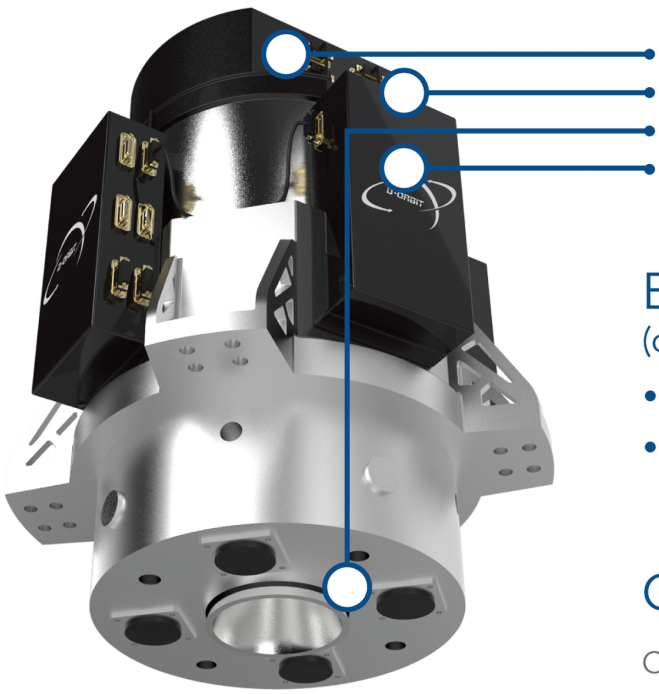
D3
TECHNICAL SHEET

D-Orbit Decommissioning Device (D3) is an independent propulsion system that enables a quick and safe removal of a satellite from its operational orbit at the end of life. The D3 family meets the needs of various classes of satellites, and is fully compliant with international space debris mitigation regulations.

Available both in single and family clusters of rocket motor configuration, the D3 is customizable based on spacecraft mass, operational orbit, and desired performance parameters (see charts below for LEO configurations).

D3 is available in a lean Slim Configuration or in Standard Configuration equipped with Telemetry, Tracking and Control subsystems.



All D3 classes can be configured with a dedicated Thrust Vector Control and Terminal Attitude Unit

Design

- Telemetry, Tracking and Command **(TT&C)**
- Electro-Explosive Subsystem **(EES)**
- Solid Rocket Motor **(SRM)**
- Command and Control Unit **(CCU)**

Electrical Interfaces
(customizable upon request)

- **Power Interface** 24/28 V
- **Data Interface** MIL-STD-1553 / CAN / Space-Wire

Quality and Reliability

Compliance with Safety Standard MIL-STD-1576

- **Components Level** SCC-B to Extended Range
- **Predicted Reliability** >0.999 after 15 year on-orbit
- **Fail-Safe Architecture** Single-point-of-failure free
- **Critical Software** B-Class

Horizon 2020
European Union funding
for Research & Innovation

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grand agreement No 711193

Contact us for a quote on the best customization for your satellite design

sales@dorbit.space

D-Orbit SpA
Viale Risorgimento, 57 Fino Mornasco (CO) Italy
(+39) 02 3792 0900 I © D-Orbit SpA

dorbit.space

D3 Configuration Low Earth Orbit (LEO)

Class		Slim Configuration (basic)		Standard Configuration (with Telemetry, Tracking and Control subsystems)	
Name*	**Configuration**	**Mass** [kg]**	**Envelope [mm]**	**Mass** [kg]**	**Envelope [mm]**
D3.S10	1x S10	16	320 x 320 x 250	18	320 x 320 x 300
D3.S20	1x S20	22	320 x 320 x 300	24	320 x 320 x 350
D3.S55	1x S55	39	450 x 450 x 500	41	450 x 450 x 550
D3.C80	1x S55 + 2x S10	63	790 x 450 x 500	65	790 x 450 x 500
D3.C100	1x S55 + 2x S20	74	790 x 450 x 500	76	790 x 450 x 550
D3.C180	4x S55	144	1000 x 1000 x 500	146	1000 x 1000 x 550
D3.S250	1x S250	149	500 x 500 x 900	151	500 x 500 x 1000
D3.C360	1x S250 + 2x S55	221	1100 x 500 x 900	223	1100 x 500 x 1000
D3.C400	1x S250 + 3x S55	255	1100 x 500 x 900	257	1100 x 500 x 1000

*S= Single Pulse | D= Dual Pulse | C= Cluster Configuration
** Exclude dedicated Thrust Vector control if required

D3 Configuration Medium Earth Orbit (MEO)

Class		Slim Configuration (basic)		Standard Configuration (with Telemetry, Tracking and Control subsystems)	
Name*	**Configuration**	**Mass** [kg]**	**Envelope [mm]**	**Mass** [kg]**	**Envelope [mm]**
D3.D14	1x D14	21	350 x 350 x 400	23	350 x 350 x 450

D3 Configuration Geostationary Orbit (GEO)

Class		Slim Configuration (basic)		Standard Configuration (with Telemetry, Tracking and Control subsystems)	
Name*	**Configuration**	**Mass** [kg]**	**Envelope [mm]**	**Mass** [kg]**	**Envelope [mm]**
D3.D38	1x D38	38	350 x 350 x 400	40	350 x 350 x 450
D3.D49	1x D49	46	350 x 350 x 500	48	350 x 350 x 550

Horizon 2020
European Union funding
for Research & Innovation

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grand agreement No 711193

Contact us for a quote on the
best customization for your satellite design

sales@dorbit.space

D-Orbit SpA
Viale Risorgimento 57 Fino Mornasco (CO) Italy
(+39) 02 3792 0900 I © D-Orbit SpA

dorbit.space