

## SPACE NEWS

## Top 50

Space Industry  
Manufacturing and Services

## EADS Continues to Climb in 2008

European defense and aerospace conglomerate EADS leapfrogged Northrop Grumman Corp. into third place in the latest *Space News* survey of the world's top 50 space manufacturing and services companies. A close fourth on last year's list, and fifth the year before, EADS's Astrium space division is steadily narrowing the gap with Lockheed Martin Corp., which made the top slot for the third year in a row, and Boeing Co., whose space-related revenue declined for a fourth straight year.

Lockheed Martin continued to pull away from Boeing, its perennial U.S. rival, posting a 9 percent increase in space revenue, but EADS Astrium outpaced all of the major primes with a 20 percent jump in sales. The company attributed its growth to better performance on the Ariane 5 rocket program, work on France's M51 strategic missile and a

rapidly growing space-based services business.

The data used to compile the annual *Space News* list of the top 50 space manufacturing and services companies is drawn primarily from responses to surveys filled out by the companies and annual reports. Oftentimes, particularly in the case of diversified firms for which space accounts for only a portion of annual revenue, it is a combination of the two.

Unlike recent years, the sales figures for European firms like EADS in the latest rankings were not inflated by sharp declines in the dollar's value relative to the euro. Revenue numbers provided in non-U.S. currencies were converted according to Dec. 31, 2008, exchange rates, when 1 euro was worth \$1.409 — down from \$1.472 a year earlier.

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Rank	Company	2008 Space Sales	2007 Space Sales	Total 2008 Sales	Total 2007 Sales	Comments	Figures in millions of U.S. dollars.
1	Lockheed Martin Corp.	\$10,700	\$10,203	\$42,731	\$41,862	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
2	Boeing Co.	\$7,130	\$7,460	\$60,909	\$66,387	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; missile defense.	
3	EADS	\$6,046	\$5,005	\$60,992	\$55,153	EADS Astrium has three divisions: Astrium Space Transportation for space station and related hardware and Ariane 5 manufacturing; Astrium Satellites, a satellite prime contractor; and Astrium Services for telecommunications and Earth observation services. Astrium Services took majority ownership of Spot Image in July 2008.	
4	Northrop Grumman Corp.	\$5,805	\$5,231	\$33,887	\$32,018	Satellite manufacturing; satellite and rocket components; ground systems; engineering services and software; missile defense; satellite communications services.	
5	Raytheon Co.	\$4,405	\$4,506	\$23,174	\$21,301	Satellite and rocket components; ground systems; engineering services and software; missile defense; imagery sales and services.	
6	Garmin Ltd.	\$3,494	\$3,180	\$3,494	\$3,180	GPS hardware and software.	
7	Thales Alenia Space	\$2,890	\$2,538	\$2,890	\$2,538	Satellite and space hardware manufacturing.	
8	CSC*	\$1,900	\$1,350	\$16,740	\$16,500	Launch services; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
9	United Space Alliance	\$1,817	\$1,860	\$1,817	\$1,860	Launch services; ground systems; engineering services and software.	
10	ATK	\$1,808	\$1,678	\$4,583	\$4,171	Satellite manufacturing; satellite and rocket components; engineering services and software; missile defense.	
11	L-3 Communications	\$1,500	\$1,400	\$14,901	\$13,961	Launch vehicle manufacturing; launch services; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
12	EchoStar Corp.	\$1,492	\$1,280	\$2,151	\$1,544	Satellite TV ground equipment.	
13	General Dynamics	\$1,446	\$1,007	\$29,300	\$27,200	Satellite manufacturing; satellite and rocket components; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
14	Arianespace	\$1,347	\$1,296	\$1,347	\$1,296	Launch services.	
15	SAIC*	\$1,235	\$1,229	\$10,100	\$8,926	Satellite and rocket components; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
16	Orbital Sciences Corp.	\$1,169	\$1,034	\$1,169	\$1,034	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; missile defense.	
17	Honeywell International Inc.	\$1,100	\$36,556	\$1,000	\$34,589	Satellite and rocket components; ground systems; engineering services and software; missile defense.	
18	Hughes Communications Inc.	\$1,060	\$970	\$1,060	\$971	Ground systems; engineering services and software; satellite communications services.	
19	ITT Corp.	\$1,030	\$1,000	\$11,700	\$9,000	Satellite manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; satellite communications services.	
20	Safran Group	\$899	\$750	\$14,561	\$16,917	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
21	Loral Space & Communications	\$869	\$761	\$869	\$882	Satellite manufacturing. Space sales figures do not include Telesat revenue.	
22	Mitsubishi Electric Corp.	\$830	\$609	\$40,561	\$44,822	Satellite manufacturing; satellite and rocket components; ground systems.	
23	Harris Corp.*	\$800	\$880	\$4,900	\$5,300	Satellite and rocket components; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
24	BAE Systems	\$795	\$610	\$34,400	\$31,400	Satellite and rocket components; ground systems; engineering services and software; missile defense.	
25	Jacobs Technology Inc.	\$739	\$550	\$1,772	\$1,406	Launch services; ground systems; engineering services and software; missile defense; satellite communications services.	

\* Results are for company's 2009 and 2008 fiscal years.

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Movement up and down the rankings can reflect a variety of factors, including organic growth, acquisitions and divestitures, and even the way a company chooses to classify its revenue. CSC, for example, vaulted four slots to the No. 8 ranking this year after reporting space revenue growth of 40 percent, but the company attributed the increase to an internal accounting change rather than a surge of new business.

Not all companies choose to participate every year. Notable among those who passed on this year's survey is United Technologies Corp., whose businesses include Pratt & Whitney Rocketdyne, the dominant U.S. maker of liquid-fueled rocket engines, and spacesuit maker

Hamilton Sundstrand. United Technologies Corp. typically is among the top 20 companies; its space-related revenue for 2007 was over \$1 billion, good enough for the No. 16 ranking.

Other manufacturers that clearly had enough business volume to land on the list but for which reliable revenue figures are unavailable include government-owned industry flagships such as RSC Energia, and Khrunichev State Research and Production Space Center, both of Russia, and China Aerospace Corp. and its various affiliate organizations.

Another significant omission is United Launch Alliance (ULA), the Boeing-Lockheed joint venture that builds and launches Atlas and Delta rockets, primarily for U.S. government customers. The U.S. Air Force spends more than \$1 billion per

year on the Atlas and Delta rocket program; NASA and the U.S. National Reconnaissance Office also contribute to ULA revenue. As was the case last year, ULA would not divulge its revenue, and Lockheed Martin and Boeing did not include ULA revenue in their numbers.

Conversely, United Space Alliance, the Boeing-Lockheed Martin joint venture that operates NASA's space shuttles, did provide its revenue number, which was not included in the figures for its parent companies.

Had the Boeing and Lockheed Martin revenue figures included the contributions of ULA and United Space Alliance, they would have been substantially higher, likely by more than \$1.5 billion each.

In a significant departure from the recent past, *Space News* elected to put the focus back on traditional manufacturing, in-

cluding software and engineering services, in compiling the 2009 rankings. Thus, companies whose primary product is space-based services, such as satellite imagery or communications bandwidth, were not included. It needs to be noted that the numbers for some of the companies that did make the list include revenue from similar types of services; it was not possible to filter out that data.

The omission of the space-based service companies made room for smaller manufacturers on this year's list. Companies like Oerlikon Space of Germany, GMV of Spain and Swedish Space Corp. did not make the top 50 last year, and would not have even with their improved revenue figures for 2008.

— Warren Ferster, Editor

Rank	Company	2008 Space Sales	2007 Space Sales	Total 2008 Sales	Total 2007 Sales	Comments	Figures in millions of U.S. dollars.
26	Ball Aerospace	\$654	\$721	\$747	\$788	Satellite manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; missile defense; imagery sales and services.	
27	Telespazio SpA	\$609	\$557	\$609	\$557	Launch services; ground systems; engineering services and software; imagery sales and services; satellite communications services. Acquired 100 percent of Aurenis SL and ISAF, and 39.73 percent of Novacom Services.	
28	Comtech Telecommunications Corp.	\$450	\$380	\$532	\$446	Satellite manufacturing; satellite and rocket components; ground systems; engineering services and software; satellite communications services. Acquired Radyne Corp.	
29	Mitsubishi Heavy Industries Ltd.	\$443	\$398	\$37,351	\$35,415	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software.	
30	Avio Group	\$428	\$368	\$2,336	\$2,191	Launch vehicle manufacturing; satellite and rocket components; missile defense.	
31	ViaSat Inc.	\$414	\$328	\$628	\$575	Ground systems; engineering services and software; satellite communications services.	
32	Aerojet General	\$390	\$340	\$720	\$730	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; launch services; ground systems; missile defense.	
33	MacDonald, Dettwiler and Associates	\$388	\$353	\$956	\$985	Satellite manufacturing; satellite and rocket components; ground systems; engineering services and software; imagery sales and services; satellite communications services.	
34	Sierra Nevada Corp.	\$387	\$250	\$690	\$484	Satellite manufacturing; satellite and rocket components; ground systems; engineering services and software; imagery sales and services; satellite communications services. Sierra Nevada Corp. acquired MicroSat Systems Inc. in January 2008 and SpaceDev in late 2008. SpaceDev revenue not included.	
35	OHB Technology	\$330	\$283	\$367	\$314	Satellite manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software. OHB sold its 19 percent share of SpaceDev to Sierra Nevada Corp. in December 2008.	
36	Tesat-Spacecom	\$312	\$223	\$312	\$223	Satellite and rocket components.	
37	Gilat Satellite Networks	\$268	\$283	\$268	\$283	Hardware and services for VSAT satellite networks.	
38	Israel Aerospace Industries	\$222	\$190	\$3,585	\$3,299	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; ground systems; engineering services and software.	
39	Globecomm Systems Inc.	\$186	\$142	\$196	\$150	Ground systems; engineering services and software; satellite communications services. Acquired Mach 6 and Telaurus.	
39	ND SatCom GmbH	\$186	\$150	\$186	\$150	Ground systems; engineering services and software; satellite communications services.	
40	Com Dev International	\$172	\$134	\$172	\$134	Satellite manufacturing; satellite and rocket components; imagery sales and services. Acquired Passive Microwave Division of L-3 Communications' ETI Group.	
41	RUAG Aerospace	\$161	\$47	\$161	\$47	Satellite and rocket components. Acquired Saab Space AB and Austrian Aerospace GmbH.	
42	Integral Systems Inc.	\$154	\$124	\$160	\$129	Ground systems; satellite communications services.	
43	Serco	\$140	\$107	\$4,489	\$4,054	Ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services. Acquired SI International Inc.	
44	QinetiQ North America*	\$116	Not provided	\$1,260	\$891	Launch services; engineering services and software; missile defense; satellite communications services.	
45	Goodrich Corp.	\$113	\$121	\$7,100	\$6,400	Satellite manufacturing; launch vehicle manufacturing; satellite and rocket components; ground systems; engineering services and software; missile defense; imagery sales and services; satellite communications services.	
46	MEI Technologies Inc.	\$110	\$108	\$118	\$116	Ground systems; engineering services and software; missile defense.	
47	Oerlikon Space AG	\$104	\$90	\$109	\$95	Satellite and rocket components.	
48	GMV	\$94	\$79	\$128	\$109	Ground systems; engineering services and software.	
49	Swedish Space Corp.	\$86	\$71	\$86	\$71	Satellite manufacturing; satellite and rocket components; launch services; ground systems; engineering services and software; and satellite communications services. Acquired Santiago Satellite Station.	
50	Carlo Gavazzi Space SpA	\$78	\$59	\$78	\$59	Satellite manufacturing; satellite and rocket components; ground systems; engineering services and software.	

\* Results are for company's 2009 and 2008 fiscal years.