DID YOU KNOW?

Alcatel Space
N°3 in the world
and N°1 in Europe
for satellites
Alcatel Space: N°3 in the world and N°1 in Europe for satellites

> Telecommunication
> Earth Observation
> Meteorology
> Oceanography
> Science

7 satellites, 7 payloads, launched in 2002

> Satellites: Stellat 5 - Hot Bird 6 - MSG 1
  Hispasat 1D - Eutelsat W5 - Astra 1K - Stentor
> Payloads: MERIS/ASAR - Vegetation 2
  Intelsat 904-903-905-906 - Express A1R
A European based Company

> 13 industrial sites in Europe
> The main partner of the Guiana Space Port
> Industrial partners all over the world

2001 Key Figures

SALES FOR 2001: €1.4 BILLION - STAFF 6,500
(DECEMBER 2001)
N°1 in Europe for spaceborne telecommunications systems

4 complete systems:

- Worldspace: Digital Audio Broadcasting
- Syracuse: military telecommunications
- Europe*Star: civil telecommunications
- Egnos: navigation

N°1 Space provider of French DoD (Department of Defence)

Prime Contractor for Syracuse III

- Based on Spacebus
- Encrypted Telecommand and Telemetry
- Robust anti-jamming system
- Dynamic pattern active antenna
DID YOU KNOW?

Spacebus: A complete range of telecommunication satellites

> In Continuous evolution and industrial improvement
> Full range up to 20kW satellites
> All bands L, C, X, Ku, Ka payloads
> Multiple fixed and steerable antennas

World leader in telecom payloads
(25 to 30% of the global market)

More than 130 telecommunication payloads already ordered
(Including 64 Globalstar)
DID YOU KNOW?

19 OBSERVATION PAYLOADS ALREADY ORDERED

EARTH OBSERVATION

N°1 in Europe for high-precision imaging instruments

> From IR to visible
> From environment to defense
> Optic and radar high resolution
> A complete range of instruments for image acquisition (imagers, spectro-imagers, interferometers, lidars, intelligent optics)

MERIS FIRST IMAGE

ASAR FIRST IMAGE

FLIGHT PROVEN

FLIGHT PROVEN
**DID YOU KNOW?**

**METEOROLOGY & CLIMATOLOGY**

N°1 in Europe for spaceborne meteorological systems

> Prime contractor for Meteosat first & second generation

N°1 in the World in space altimetry

Poseidon 2 radar altimeter on board Jason-1 in orbit

> Delivered data deemed remarkable by scientists around the world

> A minute ahead of Topex-Poseidon with Poseidon 1 still operational

*JASON 1 OPERATIONAL*
Alcatel Space Prime Contractor of major scientific programs

- Infrared astronomic exploration
- Interplanetary probes
- Star study and exoplanets detection
- Prime Contractor for Herschel and Planck space satellites, the largest ESA’s space science project
PROTEUS: the multimission LEO platform

> For all fields of application: Science, Earth observation, Navigation, Telecommunication, Environment…
N°1 in Europe for navigation systems

> GNSS1/EGNOS
> GNSS2/Galileo
> Japanese program MTSAT
> Secure Aeronautical Communications (SDLS)

Prime contractor for EGNOS

> European Geostationary Navigation Overlay System, a complement to GPS
> EGNOS testbed: the first complete permanent navigation signal --> deployed

FROM EGNOS TO GALILEO

Galileo

> Alcatel Space co-founder of Galileo Industries SA
> Architect for Galileo System
DID YOU KNOW?

GROUND SYSTEMS

N°1 in Europe for Earth observation, meteorology and navigation ground systems

> Prime contractor for large-scale ground systems
> Complete range of products and services

ENVISAT PAYLOAD DATA SYSTEM

42 M EISCAT ANTENNA SPITZBERG

EUROPE*STAR CONTROL & MISSION CENTER - TOULOUSE
ALCATEL SPACE

ADVANCED INDUSTRIAL CAPABILITIES

More than 15,000 sq. meters of clean rooms

> The only integrated manufacturing and test center in Europe: a single class 100,000 facility, spanning 8,700 sq. meters.

> All environmental tests: thermal, structural - mechanical, radio
Parallel integration of communication module and service module

> Assembly, integration and testing: from components to satellites

A space optics center unrivaled in Europe

> 500 sq. meters in class 100
> The largest optical bench in Europe
> Specific techniques (collimators, flat mirrors, solar simulators...)

AND ALSO
CLEAN ROOMS DEDICATED TO ELECTRONICAL, MECHANICAL, DIGITAL OR MICROWAVE EQUIPMENT WITH ALL THE SPECIFIC ASSOCIATED MEANS
The best-added-value solutions for customer worldwide

> More than 2500 equipment/year designed and manufactured
> On-board more than 50% of in-orbit commercial satellites
> Substantial portfolio of Long Term Purchase Agreements with major Prime Contractors
Environment and security
> Alcatel Space: Architect for GMES (Global Monitoring for Environment and Security)

Digital Audio Broadcasting
> Alcatel Space world leader in satellite Digital Audio Broadcasting: Worldspace’s system prime contractor, XM Satellite Radio’s payloads provider, RELY system architect

Satellite Broadband Access Solutions
> Strategic partnerships
> Based on DVB-RCS standard
> Digital Multimedia Broadcast applications
> Tele-activities applications