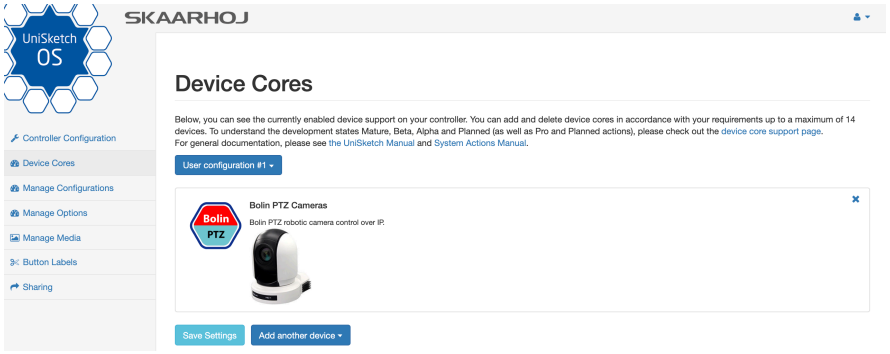
Example 1:

Enabling "Video Standard" to NTSC mode could look like this device configuration code: "D0:1=2" where the general form would be "Dx:y=z" where "x" is the number of the device core as installed on the controller (starting with zero for the first device core), "y" the index number and "z" the value for that index.

To confirm that a device configuration is in fact detected by the controller, please check it out on the serial monitor where it will be mentioned:

```
Memory A-D restored
Compiled: Aug 28 2019 12:16:59
D0[1] = 2
DeviceCore #0: BOLIN0, IP = 192.168.10.200
BOLIN: Option VISCAoverIP
ClientVISCAoverIP fixedSrcPort:1
Setting NTSC mode for 'BOLIN device core
setup() Done
----------------------------
HWc#2 Down Speed: 0
```

Example: If the Bolin device core is the first like below:



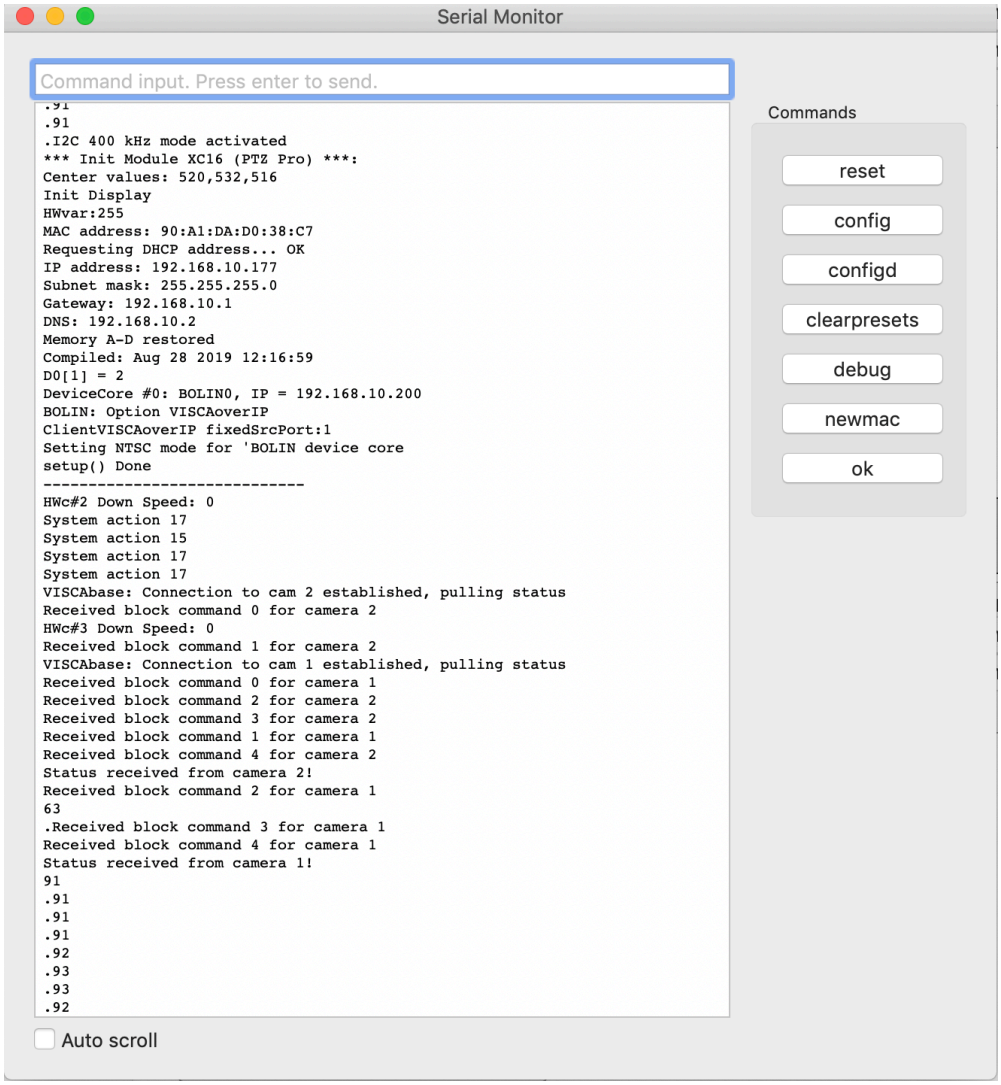
Then setting the "Video Standard" would be set by this configuration under "Manage Media" on your configuration page for your controller on cores.skaarhoj.com

Example 2:

Setting "Block Inquiry Delay" to 750ms could look like this device configuration code: "D0:4=750" where the general form would be "Dx:y=z" where "x" is the number of the device core as installed on the controller (starting with zero for the first device core), "y" the index number and "z" the value for that index.

Connection

When a controller have successfully established connection to the camera the serial monitor will report "Status received from camera x!"



This is a overview of the actions implemented in the Device Core

- Bolin VCC-7HD30S-3SMN: Pan
- Bolin VCC-7HD30S-3SMN: Tilt
- Bolin VCC-7HD30S-3SMN: Zoom
- Bolin VCC-7HD30S-3SMN: Focus
- Bolin VCC-7HD30S-3SMN: Focus One Push
- Bolin VCC-7HD30S-3SMN: Focus Settings
- Bolin VCC-7HD30S-3SMN: Zoom Settings
- ✓ Bolin VCC-7HD30S-3SMN: Exposure Mode
- Bolin VCC-7HD30S-3SMN: Iris
- Bolin VCC-7HD30S-3SMN: Shutter
- Bolin VCC-7HD30S-3SMN: Gain
- Bolin VCC-7HD30S-3SMN: AE Speed
- Bolin VCC-7HD30S-3SMN: Ex-Comp. Enable
- Bolin VCC-7HD30S-3SMN: Ex-Comp. Level
- Bolin VCC-7HD30S-3SMN: AE Comp
- Bolin VCC-7HD30S-3SMN: Gain Limit
- Bolin VCC-7HD30S-3SMN: Wide Dynamic Range Mode
- Bolin VCC-7HD30S-3SMN: White Balance
- Bolin VCC-7HD30S-3SMN: WB One Push
- Bolin VCC-7HD30S-3SMN: WB R/B Gain
- Bolin VCC-7HD30S-3SMN: Chroma Suppress
- Bolin VCC-7HD30S-3SMN: Sharpness
- Bolin VCC-7HD30S-3SMN: Noise Reduction
- Bolin VCC-7HD30S-3SMN: Gamma
- Bolin VCC-7HD30S-3SMN: Picture Effect
- Bolin VCC-7HD30S-3SMN: Preset
- Bolin VCC-7HD30S-3SMN: System
- Bolin VCC-7HD30S-3SMN: Speed Limit
- Bolin VCC-7HD30S-3SMN: Auto Shift level
- Bolin VCC-7HD30S-3SMN: Camera Select