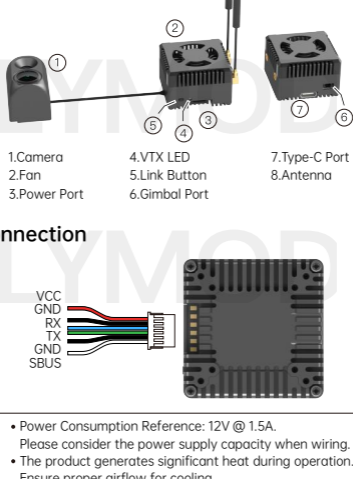


# Ascent GT PRO Z40

## Quick Start Guide

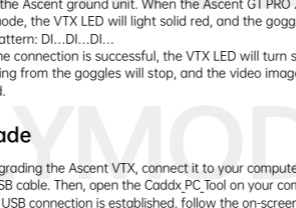
V1.0

### Introduction



- 1.Camera
- 2.Fan
- 3.Power Port
- 4.VTX LED
- 5.Link Button
- 6.Gimbal Port
- 7.Type-C Port
- 8.Antenna

### Connection



- Power Consumption Reference: 12V @ 1.5A. Please consider the power supply capacity when wiring.
- The product generates significant heat during operation. Ensure proper airflow for cooling.

### Linking

- 1.Connect the Ascent GT PRO Z40 and the Ascent ground unit.
- 2.Short-press the frequency pairing button on both the Ascent GT PRO Z40 and the Ascent ground unit. When the Ascent GT PRO Z40 enters pairing mode, the VTX LED will light solid red, and the goggles will emit a beep pattern: DI...DI...DI...
- 3.Once the connection is successful, the VTX LED will turn solid green, the beeping from the goggles will stop, and the video image will be displayed.

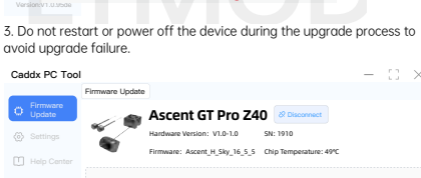
### Upgrade

When upgrading the Ascent VTX, connect it to your computer using a Type-C USB cable. Then, open the Caddx PC Tool on your computer. Once the USB connection is established, follow the on-screen instructions to select the firmware file Ascent\_H\_Sky\_XX\_X\_XX.img for the upgrade.

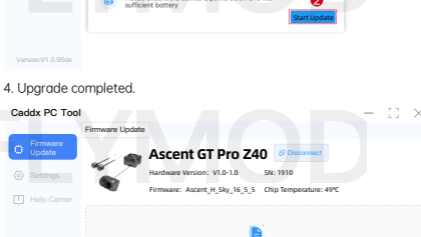
Note:

1. When the Ascent VTX is connected to the computer via Type-C, no external battery power is required — the computer's USB port will supply power to the module.
2. Do not disconnect the USB cable during the upgrade process. Unplug the cable only after the upgrade has completed successfully.

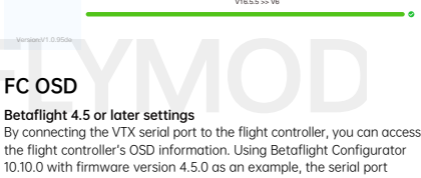
1. Click the Ascent GT Pro Z40 connection option.



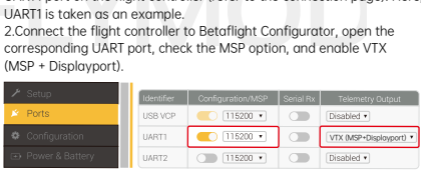
2. Click the Select button to open the pop-up window, choose the corresponding firmware version, then click Open to start the upgrade process.



3. Do not restart or power off the device during the upgrade process to avoid upgrade failure.



4. Upgrade completed.

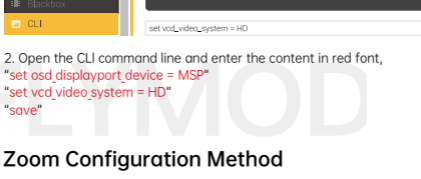


### FC OSD

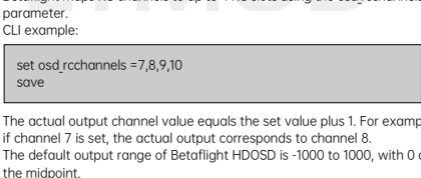
#### Betaflight 4.5 or later settings

By connecting the VTX serial port to the flight controller, you can access the flight controller's OSD information. Using Betaflight Configurator 10.10.0 with firmware version 4.5.0 as an example, the serial port configuration method is described below.

- 1.Solder the blue and green wires from the 6-pin power cable to the UART1 port on the flight controller (refer to the connection page). Here, UART1 is taken as an example.
- 2.Connect the flight controller to Betaflight Configurator, open the corresponding UART port, check the MSP option, and enable VTX (MSP + Displayport).

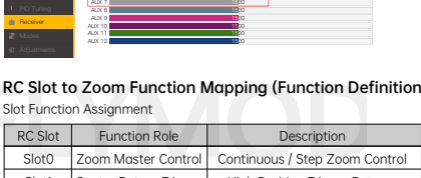


- 3.On the Presets page, search for Avator OSD or HD OSD and click to select it.

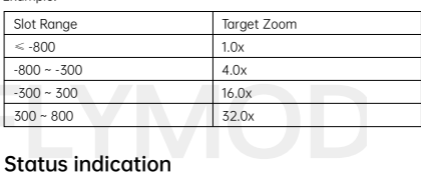


- 4.On the OSD page, configure the information you want to display.

#### Betaflight 4.4 version settings:



- 1.Open the corresponding uart port (Take uart1 as an example in the figure). Check the MSP switch and click Save. Check the VTX (MSP+Displayport).



2. Open the CLI command line and enter the content in red font, "set osd\_displayport\_device = MSP", "set vcd\_video\_system = HD", "save"

### Zoom Configuration Method

#### Preconditions

- 1.Enable HD OSD.
- 2.The VTX and FC communicate via MSP DisplayPort.

#### RC Slot Configuration Method

Betaflight maps RC channels to up to 4 RC slots using the osd\_rcchannels parameter. CLI example:

```
set osd_rcchannels =7,8,9,10
save
```

The actual output channel value equals the set value plus 1. For example, if channel 7 is set, the actual output corresponds to channel 8. The default output range of Betaflight HDOSD is -1000 to 1000, with 0 as the midpoint.

In Betaflight's receiver interface, channels AUX4, 5, 6, and 7 correspond to RC channels CH8, 9, 10, and 11, respectively.

#### RC Slot to Zoom Function Mapping (Function Definition)

| RC Slot | Function Role         | Description  |
|---------|-----------------------|--|
| Slot0   | Zoom Master Control   | Continuous / Step Zoom Control                               |
| Slot1   | Center Return Trigger | High Position Trigger Returns Camera to Initial Focal Length |

Zoom Control Mode (Slot 0)  
Mode A: Amplitude-to-Magnification Mapping  
Maps the input amplitude range directly to preset zoom levels.  
Example:

| Slot Range  | Target Zoom |
|-------------|-------------|
| ≤ -800      | 1.0x        |
| -800 ~ -300 | 4.0x        |
| -300 ~ 300  | 16.0x       |
| 300 ~ 800   | 32.0x       |

### Status indication

| Goggles Buzzer Status                            |                             |
|--|-----------------------------|
| Link state                                       | DI...DI...DI...             |
| upgrade firmware                                 | DI.....DI..... DI---        |
| Upgrade failed                                   | DI..DI..DI..                |
| VTX Indicator Status                             |                             |
| Link state                                       | Steady red light            |
| upgrade frmware                                  | Red light rapidly flashes   |
| Wireless connection, image output is normal      | Steady green light          |
| Wireless not connected                           | green light rapidly flashes |
| Wireless connection is normal, image is abnormal | green light slowly flashes  |

### Precautions

1. Before powering on, please install all antennas to avoid damage to components.
2. When the standby mode is turned on, the power is limited to 10mW. Before taking off, you need to unlock the flight control or turn off the standby mode.
3. If you use it with other 5.8GHz devices at the same time, please choose a different channel.
4. If you use the Gyroflow function of the camera, please provide shock absorption for the fixed deck of the camera to avoid the failure of the anti-shake.

### Specification

|  |   |
|--|---|
| Name                                       | Ascent GT PRO Z40 VTX   |
| Model                                      | COCA-TZ111  |
| Communication Frequency                    | 5.650-5.924 GHz   |
| Communication Bandwidth                    | 10~20 MHz   |
| Transmitter Power (EIRP)                   | 5.8 GHz: FCC<30dBm; CE<14dBm; SRRC<20dBm; Mic<25dBm                 |
| I/O Interface                              | SH1.0-6P,TYPE-C, Gimbal Port SH1.0-2P                               |
| Image Quality                              | 1080P 60FPS   |
| Auto Frequency                             | Support   |
| Manual Frequency                           | Support   |
| Channels                                   | 3   |
| Wide Power Input                           | 11.1V-25.2V   |
| Mounting Holes                             | 20*20mm; 25.5*25.5mm  |
| Dimensions                                 | 34*34*22.6mm  |
| Operating Temperature                      | -10°C~40°C  |
| Supports FC System                         | BetaFlight / INAV / Ardupilot                                       |
| Supports FPV Goggles and Remote Controller | Goggles Ascent / Goggles Cine                                       |
| OSD  | Canvas mode   |
| Latency                                    | Average delay 35ms  |
| Antenna                                    | 2 (MMCX)  |
| Camera                                     | AVATAR Pro V2 Camera  |
| Image Sensor                               | Tele-Focus Camera: 1/1.2 Inch<br>Wide-Field Camera: 1/1.8 Inch      |
| Sensor Resolution                          | Tele-Focus Camera: 8000*6000 (48MP)<br>Wide-Field Camera: 1920*1080 |
| VTX Resolution                             | 50fps   |
| Ratio                                      | 16/9  |
| FOV  | Tele-Focus Camera: 26.8 (4x)<br>Wide-Field Camera: 150°             |
| Zoom Ratio                                 | 1-32x   |
| Zoom Method                                | FC MSP Control  |
| Camera Dimensions                          | 21.4*22.5*30mm  |
| Coaxial Cable                              | 140mm   |

CADDFPV Support  
email: support@caddxfpv.com  
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