

# Device: Canon CR-N500/N300



## Introduction

The Canon CR-N500/N300 Device Core is still in alpha with most of the feature set available to control. At this point control is VISCA over IP.

Please notice currently the Canon CR-N500/N300 camera does support block inquiry commands over IP, however not all current settings on the camera will be transmitted back to our controllers.

-Some settings may start with a display of ? but should reflect true once set.

-Some settings may start at a default different than the current camera state but will reflect true once set.

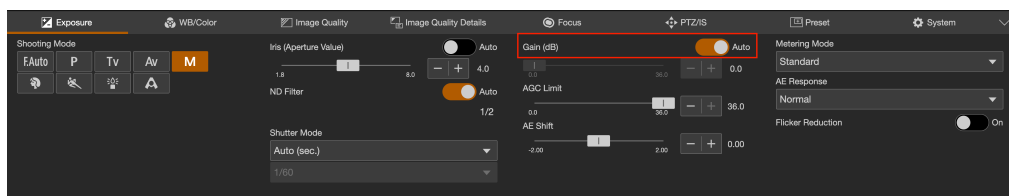
The implementation is done on firmware version: CR-N500 v. 1.0.0, CR-N300 v. 1.0.0

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.

## Known Issues

When the camera is set to Manual Exposure, gain will still auto update unless Gain Auto is disabled via the camera's web interface. We do not have control of this feature remotely at this time.



## Connection

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

The screenshot displays the SKAARHOJ Serial Monitor interface. The top bar shows the SKAARHOJ logo and navigation tabs: Main, IP Config, and Serial Monitor. The main area contains a text field with boot logs. The logs show the controller booting, initializing PTZ Trace EEPROM handler, and setting up network (IP: 192.168.10.223). It then lists loaded cameras (1-7) and their IP addresses. The final log entry, highlighted with a red box, is ".Status received from camera 1!". To the right of the text field are buttons: Reset, Config, Debug, Ok, Clear Presets, Scroll down, and Clear. A question mark icon is at the bottom right.

```

*****
SKAARHOJ Controller Booting
*****
SK_VERSION: v2.5.11
SK_MODEL: SK_PTZFLY
SK_SERIAL: 491115
Initialized PTZ Trace EEPROM handler, saving allowed.
EEPROM Size: 32768
I2C 400 kHz mode activated
*** Init Module MC16 ***
Option: Hall Effect Joystick
Deadzone settings init (X,Y,Z) = 10,10,10
Center values: 504,516,508
MAC address: 90:A1:DA:F9:55:72
Requesting DHCP address... OK
IP address: 192.168.11.225
Subnet mask: 255.255.254.0
Gateway: 192.168.10.1
DNS: 192.168.10.1
mDNS Service started, announced for port 80
Boots Count: 564
Uptime: 177 hours, 21 minutes
Screen Saver: 11 hours, 13 minutes
Usage Stats Flags: 01
Compiled: Jun 11 2021 12:31:17
DeviceCore #0: CANON_CRN5000, IP = 192.168.10.223
Loading DCOptions.
Found option D0:2 (int)=1
_deviceIdx 0 using VISCAoverIP
ClientVISCAoverIP fixedSrcPort: 0
VISCA 0 using default camera IPs
VISCA 0 Group 0, Device 1: '192.168.10.223'
VISCA 0 Group 0, Device 2: '192.168.10.224'
VISCA 0 Group 0, Device 3: '192.168.10.225'
VISCA 0 Group 0, Device 4: '192.168.10.226'
VISCA 0 Group 0, Device 5: '192.168.10.227'
VISCA 0 Group 0, Device 6: '192.168.10.228'
VISCA 0 Group 0, Device 7: '192.168.10.229'
Camera 1 loaded with IP: 192.168.10.223
Camera 2 loaded with IP: 192.168.10.224
Camera 3 loaded with IP: 192.168.10.225
Camera 4 loaded with IP: 192.168.10.226
Camera 5 loaded with IP: 192.168.10.227
Camera 6 loaded with IP: 192.168.10.228
Camera 7 loaded with IP: 192.168.10.229
setup() Done
-----
System action 16
System action 17
System action 17
System action 17
HWc#11 Down Speed: 0
VISCAbase: Connection to Camera 1 (192.168.10.223) established, pulling status
Received block command 0 for camera 1
HWc#13 Down Speed: 0
Received block command 1 for camera 1
Received block command 2 for camera 1
Received block command 3 for camera 1
Received block command 4 for camera 1
Received block command 5 for camera 1
114
.Status received from camera 1!
126
.VISCAbase: Connection to Camera 2 (192.168.10.224) established, pulling status
Received block command 0 for camera 2

```

## Device Configurations

Device configuration options exist. For most use cases, it is not needed to change any of the device core options settings.

### Device Core Options (Alpha)

**Canon CR-N500**

IP matrix: Auto-fill

Group 1

X Camera 1 Add Group

Add Camera

Connection Type: VISCAoverIP

Video Mode: PAL

☐ Destination Port: 52381

☐ Source Port: 52381

Use Strict Connection Strategy: No

☐ Set Inquiry Delay: 50

Instant PTZ control: No

## Action Overview

Canon CR-N500: Pan	Canon CR-N500: Gamma
Canon CR-N500: Tilt	Canon CR-N500: Gamma Settings
Canon CR-N500: Pan/Tilt	Canon CR-N500: Preset
Canon CR-N500: Zoom	Canon CR-N500: Preset Drive
Canon CR-N500: Zoom (Binary)	Canon CR-N500: System
Canon CR-N500: Focus	Canon CR-N500: ND Filter
Canon CR-N500: Focus (Binary)	Canon CR-N500: Camera Group Select
Canon CR-N500: Focus One Push	Canon CR-N500: PTZ Cruise Control
Canon CR-N500: Picture Profile	Canon CR-N500: PTZ Trace
Canon CR-N500: Focus Settings	Canon CR-N500: Speed Limit
Canon CR-N500: Zoom Settings	Canon CR-N500: Auto Shift level
Canon CR-N500: Exposure Mode	Canon CR-N500: Camera Select
Canon CR-N500: Iris	
Canon CR-N500: Shutter	
Canon CR-N500: Gain	
Canon CR-N500: AE Speed	
Canon CR-N500: Ex-Comp. Level	
Canon CR-N500: Metering Mode	
Canon CR-N500: AGC Limit	
Canon CR-N500: White Balance	
Canon CR-N500: WB One Push	
Canon CR-N500: WB Offset	
Canon CR-N500: WB R/B Gain	
Canon CR-N500: Matrix	
Canon CR-N500: Matrix Color	
Canon CR-N500: Detail Level	
Canon CR-N500: Detail Limit	
Canon CR-N500: Knee	
Canon CR-N500: Knee Param	
Canon CR-N500: Noise Reduction	