

# Device: eMotimo ST4



## Introduction

The motion control camera robot system eMotimo ST4 can be controlled from SKAARHOJ panels using a Ethernet-Serial converter. The Device Core is still in Alpha

## Important Settings

The eMotimo has different levels of firmware for more basic or advanced control. Our integration was done with version: ST4\_RC007\_99. Some settings might not be accessible with every version of the eMotimo firmware. If you are unable to access I/O Port: VC, check that you have the advanced version of the firmware.

1/5-Spectrum Settings:  
Mode: Regular  
Brightness: 10/10  
Bright Run: 4/10  
Slider: DanaDolly

2/5-Spectrum Settings:  
> Pan: On-Regular  
Tilt: On-Regular  
Slide: On-Regular  
Focus: On-Regular

3/5-Spectrum Settings:  
> I/O Port: VC  
SMSTriggerTime: StatTm(default)  
After Run: Stop (Default)  
Screen Flip: Off

4/5-Spectrum Settings:  
> Telemetry 1  
Telemetry 2  
Pair New Remote  
Tuning

5/5-Spectrum Settings:  
Version: ST4\_RC007\_99

## Ethernet to Serial connection

To communicate via serial (RS-232) to the eMotimo ST4 you need an Ethernet-Serial converter. Please reach out to eMotimo directly regarding purchasing this converter.

### Settings

Serial Port → Baud Rate 115200

Data Size - 8 bit

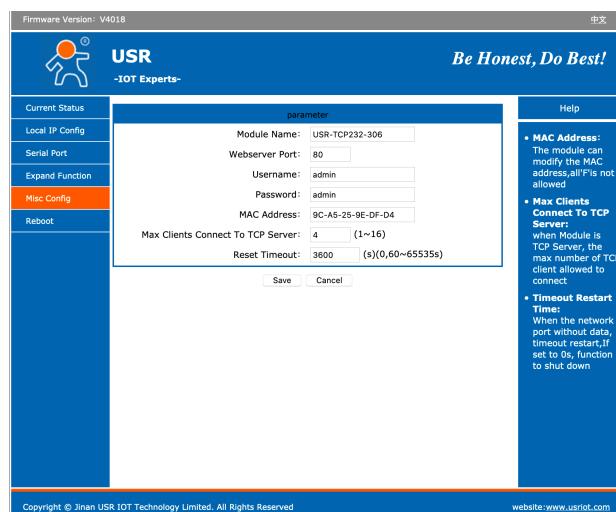
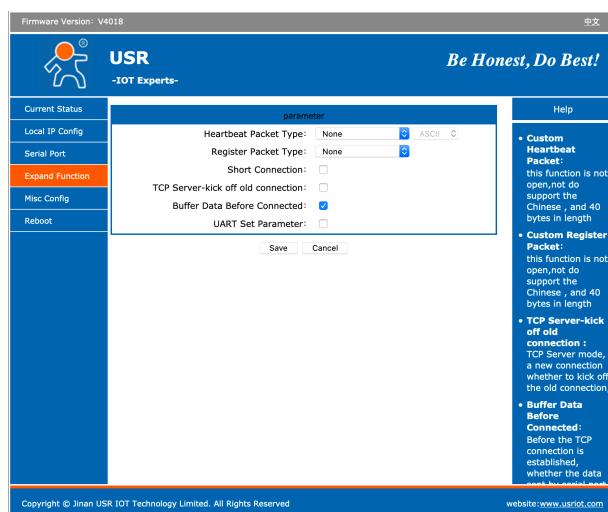
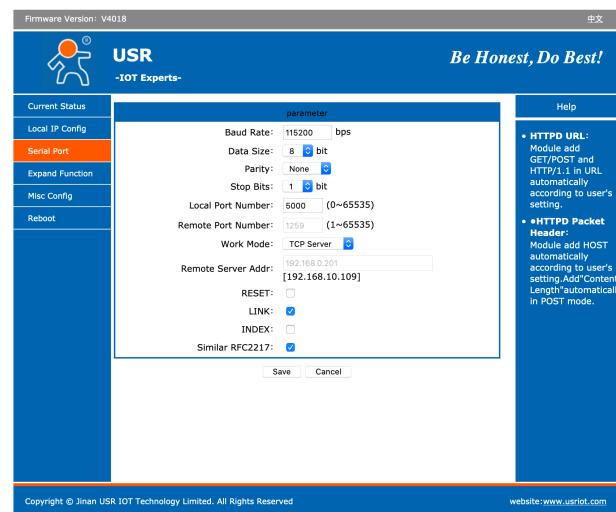
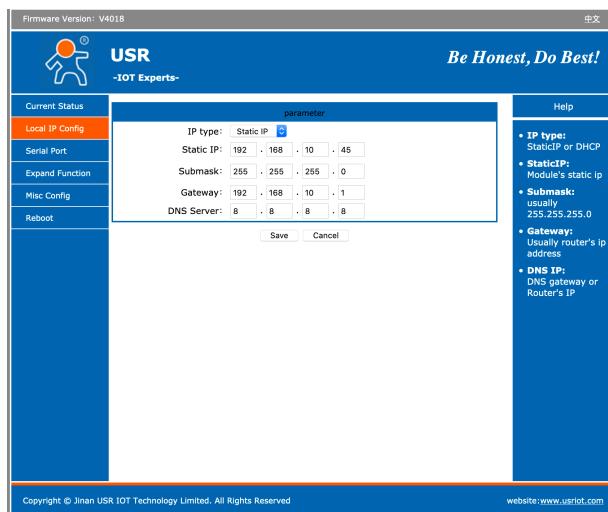
Parity - None

Stop Bits 1 bit

Local Port - 5000

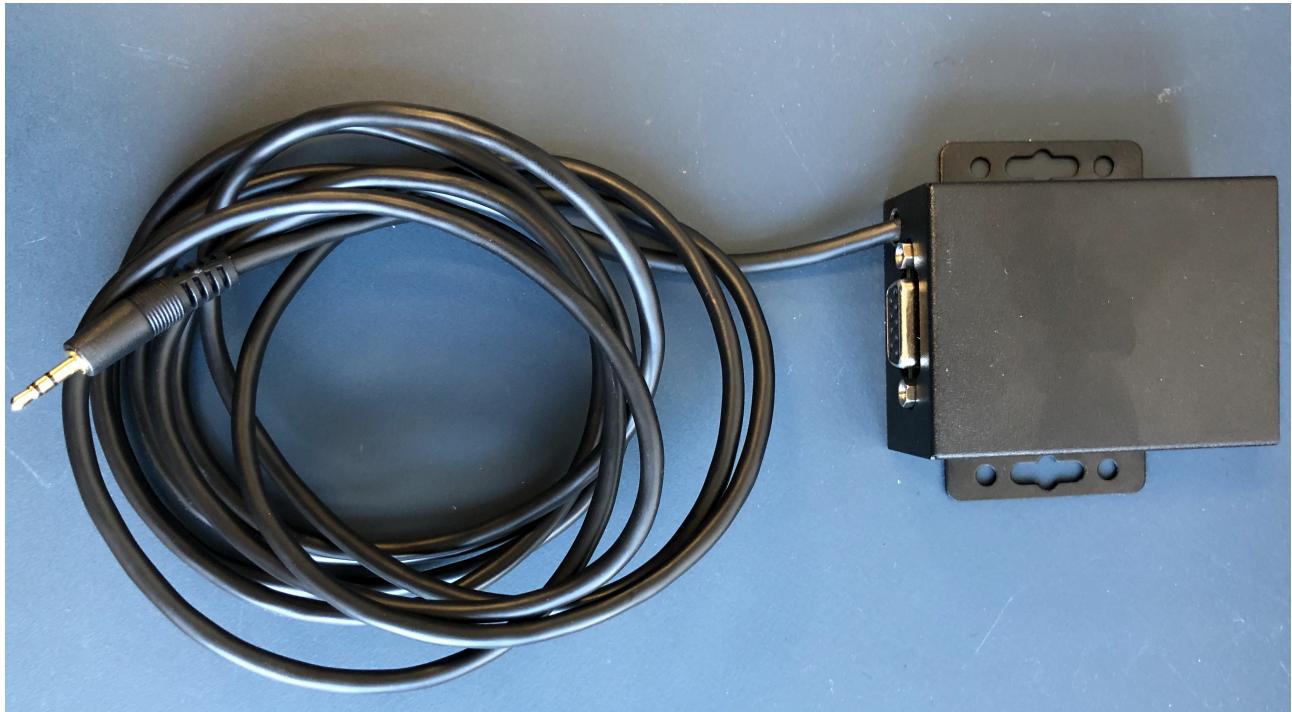
TCP Server

Below you will find screenshots of how to configure the USR-TCP232-306 converter (found on the web interface of the TCP232-306). Notice the IP address of the TCP232-306 (Static IP Address) must match the IP settings of the eMotimo Device Core.



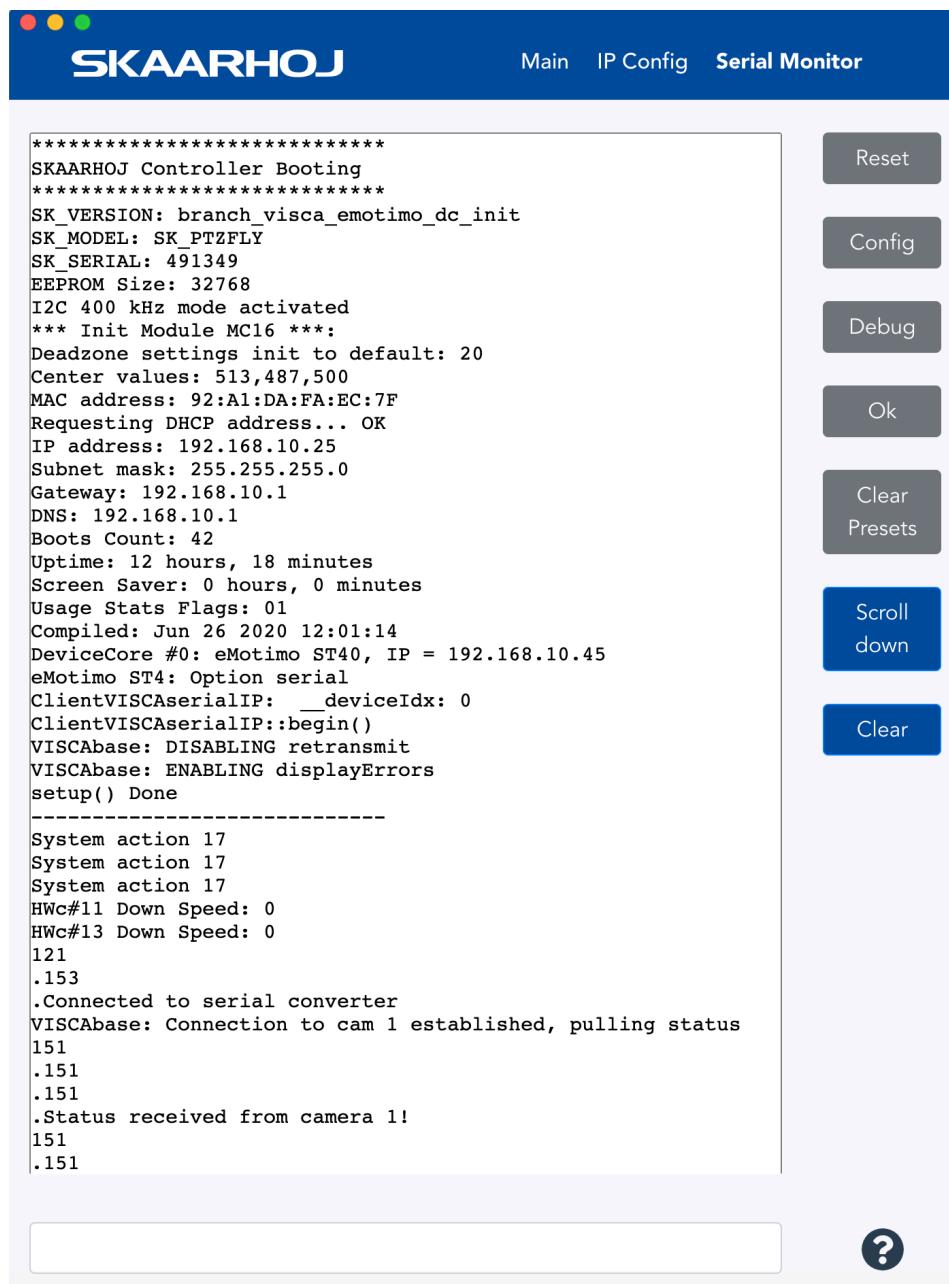
### Wiring to the Control Box

The wiring between the Serial Converter and the prototype control box from eMotimo looks like below. Please reach out to eMotimo directly for acquiring a communication box.



## Confirm Connection

The Serial Monitor from the Firmware Application can be used to monitor connection status. The message "Status received from camera 1!" Confirms connections.



The screenshot shows the SKAARHOJ Serial Monitor interface. The main window displays a log of system boot and connection events. Key log entries include:

```

*****
SKAARHOJ Controller Booting
*****
SK_VERSION: branch_visca_emotimo_dc_init
SK_MODEL: SK_PTZFLY
SK_SERIAL: 491349
EEPROM Size: 32768
I2C 400 KHz mode activated
*** Init Module MC16 ***
Deadzone settings init to default: 20
Center values: 513,487,500
MAC address: 92:A1:DA:FA:EC:7F
Requesting DHCP address... OK
IP address: 192.168.10.25
Subnet mask: 255.255.255.0
Gateway: 192.168.10.1
DNS: 192.168.10.1
Boots Count: 42
Uptime: 12 hours, 18 minutes
Screen Saver: 0 hours, 0 minutes
Usage Stats Flags: 01
Compiled: Jun 26 2020 12:01:14
DeviceCore #0: eMotimo ST40, IP = 192.168.10.45
eMotimo ST4: Option serial
ClientVISCAserialIP: __deviceIdx: 0
ClientVISCAserialIP::begin()
VISCAbase: DISABLING retransmit
VISCAbase: ENABLING displayErrors
setup() Done
-----
System action 17
System action 17
System action 17
HWc#11 Down Speed: 0
HWc#13 Down Speed: 0
121
.153
.Connected to serial converter
VISCAbase: Connection to cam 1 established, pulling status
151
.151
.151
.Status received from camera 1!
151
.151

```

On the right side of the interface, there are several buttons:

- Reset
- Config
- Debug
- Ok
- Clear Presets
- Scroll down
- Clear

A question mark icon is located in the bottom right corner of the main window area.

## Actions

An excerpt of the actions in the Device Core

Please notice all native Trace actions are not implemented yet. Live mode is not implemented either.

- eMotimo ST4: Pan
- eMotimo ST4: Tilt
- eMotimo ST4: Pan/Tilt
- eMotimo ST4: M3 Drive
- eMotimo ST4: M4 Drive
- eMotimo ST4: M3/M4
- eMotimo ST4: Memory Ramp
- ✓ eMotimo ST4: Memory Time-to-Target
- eMotimo ST4: Memory Binary Ramp
- eMotimo ST4: Memory Binary Time-to-Target
- eMotimo ST4: Trace Position Record
- eMotimo ST4: Trace Position Prepare
- eMotimo ST4: Trace Position Play
- eMotimo ST4: Trace Position Delete
- eMotimo ST4: Live Mode
- eMotimo ST4: Axis Limit
- eMotimo ST4: Preset
- eMotimo ST4: PTZ Cruise Control
- eMotimo ST4: PTZ Trace
- eMotimo ST4: Speed Limit
- eMotimo ST4: Camera Select