UDcast

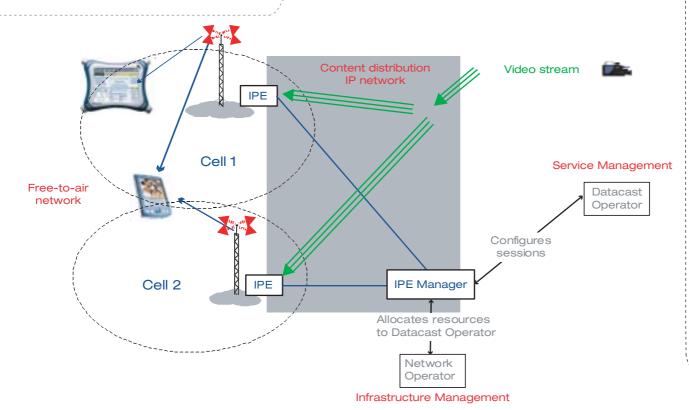**Full IP over BROADCAST Media**

DVB-H IPE

+ TV to mobile IP Encapsulator
+ DVB-H standard compliant
+ Multi-cell design

Content distribution IP network

Video stream

IPE

Cell 1

Free-to-air network

Service Management

Datacast Operator

Configures sessions

Cell 2

IPE

IPE Manager

Allocates resources to Datacast Operator

Network Operator

Infrastructure Management

DVB-H IPE

Advanced DVB-H IP encapsulation

+ **Time slicing enforcement**
+ **IP FEC**
+ **QoS management**
+ **IPsec encryption**
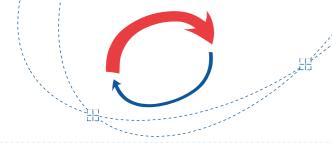+ **Handover support**

01 ⬡ Description

UDcast's industry first fully DVB-H standard compliant IPE is an important network infrastructure element needed for the delivery of digital TV to mobile devices.
In order to cost-effectively and reliably deliver content such as live television to a large number of mobile devices, service providers must address the issues of scalability and mobility. At the same time, device power consumption, mobile and indoor reception are a concern. UDcast's IPE addresses these issues in a shared infrastructure environment.

The IPE is fully compliant with the DVB-H standard implementing all the required functionality, as well as valuable optional features, ensuring the reliable delivery of digital content. In particular UDcast's IPE includes time slicing technology maximizing battery life and reducing the impact of the power intensive delivery of TV to mobile devices. It involves sending data in bursts, enabling the handset to shut down the receiver between bursts thereby minimizing power consumption and preserving battery life. Furthermore radio impairments, characteristic of mobile environments, are mitigated by the IPE's forward error correction mechanisms.

The IPE is the first to deliver sophisticated head-end functionality, including IPE management, security, quality of service enforcement, and support for handover from cell to cell.

02 ☐ Features / Benefits

+Full DVB-H compliance
- Fully compliant with the DVB-H standard bringing full interoperability
- Includes all DVB-H optional features ensuring full functionality

+Unique time-slicing technology
- Full stream management with buffering and bursting
- Mobile terminal power savings

+Standard DVB-H IP Forward Error Correction
- Radio impairments mitigation
- Reliable content delivery

+Full head-end functionality
- Network management
- Security management with encryption
- Cell to cell handover support

+Adapted QoS
- Dynamic bandwidth allocation with 3 levels of QoS
- Policy enforcement points: Bandwidth enforcement on a per service or session basis according to the configuration of the service

IPE Manager

+ Product companion
+ Network management system to manage an installed base of IPEs (group management) with full control over:
  - Bandwidth allocation
  - Encryption management
  - Seamless handover

03 ☐ Specifications

+IP features
- QoS enforcement using HFSC policy
- IPv6 encryption
- Multicast IPsec
- IPv6/MPE FEC encapsulation
- SI/PSI table generation
- Time slice enforcement on the ASI interface
- Any source & source specific multicast
- Loss free handover between different cells
- Downstream DVB network jitter compensation
- Support of FEC signalling

+Administration features
- CLI administration interface for configuration
- Alarm management
- Central management from IPE Manager

+Hardware Specifications
- Casing: 19" x 2U x 610 mm
- Power supply: autoswitch 110/240 VAC
- Motherboard: socket 478 - 2 PCI, 2 IDE with optional bi-processing
- CPU: Intel® Celeron™ 478 1.8 GHz with options for Intel® Pentium™ IV 2,2 GHz
- RAM: 256 MB DDR ECC with options for 2 GB
- Hard disk drive: 40 GB, options for 3 raid mounted IDE disks

+Network interfaces
- Ethernet 2x 10/100 base-T NIC
- ASI board: Computer Modules DVB Master 2 TX
- I/O connectors: standard connectors for display, PS/2 keyboard, 2 serial slots

UDIPEN-DOC-0904