

TL300

TelliCast V2.6

Tellitec Product Family

— tellitec —

Description

TelliCast is a multicast distribution software platform for the reliable distribution of files, directory structures and data streams for various applications. It consists of a server package combined with a set of software clients that can be installed on computers or embedded into a variety of receiver devices.

Multicast allows content to be distributed to a large number of recipients with only one single transmission. Multicast enables the transfer of a variety of services in the most economical way and is therefore especially important for satellite network operators because fast and bandwidth-efficient content distribution is one of the main factors for success in today's fast growing global markets. TelliCast is the ideal foundation for any reliable multicast data distribution system and designed to support a broad range of point-to-multipoint applications. It offers a proven, ready-to-use technology with a comprehensive range of capabilities. At the same time TelliCast is fully customizable and can easily be adapted to fit the increasing complexity of communication networks. TelliCast is therefore targeted at leading service providers, system integrators and telcos.

TelliCast is a highly reliable product and has a track record of more than 100,000 distributed copies world-wide.

Key Features

- Quick and easy integration
- Supports multicast and unicast content distribution
- Hardware independent design
- Highly efficient channel and priority-based bandwidth management mechanisms
- Comprehensive scheduling features
- Central playout control
- On-the-fly compression, forward error correction and encryption technologies

Main Advantages

- **High Transmission Reliability**, thanks to transparent content fragmentation, state of the art error correction algorithms and retransmission optimization.
- **High Bandwidth Efficiency**, based on a flexible and dynamic multi sub-channel concept that shares bandwidth according to a priority scheme and a guaranteed bandwidth allocation mechanism.
- **Reduced Channel Cost**. Content owners can select the most cost-effective distribution and return channel for each receiver and in case no feedback is required, the system also works without any return channel.
- **Content Protection** assured by encryption algorithms, built-in conditional access and the support of hardware keys to ensure strict privacy.
- **High Degree of Automation**. All transmission, content management and playout options are centrally managed from the server side and can be fully automated.

Applications

TelliCast is based on standard IP multicast and the MTP/SO protocol and can therefore be used over a wide range of communication networks. This includes uni-directional and bi-directional satellite connections, cable TV networks, xDSL or in general all networks supporting IP multicast, including the Internet. TelliCast has been specifically designed for, and is in use by leading service providers for offering the following services:

- Digital signage
- Electronic cinema
- Hotel movie services
- Meteorological data dissemination
- Digital media streaming
- End-consumer content push services
- Remote software updates

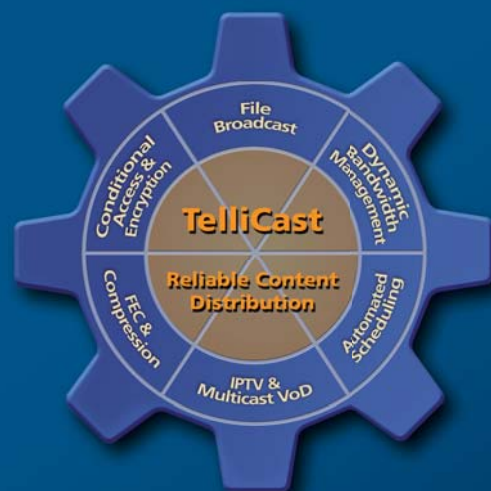
Related Products

TL 350 DirMon: Workflow automation tool for TelliCast

MENOS: Platform for the satellite contribution and distribution of live radio signals in professional broadcast networks

Related Documents

TL300/APN01 Application note on digital signage



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Specifications - TL300

System Architecture

- Server-to-Client architecture
- Based on IP multicasting technology (RFC 1112) and the MTP/SO protocol (based on RFC 1301)
- Supports point-to-multipoint (star) network topologies
- Operates in uni-directional (no return channel needed) as well as bi-directional networks
- Uses uni-directional IP multicast based control channel for the announcement of transmissions, invitation of receivers, distribution of encryption keys

Supported Content

Files:

- Single or multiple files (up to 200 GByte per file)
- Supports atomicity like directory replications and automatic program execution after reception for example used for remote software updates

Streams:

- Various IP streams including live audio and video as well as stock market tickers
- TCP, unicast UDP or multicast UDP as input on server side
- TCP, unicast UDP or multicast UDP as output on client side

Data Compression

- Supports on-the-fly payload compression
- Selective compression on a per-channel basis
- Deflate compression algorithm (RFC 1951) with average compression savings of 30 %

Security

- On-the-fly Blowfish encryption
- Available key length: 56 bits (default, export version) up to 448 bits (optional, on request only)
- Selective encryption on a per-channel basis
- Configurable re-keying intervals
- Authentication based on software or hardware

Transmission Scheduling

- Supports automated operation using drag and drop "hot folders"
- Single, multiple and carousel transmission mode
- Immediate and scheduled execution of transmissions

Transmission Reliability

- On-the-fly stream forward error correction (FEC) supporting XOR and Vandermonde algorithms
- NACK based packet retransmissions
- Client side caching of partially received content
- Job continuation after system failover or reboot
- Gap filling of incomplete files during retransmissions
- Classification of receiver types (e.g. must-receive)

- Flexible retransmission thresholds (e.g. in order to prevent that retransmissions are forced by a "buggy" receiver)
- Central recording of reception quality (i.e. which files/blocks were received by which receiver)

System Interfaces

- Local or network file systems
- TCP/IP based interfaces

Management

- Based on virtual channel concept with multiple transmission sub-channels per IP multicast address
- Supports Committed Information Rate (CIR) and maximum information rate (MIR) per channel
- Supports channel groups for bandwidth segmentation
- Support for transmission prioritization in suppress or cooperative mode
- Provides near-real-time delivery due to on-the-fly processing

System Management

- ASCII based configuration files for automated system configuration
- Web-based configuration
- Web-based interface for live monitoring
- Logging with automatic log rotation
- Supports e-mail based error notifications
- Supports file or RADIUS based data accounting and receiver authorization

Performance*

- Cumulative throughput up to 80 Mbit/s
- Up to 100 concurrent data channels

Supported Hardware Platforms**

- Intel Pentium and compatible
- Intel XScale and StrongARM (optional, only available on request)
- MIPS (optional, only available on request)
- PowerPC (optional, only available on request)

Supported Operating Systems**

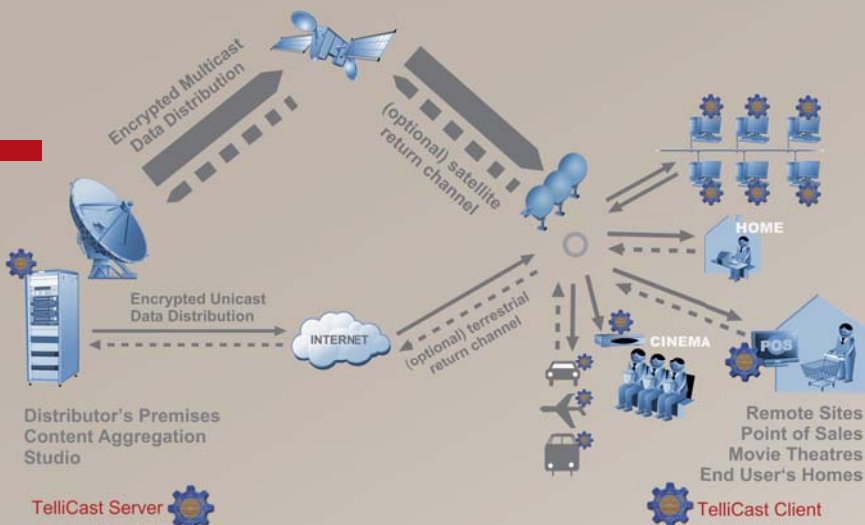
- Linux (Kernel 2.4.x to 2.6.x)
- Windows 2000, XP, Vista and 2000/2003 Server
- Mac OS X for Intel Pentium CPUs

Ordering Information**

| | Ordering number |
|---|---|
| TelliCast Server For consumer services, one-way satellite services | TL-310 LIN |
| TelliCast Server For enterprise services, i.e. professional datacasting applications | TL-320 LIN |
| DirMon Workflow automation tool for TelliCast | TL-350 |
| TelliCast Client For consumer services, one-way satellite services | TL-370 WIN TL-370 LIN TL-370 MAC |
| TelliCast Client For enterprise services, i.e. professional datacasting applications | TL-380 WIN TL-380 LIN TL-380 MAC |

TelliCast Server/Client Ordering Options**:

| ENTRY | CLASSIC | EXTENDED |
|---|---------|----------|
| File Broadcast Data Streams | | |
| On-the-fly Compression Conditional Access plus USB Dongle Support | | |
| TelliVision Multicast Video-on-Demand News Broadcast Offline E-Mail Notification Web Broadcast | | |



* Tested on the following system: Intel® Core™ 2 CPU 6400 @ 2.13 GHz, 2 Gbyte RAM, Debian Linux 4.0 (Kernel 2.6.18-4-686 SMP)

** Others on request

| Europe | North-America | South-America | Asia-Pacific | China | MENA | Africa |
|--|--|--|--|--|--|---------------------------------------|
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