VTX-Atom CCU-U – Operating Manual

1- Introduction

The VTX-Atom CCU-U (Universal) from Vietex Media is the professional-level optical CCU for the Atom One cameras from Dream Chip Technologies (www.Atom-One.de). The target of this high-level bidirectional transceiver system are Atome one cameras in autonomous operation with genlock and with additional PTZ robotic head.

The system supports all formats of SDI-Signals from SD to HD, 3G, 6G and 12G as well as RS-485 control over 20km.

The 19" 1HU base unit offers enough space for two CCU incl. all necessary converters, such as: Wico, CIO or USR-TCP232-converter. These built-in solutions saves a lot of external wiring and power supplies

2- Base unit connectivity and interfaces :

1- Duplex Fiber connector: Single mode LC, max 20km
2- SDI-out: BNC-75 Ohm, SD/HD/3G/6G/12G
3- Genlock input: BNC 75 Ohm, can be used for CCVS, Black burst, Tri-Level-Sync
4- Sony RCP: Hirose 8 pin for Sony RCP, Built-in Wico PCB required
5- IP-RCP: RJ-45 for any IP-based RCP: Built-in PCB for Skaarhoj is default, PBC for Cyanview required as option
6- Ethernet 10/100 kbps
7- USB for direct control from PC by Provideo Software
8- Blind panel for 2nd CCU-channel

9- AC-Power inlet with 1,0A fuse and main switch
10- DC-Power switch
11- Blind panel for 2nd CCU channel
12- Control-input switch: Sony – IP based RCP – USB
13- LED's: Power, Fiberlink, SDI-out, Genlock in

3- Camera Adapter

1- Duplex Fiber connector: Single mode LC, max 20km
2- SDI-in: BNC-75 Ohm, SD/HD/3G/6G/12G auto detect
3- Genlock output: BNC 75 Ohm, can be used for CCVS, Black burst, Tri-Level-Sync
4- Camera: Hirose 6 pin
5- Ethernet 10/100 kbps 6-
6- V-mount plate with D-Tap 12V-output
7- 12-15V DC input (max. 5A)
8- LED's: Fiber link, Genlock-out, SDI-in, Power
9- Power switch

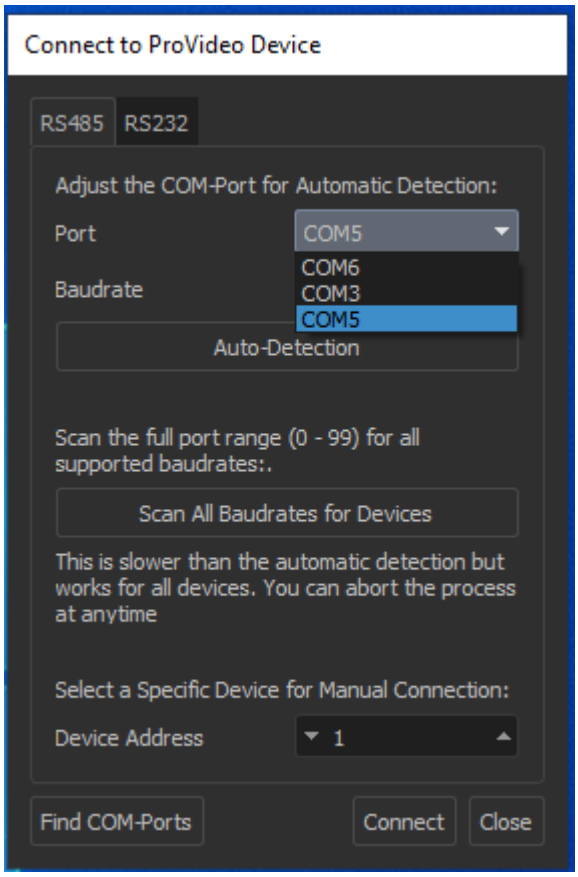
4- Package content: Set incl.

1- 19" 1HU CCU + power cord
2- CA in compact, shock and water protected (IP62) metal box + 12V DC power supply
3- USB-USB cable
4- Manual + driver on SD-Chip

5- Initial Setting

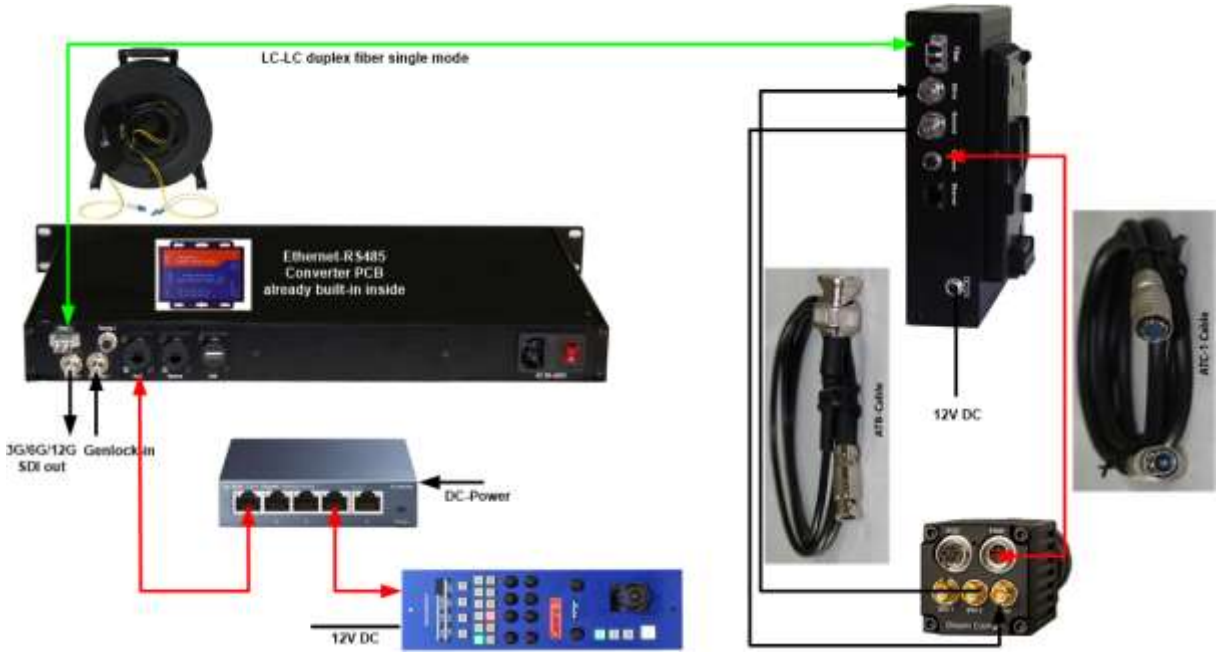
1- Connect the CCU to the CA by fiber duplex single mode cable
2- Atom one SDI Output to CA SDI-in by ATB cable
3- Connect genlock (if any) by ATB-cable
4- Connect the Atom one camera to the CA by ATC cable
5- Connect the SDI out and Genlock in at the CCU-side by BNC cable
6- Install the USB-FTDI-driver to the laptop/PC
7- Connect the USB from PC to CCU by USB-cable

8- Set front switch (12) to upper position " USB"
9- Power on the CCU at 230V main switch (rear panel)
10- Switch on the DC power at front button of the CCU
11- Switch on the DC power at the CA side, after having connected to the DC-12V adapter or attached the battery
12- All- LED's light on
13- Start Provideo Software from PC. Normaly: Autodection find the camera.
14- If "Auto detection" failed, go to "Port", select the right port (COM 6 instead COM5 i.e). Set "Baudrate" to 115200". Set ID = 1 or 2, according to the camera. Go to "Connect"



15- After Provideo GUI opened: set the resolution HD,3G/6G ..12G
16- Set the camera ID = 1, Disable "Auto exposure configuration" and "Auto White balance"for using 3rd RCP: Sony, Skaarhoj, Cyanview ect. Save the setting to the internal memory! Finish!

6- Operation with Skaarhoj—RCP

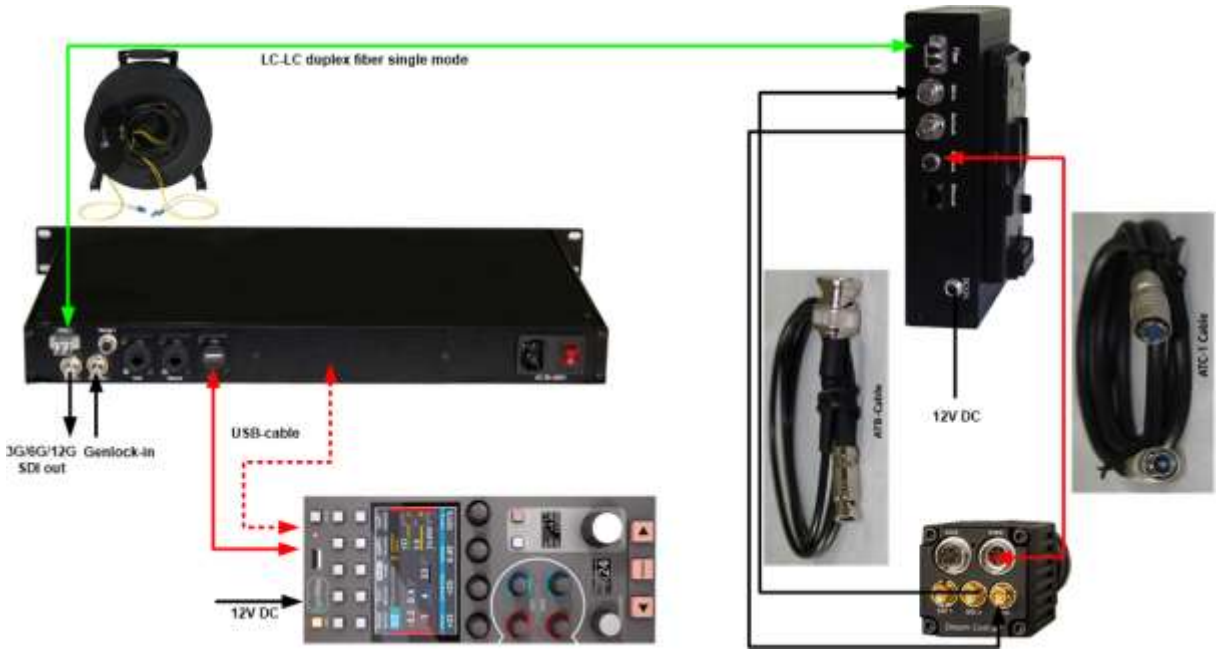


1- Skaarhoj RCP's need a network switch to communicate to the Ethernet-RS485 converter.
2- Both RCP and converter have to be configured in to the same IP-Range.
3- Log in to RCP by SkaarhoiUpdater
https://www.skaarhoj.com/support/firmware-updater/
4- Log-in to USR-TCP232-306: https//:192.168.2.230 (Factory-Set = 192.168.0.7)
5- Enter (name= admin, PW=admin)
6- Connect the switch to CCU (RJ45) by CAT5 cable
7- If th switch is not PoE capable, power the RCP by his own DC-Adapter
8- Set the switch in the CCU-front to the middle position (IP-RCP)
9- After 3-5 sec. the RCP will log in the Camera

Example for IP-Setting between Skaarhoj RCP and built-in converter

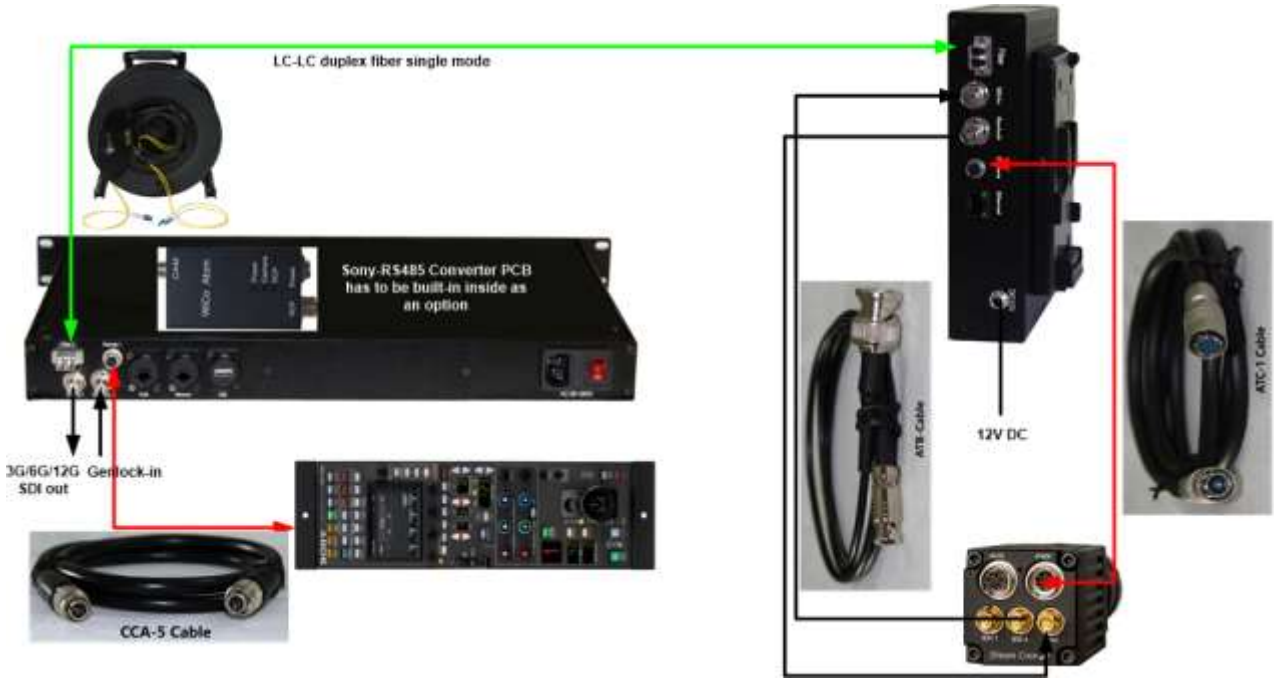
Setting Serial interface of the converter: TCP-Server mode, Port-No=5000

7- Operation with Cyanview RCP



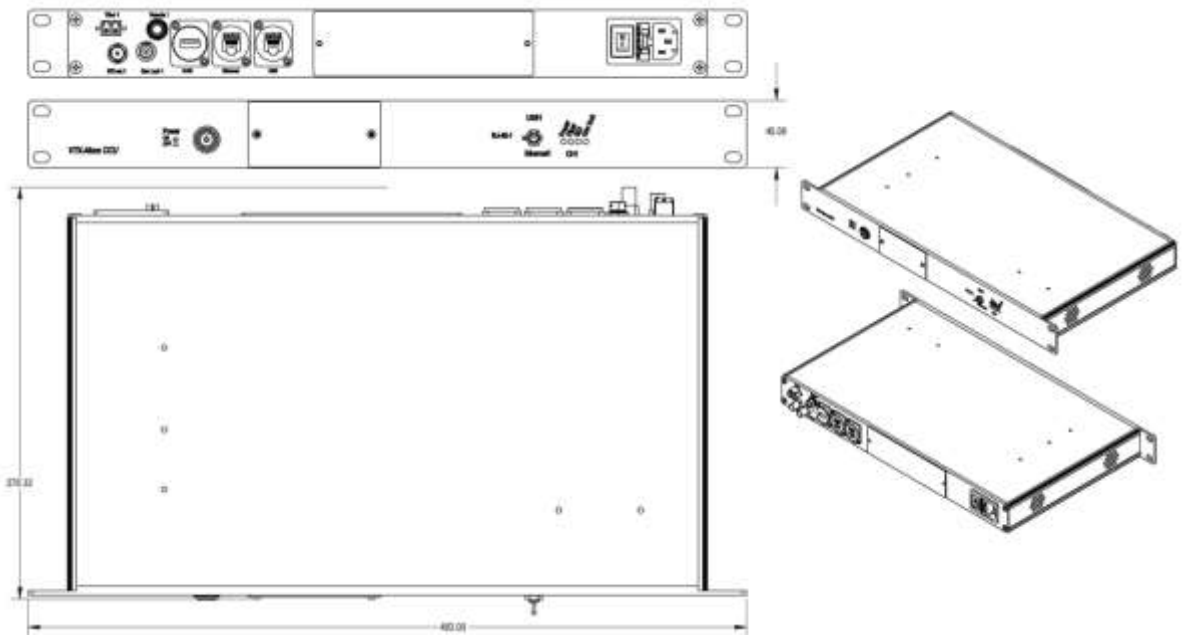
1- The Cyanview RCP Can communicate with the Atom cameras per two USB ports (port 1 and 2)
2- Connect the CY-RCP to the CCU by USB-USB cable and power it by his own 12V DC adapter.
3- Change the Ethernet setting of the PC and go to RCP Menu by LAN (http:// 10.192.18.26)
4- Set the Atom one camera and the USB-Port accordingly

8- Operation with SONY – RCP

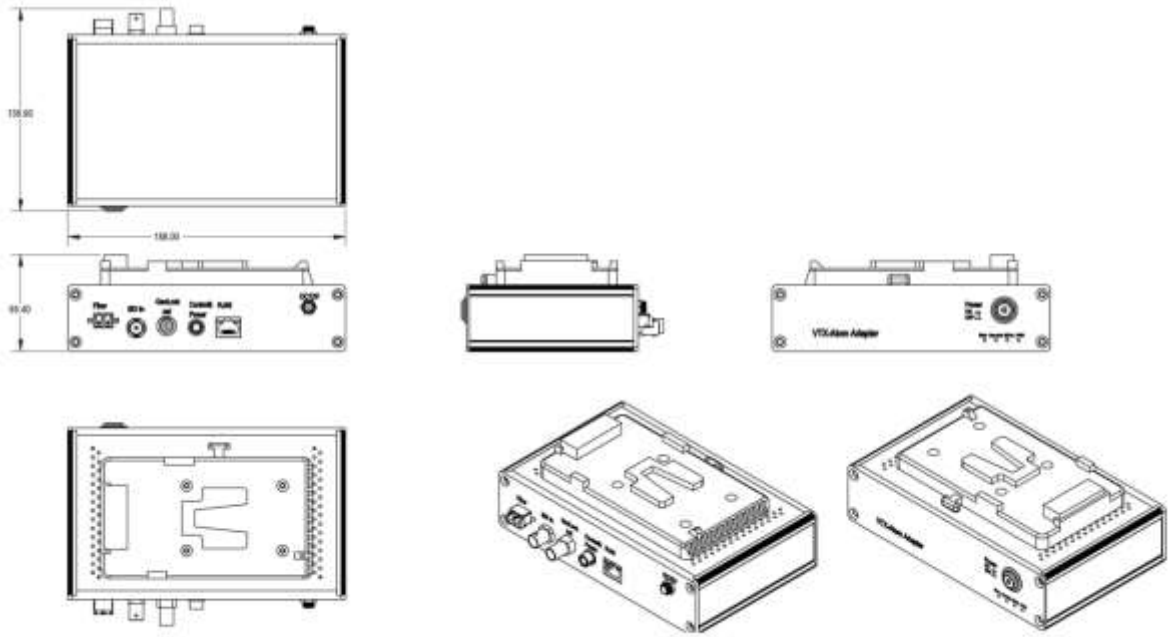


1- Sony's RCP communicate with Atom one cameras through a RS-485 converter. This PCB has to be built inside the CCU as an option (see price list)
2- After that, connect the RCP to CCU by a CCA-5 cable. The CCU feed 12V DC to the CCU
3- Activate the RCP panel

9- Mechanical size



Mechanical size of CCU



Mechanical size of Camera Adapter

10- Technical Specs.

VTX-Atom Camera Adaptor Universal VTX-CA-U	
I/O Connectors	
Fiber	Dual LC-Duplex singe mode
SDI-In: Autodetect HD/3G/6G/12G	1 x BNC SMPTE ST-2082, ST-2081 424M, 344M, 292M, 259M, DVB-ASI,
Genlock Out	1 x BNC, SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 Ω SD: Black burst (NTSC: 0.286 Vp-p, 75 Ω/PAL: 0.3 Vp-p, 75 Ω) or NTSC 10F-BB
Ethernet	1 x RJ-45 10/100 mbps
Camera Connector	1 x 6pin Hirose: RS-485 half duplex, 12V-DC,
Power	Lockable connector 12V-DC, Max. current depending on the PSU (1,5-5 A)
V-Mount	With D-Tap 14V-output from batterie
General	
Body Size	188 mm x 114 mm x 45 mm LxWxD
Weight	0,5 kg
Power Consumption	Approx. 4W (without camera)
Operating temperature	0°C to 45°C (32°F to 112°F)

VTX-Atom Camera Control Unit Universal (VTX-CCU-U)	
I/O Connectors	
Fiber	Dual LC-Duplex singe mode
12G SDI-Out	1 x BNC SMPTE ST-2082, ST-2081 424M, 344M, 292M, 259M, DVB-ASI,
Genlock in	1 x BNC, SMPTE ST274, tri-level sync, 0.6 Vp-p, 75 Ω,SD: Black burst (NTSC: 0.286 Vp-p, 75 Ω/PAL: 0.3 Vp-p, 75 Ω) or NTSC 10F-BB
Ethernet	1 x RJ-45 10/100 mbps, auto cross
IP-RCP	RJ-45 connector for IP-Based RCP: Skaahoj or Cyanview
Sony-RCP	8 Pin Hirose for Sony RCP
USB	USB-in for Camera control from PC
General	
Size	19" 1HU, 35mm deep
Weight	4 kg
Power Consumption	Approx. 4W without RCP, 8W with Sony RCP
Operating temperature	0°C to 45°C (32°F to 112°F)

System Optical Budget	
TX-Output power	- 4 dBm
RX Sensitivity	- 18 dBm
Fiber Distance	20 km