



Description

The Sat3Play platform is an all IP communication platform supporting different IP services like internet access, VoIP, enterprise connectivity and multicasting. It has been designed in order to be highly scalable for both traffic and management aspects. The platform consists of an IP Broadband Hub and multiple remote modems.

The platform offers:

- "Pay as you grow" modularity
- Support for multiple Virtual Network Operators
- Carrier grade infrastructure with hot redundancy
- Rapid network deployment
- Optimal availability and efficiency

Architecture

The Sat3Play® IP Broadband Hub provides the entire required infrastructure to receive and transmit IP data from and to the remote terminals. It includes support for multi-gateway and multi-spotbeam configurations.

The Hub manages the services offered to the customers in terms of Quality of Service, security and terminal population. It provides connectivity to the internet, private data networks, SIP or PSTN networks. The core component of the system is the Hub, which transmits a DVB-S2 carrier with Adaptive Coding and Modulation (ACM) for the forward link received by all remote terminals. The remote terminals use MF-TDMA channels to communicate with the Hub.

A Hub consists of one or more carrier blades including all equipment for the forward link, the corresponding return links and all additional traffic shaping and acceleration functionality. A carrier blade can be operated on Ka-, Ku-, C- or any other frequency band.

Pay As You Grow

The architecture and accompanied CAPEX investment model suits a smooth growth of the network. The satellite connectivity infrastructure is easy to install and enables immediate service deployment and large scale rollout.

Multiple Virtual Network Operators

The Sat3Play® management features the concept of multiple Virtual Network Operators, allowing network operators to wholesale parts of the system infrastructure and capacity to several Service Providers. Unique remote management tools allow these Service Providers to independently manage, control and monitor their resources in terms of subscriber management, QoS, terminal population, accounting and diagnostics.

Low Operational Cost

Sat3Play® offers high network efficiency reducing satellite capacity OPEX and an easy to operate hub minimizes operational expenditures. Newtec's Network Optimisation technology enhances the IP performance of the system through traffic acceleration and compression. This results in a true broadband experience and reduces the required bandwidth. The work flow based network management focusses on the entire transaction and not just single or partial transaction. It results in proper management of the specific configuration item and minimizes the operational overhead.

Through the northbound interface operational tasks like reporting, accounting, terminal provisioning and bandwidth management can be fully automated and seamlessly integrated with OSS/BSS infrastructure.

Main Advantages

- Different network architectures and modem portfolio covering wide range of applications on single platform
- Adaptive Return Link based on different 4CPM modulations/coding and multiple channel bandwidths.
- High service satisfaction ensured through true broadband experience
- Optimal availability and efficiency of DVB-S2 transmission thanks to Newtec's technologies FlexACM® and ThiMM®
- Efficiency improvement of 10 to 15% with Newtec's Clean Channel Technology®
- Maximum efficiency guarantees through terminal installation certification and verification

Key Features

- DVB-S2 ACM Forward
- 4CPM MF-TDMA Adaptive Return Link
- Embedded TCP acceleration and encryption
- Advanced network management capabilities including monitoring and diagnostics
- Multi-level Quality of Service
- Over-the-air terminal monitoring, diagnostics and software upgradeability
- Workflow based resource configuration
- Network traffic security and network access control
- C, Ku, Ka, HTS

Markets

- Consumer
- SME
- Enterprise
- Government
- Education

Applications

- Internet/Intranet access
- Private Networks
- Enterprise Connectivity
- School networks
- Banking
- Streaming video and audio with TV quality
- VoIP telephony (SIP, H.323, G.729 ...)
- Content Distribution and management
- Telemetry (SCADA)

Satellite Link Interface

FORWARD CARRIER

- Standard DVB-S2 ACM
- Modulation QPSK, 8PSK, 16APSK, 32APSK
- Coding 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
- Roll-off 5, 10, 15, 20, 25 and 35%
- Symbol Rate 3.6 - 63 Mbaud (up to 47Mbaud for 16APSK, up to 38Mbaud for 32APSK with 5/6)

RETURN CARRIER

- Modulation 4CPM (Quaternary Continuous Phase Modulation) with 6 different modcodes using Adaptive Return Link
- Access Scheme MF-TDMA (Multi Frequency Time Division Multiple Access)
- Channel bandwidth 128kHz to 4MHz

Scalability

- Up to 15,000 terminals per Carrier Blade
- Up to 155Mbps throughput per Carrier Blade
- Up to 30Mbps Return throughput per Carrier Blade
- Up to 20 Carrier Blades

HUB Interfaces

- Local Area Connection (LAN) GbE
- IFL RF In L-band: 950-2150 MHz
-114 to -96 dBm/Hz
- RF Out IF-band: 70/140 MHz
L-band: 950-1750 MHz
-35 to 0 dBm

Additional Options

- Fair Use Policy Server
- Terminal Certification and Verification System
- Cross-pol Measurement Hardware

Mechanical & Environment

- Housing 19" rack
- Weight 542kg (max per 19" rack)
- Operating Temperature 0 to 40°C
- Humidity 10% - 70% non-condensing
- Storage Temperature -40°C to 70°C

Power Supply

- Power Supply 210-260VAC, 50Hz or 208-240VAC, 60Hz

IP features

- Protocols: UDP, IPv4 & IPv6, ICMP, IGMPv2, TCP, ARP, DHCP, DNS, DiffServ Marking

Software release

- Specifications valid for Sat3Play® software release 2.2

Standards

- EN 302307 DVB-S2
- EN 300421 DVB-S
- EN 50478 SATMODE
- EN 301428 Ku-band VSAT spectrum usage
- EN 301443 C-band VSAT spectrum usage
- EN 301459 Ka-band VSAT spectrum usage
- IEEE 802.3 10T Ethernet
- IEEE 802.3u 100TX Ethernet

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