

## CinePuck

This page provides specifications and additional information for the CinePuck.

The CinePuck is designed specifically for Virtual Production or Broadcast studios. For more information on how to use the CinePuck for Virtual Production, please visit the [Virtual Production](#) section of this documentation.



### Active Markers

#### LED Specifications

The following specifications apply for active IR LEDs on the CinePuck:

- 850 nm IR spectrum
- 8 LEDs
- Illuminations synchronized with camera exposures
- Illumination angle:  $\pm 60^\circ$

#### Basic Specs

| Spec                     | Description   |
|--------------------------|---|
| CinePuck Body Dimensions | <b>Dimensions</b> <ul style="list-style-type: none"> <li>• Width: 153.30mm (~6.04")</li> <li>• Length: 127.68mm(~5.03")</li> <li>• Height: 25.70(~1.01")</li> </ul>   |
| Weight                   | <ul style="list-style-type: none"> <li>• 11.58 oz (~328.29g)</li> </ul>   |
| Attachment               | <ul style="list-style-type: none"> <li>• x1 ARRI-Style Anti-Twist Mount w/ 3/8"-16 threads</li> <li>• x6 Standard Tripod Mounts w/ 1/4"-20 threads</li> </ul>   |
| Battery                  | <b>2200mAh Lithium polymer battery</b><br><b>Charging</b> <ul style="list-style-type: none"> <li>• 5V micro USB Type C</li> <li>• ~7.5 hours* of battery life (*Battery life varies depending on frame rate and exposure settings)</li> <li>• 5hrs zero to full charge</li> </ul> |
| IMU                      | <b>Dimensions</b> <ul style="list-style-type: none"> <li>• Width: 15mm</li> </ul>   |

| Spec      | Description   |
|-----------|---|
|           | <ul style="list-style-type: none"> <li>Length: 15mm</li> <li>Height: 5.720mm</li> </ul> <p><b>Weight</b></p> <ul style="list-style-type: none"> <li>&lt; 1.75g</li> </ul> |
| Gyroscope | <p><b>Dynamic Range</b></p> <ul style="list-style-type: none"> <li>500 +/- °/sec</li> </ul>   |

### BaseStation Load Capacity

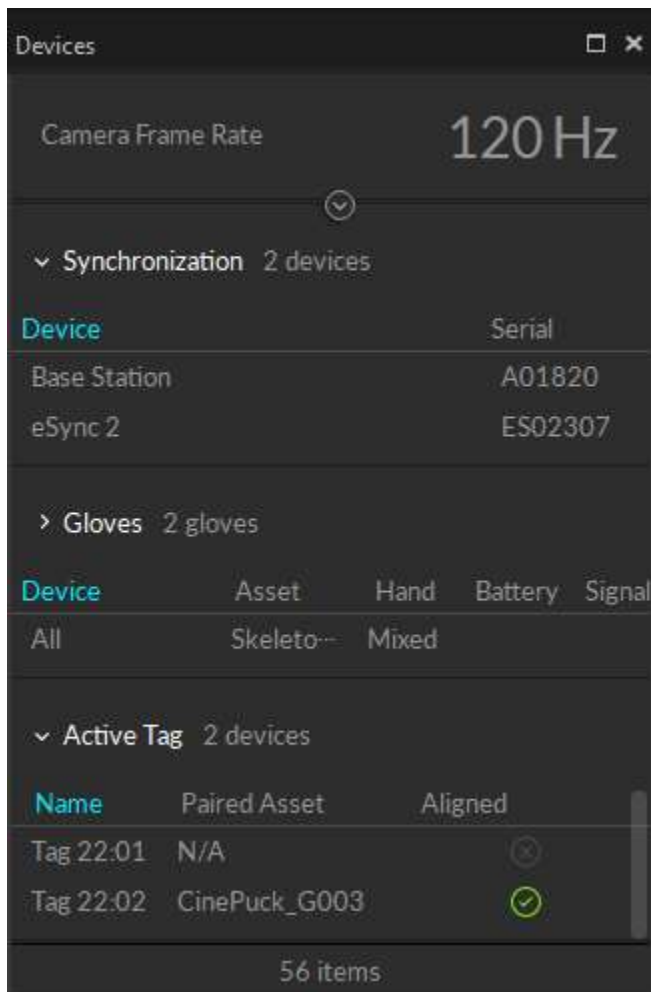
The number of devices with IMUs (such as CinePucks) that can attach to a BaseStation is determined by the system frame rate and the divisor applied to the BaseStation. The table below shows the IMU maximum for common frame rates with a divisor rate of 1, 2, and in some cases 3.

| FrameRate | Divisor Rate 1 | Divisor Rate 2 | Divisor Rate 3 |
|-----------|----------------|----------------|----------------|
| 60        | 26             | 54             | 83             |
| 70        | 22             | 47             | 71             |
| 80        | 19             | 39             | 62             |
| 90        | 16             | 36             | 54             |
| 100       | 14             | 32             | 49             |
| 110       | 13             | 29             | 44             |
| 120       | 11             | 26             | 40             |
| 130       | 10             | 24             |                |
| 140       | 9              | 22             | 34             |
| 150       | 9              | 20             |                |
| 160       | 8              | 19             | 30             |
| 170       | 7              | 17             |                |
| 180       | 7              | 16             | 26             |
| 190       | 6              | 15             |                |
| 200       | 6              | 14             | 23             |
| 210       | 5              | 14             |                |
| 220       | 5              | 13             | 21             |
| 230       | 5              | 12             |                |
| 240       | 4              | 11             | 18             |
| 250       | 4              | 11             |                |

As noted, the table does not include all possible frame rate and divisor combinations. If you are familiar with using Tera Term or [PuTTY](#), you can determine the maximum number of IMUs for any specific frame rate and divisor combination not shown on the table.

1. Use PuTTY to change the divisor rate on the BaseStation.
2. Connect an IMU puck to PuTTY.
3. Attempt to set the ID of the puck to an unrealistically high value. This triggers a warning that includes the current number of slots available for the given frame rate.
4. Set the IMU puck ID to the highest available slot for the frame rate and confirm that it appears in Motive.





14.

15. Devices Pane with a CinePuck and Base Station.

16. Watch the video below to see a demonstration of a CinePuck setup and calibration at the 4:20 mark. Please also see our [InCamera VFX page](#) for more details.