iDirect Broadband

A perfect TDMA service by any measure, the commercially successful iDirect Broadband combines broadband Internet access and Sentinel optimization solution to stunning effect.

The initial concept for BusinessCom's iDirect Broadband service was based on offering something exceptional to the world of satellite broadband. Superb Internet access performance and qualified NOC support service enable guaranteed quality data, voice and video service around the clock. The heritage of BusinessCom's satellite service design is apparent whenever you open your laptop, with a great deal of thought going on in terms of reliability and flexibility. From the custom tailored QoS profiling and bandwidth management, to the fully accelerated VPN solution with DPI firewall, iDirect Broadband is the perfect way to connect your remotes.

◀iDIRECT   **FreeBSD** FOUNDATION

Managed Bandwidth

Our first iDirect service was a highly integrated solution with true dedicated bandwidth, bi-directional QoS and TCP acceleration. It was a quantum leap forward from prevailing DVB-RCS and legacy TDMA systems in terms of both efficiency and functionality. Today, iDirect is an acknowledged business connectivity standard worldwide. BusinessCom, after a decade of innovation, has raised the bar yet again.

Integrated Solution

Meeting the challenges of a modern business requires a fast, reliable and secure connectivity 24/7. How well do VSAT systems handle this task? With Internet traffic growing steadily, users always demand more throughput. They rely on ISPs to maintain local networks, while continuously protecting them from internal and external threats. Traditionally, this required on-going investments in complex IT engineering, bandwidth management, and the resulting IT staff training. Many businesses find it expensive or even impossible to keep up the chase, especially when locations are remote and hard to reach.

We have re-thought, re-engineered and refined our approach inside and out to address these challenges. The subscriber gets a VSAT terminal that becomes a comprehensive networking control central at the remote site. Instead of simply routing packets over satellite, the VSAT has become smarter.

Our solution delivers bandwidth management, optimization and acceleration, firewall, authentication, VPN, fail-over, load balancing, real-time reporting and monitoring, and many other advanced networking services, without adding anything to the cost. In fact, the return on investment is now quicker than ever. This managed service concept has been available to high end customers, and BusinessCom is now bringing it to a wider market. These advanced monitoring and management features allow us to deploy efficient remote networks without wasting satellite capacity or investing in expensive equipment. The end result is the delivery of a better broadband experience for the end users.

NOC Support

The new concept means a world of change in the VSAT business. The client can now delegate a wide range of management tasks to their technical support contact. The satellite network becomes more transparent; for example, making any bandwidth abuse easier to identify and resolve. Personnel at the BusinessCom Network Operations Center (NOC) or VAR helpdesk, empowered with an insight into their client's LAN, delivers better technical support. Support staff on all levels are better immersed into the client's IT infrastructure, and with the help of BusinessCom NOC, the most complex networking tasks can be resolved. This includes building secure and accelerated VPN networks, supporting specialized business applications with guaranteed quality, deploying redundant connectivity solutions, Wireless Hot Spots, and many other tasks.

BusinessCom® Sentinel PF

The core of this approach is strong bandwidth management, supported by the Sentinel PF operating system. The satellite terminal now allows us to deliver a guaranteed level of service to the customer's LAN on a per-host basis. The client can control maximum bandwidth per each device in the network, as well as prioritize certain applications via QoS, in order to avoid abuse. For example, the VSAT service can be configured to allocate each IP host a certain bandwidth level, and allow bursts when idle capacity is available on the satellite link. The service can be configured to support business quality Voice over IP and Videoconferencing on a 24/7 basis. Shaping and QoS rules can be monitored and changed at any time.

Acceleration & Optimization

Signal propagation latency to geostationary Earth orbit always posed a challenge for supporting real-time applications over satellite links. BusinessCom's iDirect Broadband mitigates this via IP bandwidth optimization and acceleration components.

BusinessCom® PEP/2

BusinessCom's PEP/2 technology leverages two methods to accelerate WAN links: virtual bandwidth and optimization. Compression and content optimization algorithms increase the amount of bandwidth available to user applications so that your actual LAN throughput exceeds the amount of bandwidth available on the satellite interface. Content optimization mitigates effects of circuit congestion and latency - which are especially prominent with satellite links - to improve how the bandwidth is used. The combined effect results in additional capacity made available to user applications and better overall Internet experience.

Unlike other PEP solutions available on the market, BusinessCom PEP/2 is an assymetric, fully managed solution whereby teleport side gateways are provisioned and managed by BusinessCom. Designed to meet the needs of small and medium-sized remote sites, BusinessCom PEP/2 provides very quick ROI.

Accelerated Layer 3 VPN

All iDirect Broadband terminals can act as both VPN clients and servers. The built-in VPN solution accommodates a wide range of configurations, including remote access and site-to-site VPNs. It supports clients on a wide range of operating systems including all the BSDs, Linux, Apple macOS, Solaris and Windows. The security model is based on the SSL, 256-bit encryption and is fully accelerated via satellite path. It implements OSI Layer 3 secure network extension using the SSL/TLS protocol.

Network Security

The iDirect Broadband terminal includes a complete authentication solution that allows clients to deploy safe and controlled local networks. The terminal authenticates local users via Web user interface and enables Internet access on a limited time basis (per hour, per day, or any other timeframe), or using traffic limits, or without any limits at all. The solution can be set up to work with third party local or remote accounting software via RADIUS protocol. Internal user management interface and database are included in case authentication credentials must be stored locally.

The network intrusion detection system (NIDS) provides real-time reports to threats. Infected local hosts can be identified and blocked easily in order to prevent satellite bandwidth abuse. The NIDS threat database is automatically updated on a daily basis.

Bandwidth Monitoring

Built-in bandwidth monitoring and reporting tools enable full understanding of how the satellite bandwidth is used at any particular remote. The terminal can report Top 20 hosts in the LAN by traffic, with charts showing bandwidth utilization over 2 day, 8 day, 40 day and 400 day periods; or real-time statistics breaking down connections by protocol, direction, source and destination IP, packet and byte rates.

Deep packet inspection (DPI) monitoring tools included provide per-host and per-protocol traffic breakdown. This allows to exercise strict control how the satellite bandwidth is used in the local network.
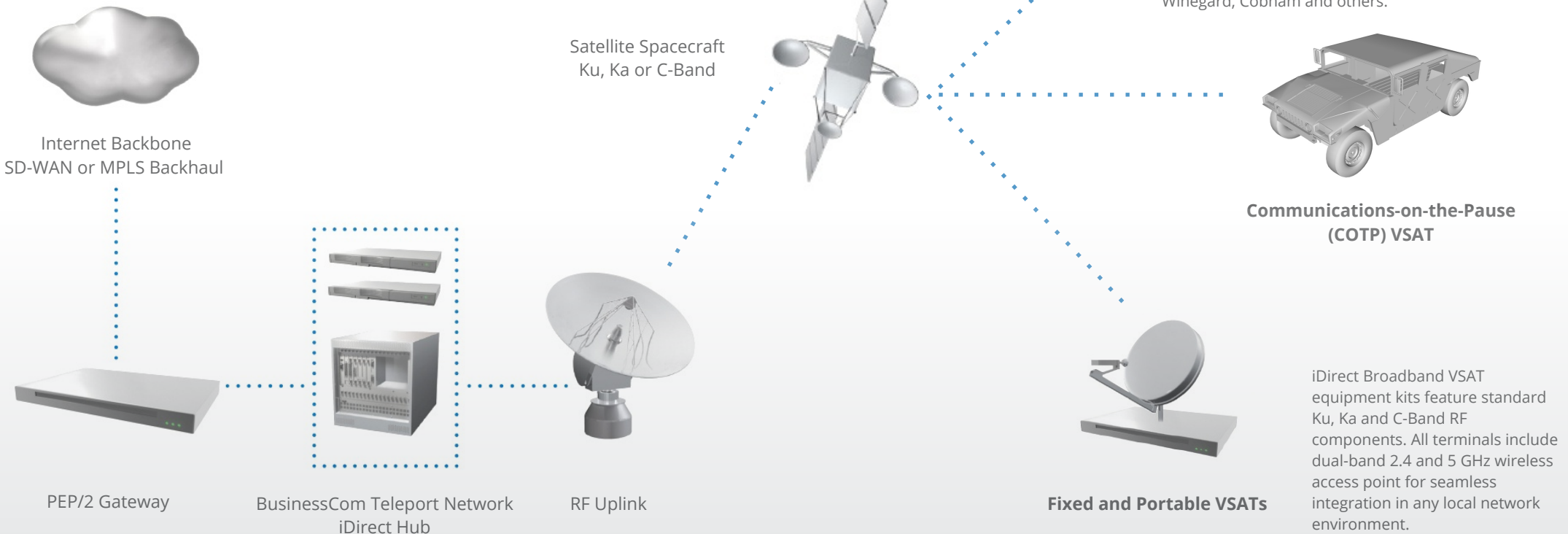
Applications

Featuring up to 20 Mbps of IP throughput, iDirect Broadband is designed to provide WAN connectivity to a wide range of clients.

One Service, Many Possibilities

BusinessCom's iDirect Broadband solution is compatible with standard RF and IP components available from a multitude of SATCOM manufacturers worldwide. Terminals range from portable manpacks to drive-away, fly-away, maritime and specialized antennas.

iDirect Broadband can deliver IP throughput from 64 kbps and up to 20 Mbps with any quota of CIR bandwidth, including fully dedicated links. This allows the service to support virtually any IP application and serve as a great choice for connectivity for business continuity, energy and utilities, embassy networks, maritime, disaster relief, hotels and leisure, healthcare, financial, engineering, national security, education, rural communities, and many others.

iDirect Broadband service is compatible with most of the standard Ku and C-Band maritime antennas, such as Cobham SeaTel, Intellian, Furuno, Orbit, KNS, Epak and others.

Maritime VSAT

iDirect Broadband service can be used with standard drive-away and fly-away antennas available from most of the manufacturers, such as C-Comsat (iNetVu), Winegard, Cobham and others.

Satellite Spacecraft
Ku, Ka or C-Band

**Communications-on-the-Pause
(COTP) VSAT**

Internet Backbone
SD-WAN or MPLS Backhaul

iDirect Broadband VSAT equipment kits feature standard Ku, Ka and C-Band RF components. All terminals include dual-band 2.4 and 5 GHz wireless access point for seamless integration in any local network environment.

PEP/2 Gateway

BusinessCom Teleport Network
iDirect Hub

RF Uplink

Fixed and Portable VSATs

Specifications

VSAT Service and Interfaces

Bandwidth[1]	64 kbps to 20 Mbps, typical uplink up to 2 Mbps
Traffic Quota	Unlimited traffic without FAP/FUP
SLA, Guaranteed Network Uptime	at least 99.5%
Bandwidth	Burstable (BIR) and Dedicated (CIR)
Traffic Engineering	Group QoS, QoS (Priority Queuing and CBWFQ), Strict Priority Queuing, Application Based QoS, Minimum CIR, CIR (Static and Dynamic), Rate Limiting
Optimization & Acceleration	BusinessCom PEP/2, Web and DNS Caching
IP and MAC Security	BusinessCom Sentinel PF, Layer 3 Firewall, Layer 2 Captive Portal with RADIUS support, Deep Packet Inspection Monitoring
Network Interfaces	1 Gbps Ethernet and dual-band (802.11ac) wireless
Supported Protocols	TCP, UDP, ACL, ICMP, IGMP, RIP Ver2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP and GRE, Fully Accelerated VPN

iDirect Broadband fixed VSAT terminal with General Dynamics 1385 C-Band antenna. The actual VSAT equipment required would be contingent to site location, satellite EIRP, frequency band and requested bandwidth.

VSAT Platform

Platform	iDirect Evolution DVB-S2/ACM
Satellite Spacecraft	ABS-2, Measat Africasat-1a, Asiasat-9, Telesat Anik F1, Telstar 11N and Telstar 12 VANTAGE, Eutelsat 21B, SES NSS-12, Intelsat Galaxy 3C, IS-14 and IS-23.
BusinessCom Teleport Networks	DE1 (Munich, Germany) US1 (Miami, FL)

Commercial Overview

Contract Terms	Minimum 1 month term, with automatic renewal. 1 month security deposit paid in advance. Cancellation: 30 days advance notice.

1) Actual maximum throughput depends on the satellite and beam choice, actual transponder load and capacity availability. Please consult with BusinessCom sales representative for bandwidth ranges available.

BUSINESSCOM
NETWORKS

BusinessCom Difference

BusinessCom was among the first in the industry to look at satellite networking as more than a remote link. With the potential for each owner to customize the service, BusinessCom iDirect Broadband is a superb blend of tried and trusted technology, mixed with thoughtful and sometimes radical design. As a pure end-to-end IP solution, our products and services offer our customers the tools, solutions and expertise necessary to enable superb Internet experience virtually anywhere in the world.

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