SingTel Satellite
VSAT Services
SingTel offers your business a variety of VSAT services catering to your specific needs. From end users to small businesses to multi-national corporations, we have the right VSAT solution for you.

As a major provider of satellite and fibre communications services, SingTel is able to offer both in width and in depth, bundled products and services to meet customers’ most demanding requirements. With our teleports in Singapore and other locations in the world, we have access to more than 30 satellites, giving customers a wide range of satellite coverage. Complementing our satellite solutions are our MPLS networks and Internet backbone seamlessly connected to our teleports to give customers end-to-end solutions almost anywhere in the world.

**Key Benefits**

- **Scalability**
  Ability to increase bandwidth and scale with system expansion
- **Fully Managed Network**
  24x7 circuit monitoring by SingTel’s ISO-9002 certified network management centre
- **Extensive Coverage**
  Satellite connectivity with more than 30 antennas pointing at the satellites from 36°E to 180°E and extensive terrestrial network of more than 200 PoPs in over 80 major cities
- **End-to-end Control**
  Hassle free single point of contact allowing quicker service request turn-around, better management and faster fault recovery

**Features**

- Connectivity to Tier 1 Internet backbone
- Connectivity to worldwide MPLS network
- RF chains with redundancy protection
- Remote monitoring capabilities
- End-to-end solutions including on-site services
- Dual power feed from power station
- Dual UPS power feeds to equipment racks
- Generator power to support operation indefinitely
- 24x7 Network Operation Centres
- Disaster free location - Singapore is one of the countries with the lowest risk of natural disaster*

**SingTel VSAT Solution is suitable for**

- Enterprises
- Banks
- Government organisations
- Mining companies
- Telco service providers
- Internet service providers

* Source: Maplecraft’s Natural Disaster Risk Index (NDRI) 2011.
SingTel’s various VSAT Solutions

Global VSAT
Point-to-point dedicated SCPC service with SingTel satellite capacity and ground solutions. Both sites are linked directly via satellite without going through SingTel teleport.

Corporate VSAT
Point-to-point dedicated SCPC service terminating at SingTel Teleport, bundled with private local digital leased line to connect to customer’s premise or another location in Singapore.

SAT IP Trunk
Point-to-point dedicated SCPC service terminating at SingTel Teleport, connected to Internet backbone.

DVB-S2/SCPC
High capacity DVB-S2 outbound from SingTel Teleport and return via smaller SCPC connectivity. CIR and MIR schemes available.

iDirect
Point-to-multipoint shared TDM/TDMA and DVB-S2/ TDMA service terminating at SingTel Teleport, enabling dynamic allocation of bandwidth. Various contention ratio schemes are available.

Note: Bundled solutions including provision of remote site equipment, installation and maintenance services are also available.

SingTel VSAT Solution Matrix

<table>
<thead>
<tr>
<th>Dedicated</th>
<th>Satellite IP Trunk</th>
<th>Corporate VSAT</th>
<th>Global VSAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td>Up to 155 Mbps duplex*</td>
<td>Up to 155 Mbps duplex*</td>
<td></td>
</tr>
<tr>
<td>Ideal for</td>
<td>Enterprises and Satellite Service Providers</td>
<td>Government and Enterprises</td>
<td></td>
</tr>
<tr>
<td>Connectivity to</td>
<td>Internet</td>
<td>SingTel DigiNet (local loop)</td>
<td>SingTel ConnectPlus</td>
</tr>
</tbody>
</table>

Shared

<table>
<thead>
<tr>
<th>DVB-S2 or equivalent</th>
<th>iDirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed (aggregate)</td>
<td>Up to 160Mbps*</td>
</tr>
<tr>
<td>Ideal Solution for</td>
<td>ISPs</td>
</tr>
</tbody>
</table>

Note: * subject to Link Budget calculation

Value-added Services

SingTel provides a number of value-added services including:

- Integrated Network Monitoring System (iNMS) to monitor in real-time the remote sites health status and to assist in fault identification and recovery, saving precious time before engineer is deployed to site.

- AIO Connect Services support cost effective voice and internet services, connected to SingTel’s international telephony service and internet backbone. Comes with an easy to manage pre-paid model to enable remotely located communities and enterprise operations to maintain communications with friends and families over the world.
Satellite Coverage

ST-2 Ku band

ST-2 Ex-C band

NSS-12 EH beam C band

APT-V C band

ABS-1 C Band

ABS-1 Ex-C band

About SingTel

SingTel is Asia’s leading communications group providing a portfolio of services including voice and data solutions over fixed, wireless and Internet platforms as well as infocomm technology and pay TV. The Group has presence in Asia and Africa with 434 million mobile customers in 25 countries, including Bangladesh, India, Indonesia, Pakistan, the Philippines and Thailand. It also has a network of 35 offices in 19 countries and territories throughout Asia Pacific, Europe and the United States.

About SingTel Satellite

SingTel Satellite is Asia’s leading provider of one stop satellite communications and ICT solutions, driving innovations to meet voice and digital challenges in Fixed and Mobile Satellite segments on both land and at sea.

With a strategic focus on Maritime communications, SingTel engages the key needs of Maritime customers with ICT applications in Crew Welfare, Operational Efficiency and Control and Monitoring, bridging mission critical communication gaps between ship and shore.

From satellite to fibre to IP, SingTel offers global coverage and versatility across platforms. Backed by 4 teleports pointing to more than 30 satellites and supported by our award winning IP VPN infrastructure and an extensive terrestrial network of more than 125 PoPs in over 80 major cities – SingTel ensures quality customer experience in communications and connectivity.

Committed to delivering service excellence and with more than 35 years of collective experience, SingTel empowers global customers with complete solutions to organically drive productivity, efficiency, and experience.