Satellite Solutions

PCCW Global provides easy-to-use, flexible and reliable turnkey Satellite Solutions for private data networks connecting enterprises and governmental institutions around the world.

Key benefits to your business

- Ideal for corporate networks, our Satellite Solutions provide reliable two-way transmission, even in challenging geographies
- Worldwide coverage with interconnections to PCCW Global’s high speed terrestrial backbone network
- Capability to provide turnkey services in over 95 countries worldwide, including arrangement of legitimate licenses
- Scalable-growth path, as high bandwidth requirements can be accommodated easily

Network coverage
VSAT Services

A Very Small Aperture Terminal (VSAT) is a two-way satellite ground station that accesses satellites in orbit and relays data from terminals and hubs on earth. VSATs can transmit both narrowband and broadband data and are used for various types of communications.

The strength of VSAT is in its ease of deployability and its secure and high speed connection regardless of latency. VSAT can also serve as backup for local infrastructure in case of potential disasters. It can also provide connectivity to thousands of locations at a time at cost-effective pricing.

Managed End-to-End VSAT Service

This satellite-based Single Channel Per Carrier (SCPC) technology uses a VSAT antenna and indoor unit to provide a reliable, two-way communications link anywhere under the satellite's footprint.

Specifications
- Satellite space segment
- Local VSAT operations license
- Ground equipment includes VSAT antenna, RF ODU, satellite modem and cables
- One-time VSAT installation and commissioning
- Data rates support: 64Kbps up to 155Mbps
- Interface supported: V.35, G.703, RS-422, Ethernet, FE, HSSI and ASI

Features
- Quick implementation of reliable, dedicated capacity with clear channel circuits
- Both symmetric and asymmetric data rates supported in 1Kbps increments
- Service Level Agreements (SLAs) offered for both hub and remote locations
- Extensive local partner network and PCCW Global's own field engineering teams to provide fast and professional on-site support
- Terrestrial interconnection with PCCW Global's optical fiber infrastructure (IPLC + MPLS VPN)

Broadband VSAT Network Service

An IP-enabled two-way broadband service based on meshed or star network topology provides dynamic and efficient use of bandwidth with burstable (offering delivery speeds equalling multiples of the Internet access rate) or shared throughput.

Specifications
- Typical information rates from 64Kbps to 11Mbps
- Quality shared bandwidth service, with QoS control
- C-band and Ku-band coverage
- Flexible profiles with symmetric and asymmetric data rates on forward and return links
- Real or private IP address allocation
- Interface: Ethernet or Fast Ethernet
- Antenna size: 0.75m to 2.4m

Features
- IP-based connectivity with enhanced features such as TCP spoofing, caching and pre-fetching
- Supports VLAN, IP-VAN and transparent mode
- Voice-over-IP (VoIP)
- VLAN connectivity
Cellular Backhaul Service

PCCW Global’s Cellular Backhaul Service is made possible by the most advanced voice optimization technology coupled with our systems integration expertise, network bandwidth savings enabling cellular operators to slash operating costs.

Our total package includes a highly efficient satellite-based service that supplements an operator’s terrestrial backhaul infrastructure and extends reach into markets where deployment of optical fiber or microwave networks would not be viable. This enables mobile players to offer services to populous yet previously-unserved wireless markets.

Network diagram

Specifications
- A and E interface specifications
- Mobile Switching Centre (MSC) to Base Station Controller (BSC) backhaul link
- Codecs supported: G.711, G.723 and G.729
- Abis and Ater interface specifications
- Base Station Controller (BSC) to Base Transceiver Station (BTS) and Transcoder Rate Adapter Unit (TRAU) to Base Transceiver Station (BTS) access links
- GSM codecs supported: FR, EFR, HR and AMR (both FR and HR)
- Supports both CDMA and GSM cellular networks
- Traffic types supported: 3G (UMTS, CDMA), 2.5G (EGDE), GPRS data, 2G, IP data, SS7 signaling, PCU signaling and Signaling Connection Control Part service (SCCP)
- A and E interface optimization ratio: Up to 16:1 & up to 8:1 SS7 traffic optimization
- Voice and data aggregation and compression
- Abis and Ater interface optimization ratio: Up to 3:1 (2G) and up to 4:1 (2.5G)

Features
- Design and optimization of satellite backhaul network using the latest advanced satellite technologies – SCPC/TDMA/DAMA
- Equipment procurement and systems integration with GSM equipment
- Space segment procurement and satellite link installation and commissioning
- International Voice Termination — Premium Service for roaming and CLI guaranteed terminations and Standard Service for price-sensitive terminations
- Mobile Messaging and Signaling Services
- Global roaming with more than 400 partners worldwide
- iSMS (international text messaging) — real-time text messages of up to 160 characters
- Fully redundant bi-directional signaling network
- Simple and customized pricing
- ANSI-to-ITU signaling conversion
Internet Trunking Service
This provides Internet Service Providers (ISP) with a high speed satellite connection to the Internet backbone.

Specifications
- Typical information rates from 5Mbps up to 155Mbps
- Flexible bandwidth arrangements and Quality of Service (QoS) options, including Constant Bit Rate (CBR) and Burstable Bit Rate (BBR) over DVB/IP platform
- Public IP-address allocation
- Interface: V.35, HSSI, Fast Ethernet or Giga Ethernet

Features
- Deployment of latest advanced satellite communication technologies to derive highest efficiency on satellite bandwidth
- Improved overall link performance, eliminating congestion in local terrestrial infrastructure for the high speed portion of the link
- Guaranteed reliability with aggressive service level objective
- Cable restoration solution to backup fiber capacities on pay per-use basis

Value-Added Services
- Managed Router Service (MRS)
- Colocation Service

Teleport Service
State-of-the-art self-owned teleport facilities in Hong Kong, Belgium, Mozambique and South Africa equip PCCW Global to satisfy service provider requirements with high quality and reliability. Over 40 earth station in Hong Kong teleports accessible to more than 50 satellite feeds, C and Ku band. Unique Ku-Band teleport service accessing multiple satellites with ideal maritime and avionic coverage.

Specifications
- Frequency band: C-band, Ext. C-band and Ku-band
- Interconnection with PCCW Global’s IP backbone and optical-fiber infrastructure
- Interface supported: IF and L-band
- Management control: Remote dial-in and async server
- Colocation rack space and power available

Features
- Maximum security, controlled environment and complete redundancy
- Rack space available for customer CSU/DCU, routers, compression and channel banks
- Connectivity for local loops available
- Diverse optical-fiber SDH, Metro Ethernet and MPLS CP circuits available
- Internet backbone connectivity, redundant access to IP carriers, network operators and voice partners
- Total Teleport diversity in Hong Kong
- Standard ‘A’ satellite communication antennas
- Video Broadcast Standard Teleport
- Flexible and wide Satellite Access Range
Global Media Transportation Solutions

PCCW Global has over 30 years of experience in the provisioning of satellite television services dating back to 1969 when men landed on the moon, backed by a unique engineering and operations team in our International Television Center (ITC), a state-of-art integrated fiber and satellite contribution and distribution network, and extensive partnerships in strategic locations around the globe.

Media transportation services provided by PCCW Global are designed to meet the broadcasting needs of regional and international broadcasters and service providers. Leveraging on the geographic advantage of Hong Kong, PCCW Global established Asia’s largest commercial teleport with more than 30 operating earth stations in Hong Kong. Coupled with its Global Television Network (GTVN), a fiber-based video transportation platform, its self-owned teleport facilities in Europe and Africa and partnership with satellite and teleport operators worldwide, and also the interconnectivity with popular video switches in strategic locations around the globe, PCCW Global is the ideal partner for international broadcasters and television service providers for delivering video contents worldwide on both full-time and on-demand basis.
Global TV Network

Global TV Network (GTVN) is PCCW Global’s video over fiber transmission platform. It provides a true managed end-to-end video transportation solution.

In addition to the connection to a video switch in Hong Kong, GTVN has major PoPs in Hong Kong, Singapore, the United Kingdom, Japan and the United States. PCCW Global is expanding the GTVN to strategic countries where we have a well-established presence. GTVN will be offered in conjunction with PCCW Global’s commercial teleports in Hong Kong and Belgium to meet the video contribution and distribution requirements of the market.

Network coverage
Satellite TV Network

With its global broadcasting teleport presence, PCCW Global operates a true global satellite video contribution and distribution network. Whenever there are breaking news, special global coverage events, or regular broadcasting segments, PCCW Global is able to provide ad-hoc and full-time access anywhere in the world via satellites in the Asia Pacific Region (APR), Indian Ocean Region (IOR), Pacific Ocean Region (POR) and Atlantic Ocean Region (AOR). Complemented with its fiber-based GTVN coverage, PCCW Global is dedicated to providing its users with the most reliable and cost-effective video transportation solutions.

Satellite Video network coverage diagram
International TV Centre & Hong Kong Video Switch

PCCW Global operates a 24/7 International Television Center (ITC) in Hong Kong. ITC is also an occasional service booking center that accepts calls and implement requirements from customers for ad-hoc and occasional services. ITC staff has extensive experience and is equipped with well-established working relationships with various local and international broadcasters, teleports and video switching centers, to ensure smooth and reliable operations of the live broadcast services.

PCCW Global also operates the most-connected-to video switch located at Telecom House in Hong Kong. Most local broadcasters, major financial institutes and regional service providers are connected to the switch. It is a convenient and cost-effective way to exchange HD, SD and analog video contents, as well as distribute their live programs globally via PCCW Global’s integrated fiber and satellite media transportation network infrastructure.

Hong Kong teleport setup diagram

Key benefits to your business
- Up to 99.999% commitment on service availability
- One-stop integrated satellite and fiber solution
- One switch away from a global network
- A wide range of flexible satellite options
- Managed video equipment on the customers’ premises can be included as part of the solution
- Cost-effective point to multipoint video distributions enabled by multicasting features over GTVN
- Broadcast standard operational support
- Supports ad-hoc occasional use, short-term and full-time services

Features
- Reliability with redundant system design
- Robust global fiber network with integrated cable and satellite solutions
- Access to Hong Kong video switch
- Access to all key satellite systems in the region
- Truly end-to-end solution
- Video multicasting support
- V/A monitoring support
- Flexible contract terms

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