

# Product Datasheet

## BCN3D Omega I60



### Printer properties

<b>3D Printing Technology</b>	Fused Filament Fabrication (FFF)
<b>Architecture</b>	Independent Dual EXtruder (IDEX)
<b>Printing volume (W x D x H)</b>	450 x 300 x 450 mm (17.7 x 11.8 x 17.7 in)
<b>Build chamber</b>	Heated Chamber up to 70 °C (158 °F) Fully enclosed
<b>Air filtering</b>	Category H13 HEPA filter Active Carbon filter
<b>Number of extruders</b>	2
<b>Warranty</b>	12 Months (Global)
<b>Extruder system</b>	Direct drive bondtech LGX Pro extruders Quick-swap Hotend Tips 1.75mm Filaments
<b>Printing modes</b>	Single mode Duplication mode Mirror mode Dual mode

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<b>Automatic Calibration System</b>	Main features: <ul style="list-style-type: none"><li>• Accurate Z homing</li><li>• Quick assisted bed leveling</li><li>• Automatic XYZ offset extruder calibration</li><li>• Automatic Mesh Mapping</li></ul>
<b>Electronics</b>	Single Board Computer: Toradex ARM Compute Module Motion Board: BCN3D Electronics with integrated stepper drivers 32 bit ATSAME51A
<b>Firmware</b>	BCN3D Embedded Linux distribution BCN3D Omega - Marlin 2.1.x
<b>Heated bed</b>	Silicone thermal pad Up to 120°C (248 °F) Flexible Printing Surface
<b>Screen</b>	7" IPS full color capacitive touchscreen
<b>Supported languages</b>	English
<b>Supported files</b>	Supported by the printer: .gcode Supported by Stratos: .3MF, .STL, .OBJ
<b>Operating sound</b>	65 dB (maximum)
<b>Tip/Nozzle diameter</b>	Omega Hotend Tip 0.4 HR (0.4mm tip size) (Included) Omega Hotend Tip 0.6 HR (0.6mm tip size) (Sold separately)
<b>Connectivity</b>	Offline printing: USB Online printing: WiFi (Dual Band 2.4/5 GHz 2x2 Wi-Fi 5 (802.11ac)) or Ethernet (through BCN3D Cloud)
<b>WiFi band characteristics</b>	Wideband transmission systems; Data transmission equipment operating in the 2400 MHz and 5000 MHz band. Wi-Fi 802.11ac/a/b/g/n , Dual-Band 5000 MHz and 2400 MHz, Up to 866.7 Mbps 5000 MHz frequency range: from 5150 to 5850MHz 20/40/80 MHz channel bandwidth Bluetooth 5 (BR/EDR), BLE Max Output Power 0.07 W
<b>Materials Operation System (MOS)</b>	70 °C (158 °F) max temperature Average relative humidity <10%
<b>Camera</b>	Yes (visualization via screen)

### Materials

<b>Filament diameter</b>	1.75 ± 0.05 mm
<b>Compatible materials</b>	BCN3D Filaments (for Omega) Open Filament Network (for Omega) Custom Materials (with free license activation) <sup>1</sup>

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**Open filament system** Yes (with free license activation)

### Physical properties

**Overall dimensions (W x D x H)** 987 x 600 x 1927 mm ( 38.86 x 23.62 x 75.87 in)

**Weight** 240 kg (530 lbs)

**Shipping box dimensions (W x D x H)** 1180 x 725 x 2100 mm (46.5 x 28.54 x 82.7 in)

**Shipping weight** 260 kg (573.2 lbs)

**Minimum working area**

For printer operation: A minimum clearance of 20 cm (8") is required on all sides of the printer, and except for the front, where a clearance of 80 cm (32") is necessary to operate the printer.

For technical service: A minimum clearance of 80 cm (32 in) is required on all sides of the printer for accessing the front, right, and rear panels, except for the left side, where a 20 cm (8 in) clearance is sufficient.

**Air/ventilation requirements** No additional requirements

**Shipping method** Custom pallet 1180 (W) x 720 (D) mm (46.46 (W) x 28.35 (D) in)

### Printing properties

**Recommended profiles** Built-in print profiles in slicer software

**Accuracy<sup>2</sup>**

XY part accuracy: +/- .200 mm (.008 in), or +/- .002 mm/mm (.002 in/in), whichever is greater.

Z part accuracy = +/- 0.200 mm (+/- 0.008 in.) or +/- 0.002 mm/mm (+/- 0.002 in./in.), +/- 1 layer height.

**Layer Height** 50 µm minimum, 300 µm maximum

**Operating Environment** Temperature: 18 - 30 °C (64.4 - 86 °F), Humidity: 30 - 70% RH

**Extruder maximum temperature** 300 °C (572 °F)

**Heated bed maximum temperature** 120 °C (248 °F)

**Build chamber maximum temperature** 70 °C (158 °F)

### Electric Properties

**Input<sup>3</sup>** AC 200-240V, AC 10,25-8,5A, 50-60Hz

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<b>AC Power Socket</b>	USA: NEMA 6-20, EU: Schuko, UK: BS1363, Australia: AS3112
<b>Maximum power consumption</b>	2050W
<b>UPS Topology</b>	Online 1kVA Battery specifications: 3 batteries, each 36VDCx7Ah

### Software

<b>File preparation software</b>	BCN3D Stratos for slicing and BCN3D Cloud for printer management
<b>Operating Systems</b>	Windows 10 or higher, 64-bit, Mac OSX 11 Big Sur or higher, 64-bit, Linux, 64-bit
<b>Connectivity</b>	Online printing: WiFi or Ethernet (through BCN3D Cloud) Offline printing: USB
<b>Supported browsers BCN3D Cloud</b>	Google Chrome, Mozilla Firefox, Safari

<sup>1</sup> The Omega I60 is an open material platform that offers customers the flexibility to use custom materials and create their own printing profiles at no extra cost. An Omega Open Filament License (OOFL) is required for this purpose. For more information: <https://3d.bcn3d.com/bcn3d-omega-i60-omega-open-filament-license>

<sup>2</sup> Test conditions: 0.4mm hotend tip , 0.15 layer height , Material: Omega Proto. The accuracy is dependent on geometry and the achievable accuracy specification is derived from statistical data at 95% dimensional yield.

<sup>3</sup> This system requires a 220 voltage connection, which is made at the bottom right-hand corner at the back of the printer. The voltage is applied to the system using a Single Phase connection. Check the AC Power Socket section to install the proper socket.

All specifications are approximate and subject to change without notice.  
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