CubeWheel
Momentum/reaction wheels for nanosatellites

Option Sheet
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## 1. Client Information

<table>
<thead>
<tr>
<th>Company/Institution</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of proposed satellite</td>
<td></td>
</tr>
<tr>
<td>Physical address</td>
<td></td>
</tr>
<tr>
<td>Contact person</td>
<td></td>
</tr>
<tr>
<td>E-mail address</td>
<td></td>
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<tr>
<td>Date</td>
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</table>

Client signature: ____________________________
2. Hardware Configuration

Please complete all the relevant sections below to configure the CubeWheel unit.

2.1 Size

The CubeSpace CubeWheel units are available in three different sizes: Small, Medium, and Large. Refer to the CubeWheel ICD for details regarding the dimensions and mounting specifications for each size. Please select the desired CubeWheel size.

<table>
<thead>
<tr>
<th>Option 1 – Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>CubeWheel size</td>
</tr>
<tr>
<td>Small</td>
</tr>
</tbody>
</table>

2.2 Connector and harness length

The 14-way connection to the CubeWheel unit is available through either an open-ended discrete wire harness or a polarised connector, depending on the size of the CubeWheel. Refer to Figure 1 for an illustration of the different connection options. Refer to the CubeWheel ICD for the part numbers of the various Samtec headers and connectors.

![Diagram of CubeWheel connector and harness configurations](image)

Figure 1 – CubeWheel connector and harness configurations

All CubeWheel units are supplied with a Samtec SFSDT female connector on the user module side to assist with the outgoing (performed by CubeSpace) and incoming (performed by the user) health checks. The connector may be removed by the user once the incoming health check has been completed.

Client signature: ___________________________
For Small CubeWheel units, the user side connector and the wire harness length can be configured. For Medium and Large CubeWheel units, a screw down connector will be supplied on the user side with a harness length of 370 mm. The user will be able to cut the harness to the desired length.

**Option 2 and Option 3 are only relevant to Small CubeWheels.**

Please select the desired connector and harness length. The maximum length of the wire harness is 350 mm.

**Option 2 – Connector (CubeWheel Small)**

<table>
<thead>
<tr>
<th>No connector</th>
<th>Retention latch</th>
<th>Screw-down</th>
</tr>
</thead>
<tbody>
<tr>
<td>User module connector (female)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Option 3 – Harness length (CubeWheel Small)**

<table>
<thead>
<tr>
<th>Wire harness length*</th>
<th>Length (mm)</th>
</tr>
</thead>
</table>

* If “No connector” is selected in Option 2, the maximum harness length of 350 mm will be supplied. The user will then be able to cut the harness to the desired length. If Option 2 indicates that a connector is required, the harness length will be measured from the CubeWheel to the end of the relevant connector (i.e. including the length of the connector at the end of the wire harness).

### 2.3 CAN electronics

CubeWheel units have interfaces for I2C, UART, and CAN. If the CAN interface is not required by the user, it is recommended that the CAN electronics should be left unpopulated. The result will be significantly less power consumed from the 3.3 V supply. Please indicate whether or not the CAN electronics should be populated.

**Option 4 – CAN electronics**

<table>
<thead>
<tr>
<th>CAN interface electronics</th>
<th>Populated</th>
<th>Unpopulated</th>
</tr>
</thead>
</table>

### 2.4 Battery bus voltage

The gains of the speed controller on the MCU of the CubeWheel unit are dependent on the battery bus voltage of the satellite. Please specify the expected nominal battery voltage.

**Option 4 – Battery bus voltage**

<table>
<thead>
<tr>
<th>Raw battery voltage</th>
<th>8.0 V</th>
<th>Other (specify)</th>
</tr>
</thead>
</table>

Client signature: ___________________________________________________________________
3. Terms & Conditions

The following terms and conditions are imposed on this document:

1. The “Contact Person” (listed in Section 0 of this document) must be a legal representative of the “Company/Institution” (listed in Section 0 of this document). The “Contact Person” and the “Company/Institution” will hereafter collectively be referred to as the client.

2. The selections made in this document will only be valid and binding after the following process has been completed:
   a. The client will receive an empty Option Sheet from CubeSpace.
   b. The client must send the filled and signed Option Sheet back to CubeSpace.
   c. After all the selected configuration options have been validated, the client will receive an Option Sheet Summary from CubeSpace, which also serves as an acknowledgement of receipt of the filled and signed Option Sheet.
   d. The client will receive an official quotation from CubeSpace.
   e. The client must accept the quotation received from CubeSpace.
   f. The client will receive an invoice from CubeSpace for the required deposit (50% of the total quotation amount).
   g. The client must forward the proof of payment of the required deposit to CubeSpace.

3. The client may request free-of-charge changes to certain selections made in this document within 7 (seven) days of receiving the Option Sheet Summary from CubeSpace.

4. Changes to the selections made in this document that are requested after 7 (seven) days of receiving the Option Sheet Summary from CubeSpace may result in additional costs and/or delays in delivery time.

5. Production of components will only commence once proof of payment of the required deposit has been forwarded to CubeSpace.

6. The standard delivery time of standalone CubeSpace components is 3 (three) months from the day on which the proof of payment of the required deposit is received by CubeSpace. The standard delivery time of custom CubeADCS bundles is 4 (four) months from the day on which the proof of payment of the required deposit is received by CubeSpace.

7. The aforementioned delivery time may be subject to component availability on rare occasion. CubeSpace retains the right to extend the delivery time by a maximum of 1 (one) month in the event of unplanned manufacturing delays. CubeSpace must, however, notify the client as soon as possible if an extension of the delivery time is expected.

Client signature: ______________________________
4. Declaration

I, ____________________________________________, hereby declare that I am a legal representative of _________________________________________________. I also declare that I have read, understand, and accept the Terms & Conditions of this document (see Section 3).

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
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