

# Device: Dream Chip - ATOM One Mini

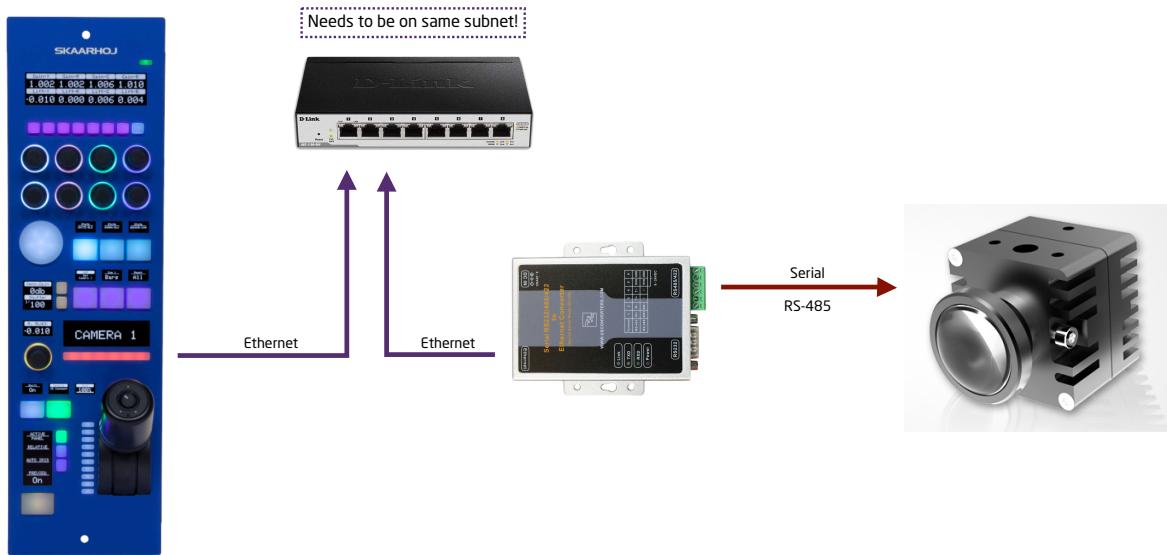
ATOM one Mini are small POV cameras controller over serial. Via an ethernet to serial converter you can color control this camera using SKAARHOJ controllers.

For more information on the camera, please go to <https://www.dreamchip.de/products/atom-one-family/atom-one-mini.html>



## Ethernet to Serial connection

To communicate via serial (RS-485) to the Dream Chip camera you need an Ethernet-Serial converter. We suggest you get a XS1200 from US Converters - <http://www.usconverters.com/serial-rs232-device-server>



There is a quirk you should know about: The XS1200 only accepts a single TCP connection at a time and it will take some time to realise if a client disconnected silently before it allows a new connection. In essence this means if the SKAARHOJ controller was connected and is rebooted without disconnecting, the XS1200 Server may not realise this before after some time. Therefore you may need to powercycle it along with the SKAARHOJ controller to make sure it will accept a connection.

Below you will find screenshots of how to configure the XS1200 converter (found of the web interface of the XS1200).

# SKAARHOJ DEVICE CORES

The screenshot shows the configuration interface for a SERIAL TO ETHERNET CONVERTER (PART: XS1200). The interface is divided into two main sections: **Serial Settings** and **Network Settings**.

**Serial Settings:**

- Device Name: DSM1
- Data Baud Rate: 115200
- Data Bits: 8
- Data Parity: None
- Stop Bits: 1
- Flow Control: None
- Serial Type: RS485

**Network Settings:**

- DHCP Client: Disable
- Static IP Address: 192.168.10.230
- Static Subnet Mask: 255.255.255.0
- Static Default Gateway: 192.168.10.1
- Static DNS Server: 168.95.1.1
- Connection Type: TCP
- Transmit Timer: 100 (with validation message: Please enter an integer between 10~65535 ms)
- Server/Client Mode: Server
- Server Listening Port: 5000 (with validation message: Please enter an integer between 1024~65535)
- Client Destination Host Name/IP: 192.168.2.2 (with validation message: Please enter host name or IP address)
- Client Destination Port: 5000 (with validation message: Please enter an integer between 1024~65535)

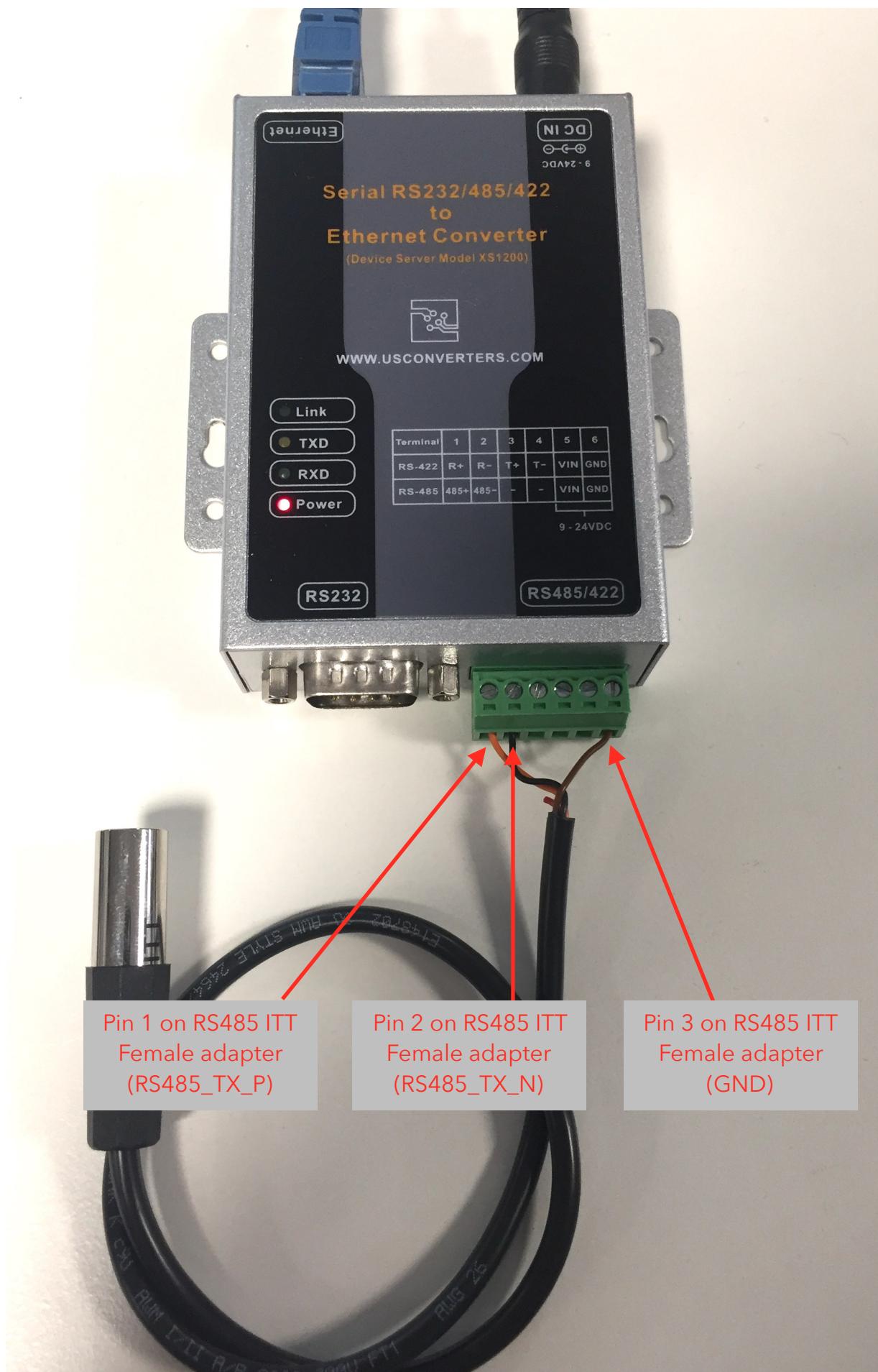
At the bottom are four buttons: Apply, Cancel, Reboot, and Restore default.

Make sure to set up an IP address in your range here. This is the IP address you must also set up inside the SKAARHOJ controller for the Device Core! Here it is set to 192.168.10.230 and corresponding subnet mask.

For serial commands the default for the ATOM one mini is 115200 8N1 (from their manual).

## SKAARHOJ DEVICE CORES

Cabling to the XS1200 is via the RS-485 connector. 3 wires are necessary. GND and then 485+ and 485-.



Look in the ATOM one mini manual for cabling instructions. For the RS485 ITT Female M-XL-3-11L connector the 3 wires are indicated as GND, RS485\_TX\_N and RS485\_TX\_P.

The coloration between these and the XS1200 is the following:

RS485\_TX\_N = 485-

RS485\_TX\_P = 485+

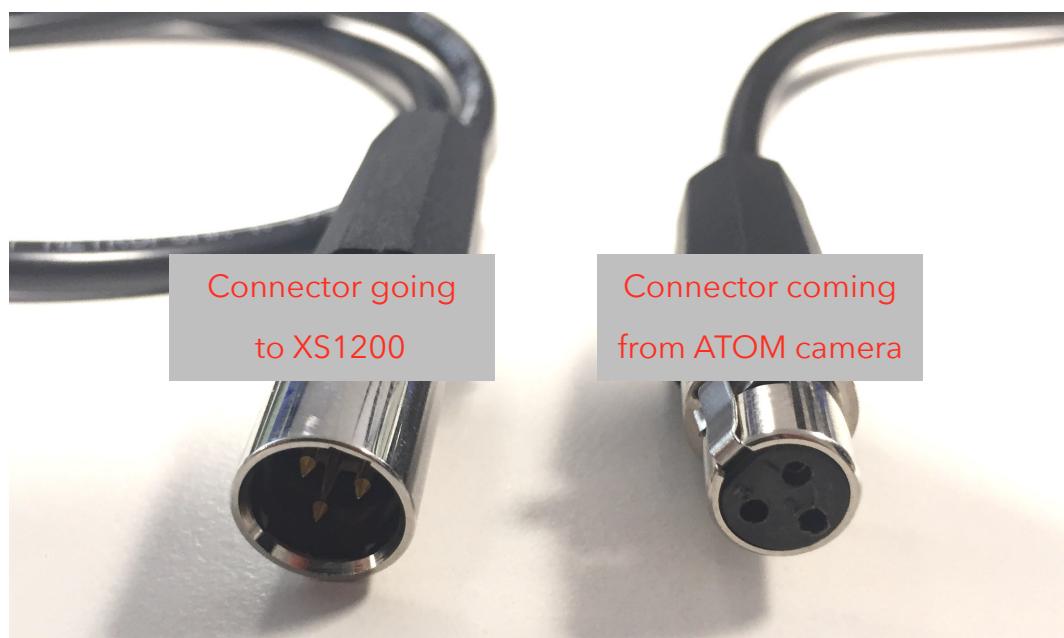
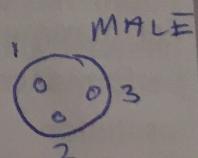
### 3.1 Power / RS485 Connector

The power connector is a Hirose male HR10 6 pin connector. The following table shows required plugs. Dream Chip offers a mini XLR adapter.

	Female HR10A-7P-6S(73)	Signal	Dream Chip 4-wire Power Cable	Power ITT Male M-XL-3-12L	RS485 ITT Female M-XL-3-11L
6		Power in	red	1	
5		GND	brown	3	3
4		RS485_TX_P			
3		RS485_TX_N			
2		RS485_TX_N	black		2 brown
1		RS485_TX_P	orange		1 white

### 3.2 SDI Output

The HD-BNC output is SMPTE 292M / 424M compliant.





## ATOM one Family

Currently we have control of the ATOM one Mini. We are working on expanding control for the rest of the ATOM one family.