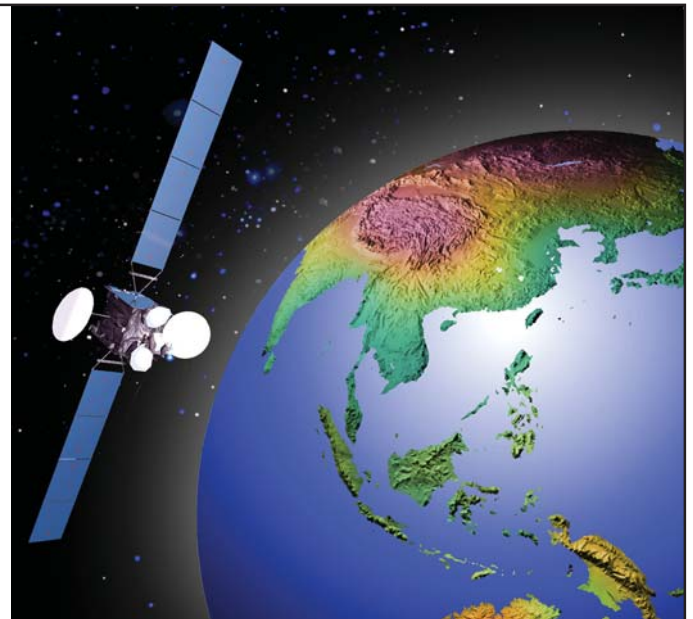


Indostar II/ProtoStar II



Customer	ProtoStar Ltd. of Bermuda
Spacecraft	Boeing 601HP
Launch	
Date	2009
Vehicle	Proton Breeze M
Site	Baikonur, Kazakhstan
Orbital slot	107.7° E longitude
On-orbit Life	15 years



Optimized Direct-to-Home Communications for Asia

ProtoStar Ltd. of Bermuda, chose Boeing, the world's leading manufacturer of government and commercial communications satellites to expand its constellation of spacecraft with a 601HP satellite. Indostar II/ProtoStar II will provide robust direct-to-home (DTH) and other telecommunications services including broadband Internet throughout the Asia-Pacific region. The Indostar II/ProtoStar II satellite will feature high-powered transponders and will significantly expand ProtoStar's capacity.

The Boeing-built 601HP spacecraft is the most powerful satellite to join the ProtoStar fleet with nearly 10 kilowatts of power at beginning of life.

Scheduled for completion in 2009, the satellite will be launched into the orbital slot of 107.7 degrees East longitude. Indostar II/ProtoStar II will use 10 active and three spare S-band Traveling Wave Tube Amplifiers to provide DTH broadcasting across Indonesia.

Boeing will integrate technology that will allow ProtoStar to broadcast a Ku-band system for DTH

and other telecommunications services across India. A second Ku-band payload that can be switched between the Philippines, Taiwan and Indonesia will provide broadband Internet access and other telecommunication services.

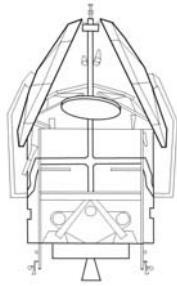
The Boeing 601 satellite is the best-selling large spacecraft model in the world. Eighty-three orders for the spacecraft had been received as of January 2008.

In 1987, Boeing introduced the 601 to meet anticipated requirements for high-power, multiple-payload satellites for such applications as direct television broadcasting to small receiving antennas, very small aperture terminals for private business networks, and mobile communications.

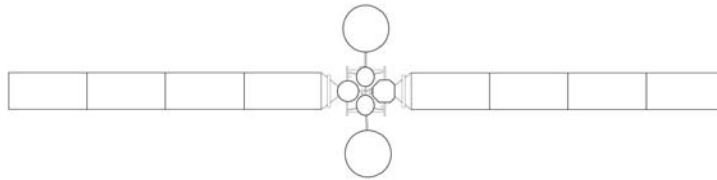
A more powerful version, the Boeing 601HP, made its debut in 1995. The HP versions can carry payloads twice as powerful as the classic Boeing 601 models, through such innovations as gallium arsenide solar cells and advanced battery technology. The 601HP features as many as 60 transponders and provides up to 11,000 watts of electrical power.

Indostar II/ProtoStar II

S P E C I F I C A T I O N S



Stowed



In Orbit

PAYLOAD

Ku-band	India	12 active (3 spare) TWTAs
	Philippines-Taiwan/Indonesia	10 active (2 spare) TWTAs
S-band	Indonesia	10 active (3 spare) TWTAs

PROPULSION

Liquid apogee engine	110 lbf LAM
Stationkeeping Thrusters	E-W (bipropellant) 4 x 2 lbf N-S (bipropellant) 8 x 2 lbf

POWER

Solar	
Beginning of life	9.9 kw
End of life	8.8 kw
Panels	2 solar wings, each with 4 panels of dual-junction gallium arsenide cells
Batteries	30 cell NiH

DIMENSIONS

In Orbit	L, solar arrays: 86 ft (26 m) W, antennas: 33.0 ft (10 m)
Stowed	H: 13 ft 3 in (4 m) W: 8 ft 10 in x 11 ft 9 in (2.7 m x 3.6 m)
Weights	Launch 8609 lb (3905 kg) In orbit (beginning of life) 6806 lb (3087 kg)

ANTENNAS

- 1 107" - diameter Ku-band Gregorian transmit/receive antenna
- 1 107" - diameter S-band shaped Gregorian transmit antenna
- 1 50" - diameter X-band shaped receive antenna
- 1 50" - diameter Ku-band shaped transmit/receive antenna