

# IPNET VISION™ HD/SD Hybrid DVB-C/IPTV Set Top Box

Model

## HYBRID STB



The **IP-NET VISION HD HYBRID DVB/IPTV set-top-box** is an innovative, complete, full featured, manageable, and performance optimized advanced DVB/IPTV hybrid platform that can receive and process rich digital media content via cable and broadband IP networks. Bi-directional functionality and signal transport is possible via Ethernet, WiFi, and DOCSIS options. DVB-S and DVB-T options are also available.

This Linux based and modular architecture media platform integrates all of the required DVB and IPTV technologies to securely access and share multiple types of digital media content including advanced decoding such as MPEG-2, H.264, VC1, Standard Definition TV (SDTV), and High-Definition TV (HDTV).

With the **VISION HD HYBRID** set-top-box users can enjoy live TV, video on demand (VOD), movies, music, Email, web browsing, photos, games and many more interactive TV services through cable and IP networks.

The **VISION HD HYBRID** is a powerful and flexible Hybrid STB platform which allows various middleware, browser, streaming server, CA and DRM systems to be integrated quickly and easily. In conjunction with the IP-NET VISION headend system it delivers cost savings and time to market advantages for receiving DVB-C/S/T digital TV and providing broadband access for multimedia, entertainment and communication applications.

## Features:

- Advanced single chip Solution from Broadcom (7400 series)
- Embedded Linux operating system
- Fully DVB-C compliant
- MPEG-2 and MPEG-4/AVC reception
- SDTV and HDTV
- HDMI™ interface with HDCP copy protection
- Advanced Graphical User Interface navigation via browser
- Advanced EPG and rich interactive services
- EPG function, support PIG (Picture in Graphics) display
- Multi-language supported
- Automatic fast channel installation
- Parental lock control
- Supports various commercial DRM with build-in AES/1DES/3DS/C2/CSS engines
- Support TR-069 management protocol
- Software is remotely upgradeable by multicast, HTTP, FTP and TFTP or Over-the-Net
- 160 or 250GB hard disk drive (Option)
- Modular Upgradeable HW Architecture (IPTV STB, DVB Tuner, and MODEM boards)

## Technical Specifications

### Hardware Features:

#### CPU & Memory

- CPU: 450 MIPS (Broadcom 7401) or 1100 DMIPS (Broadcom 7405)
- RAM: Standard 200 MHz 128 MB DRAM/DDR Std(Max 256MB)
- Flash: 64 MB Std (Max 256 MB)

#### Rear Panel

- HDMI™ digital video output
- YPbPr component video output: 3xRCA
- Composite video output (1xRCA)
- S-video output: 4-pin DIN
- TV SCART (Optional)
- Stereo audio output: 2xRCA
- Optical digital audio output (S/PDIF)
- RF Input: F-type interface (75Ω)
- RF Pass-thru Output for analog channels
- RF NTSC Channel ¾ modulator
- Ethernet: RJ-45 10/100 Base-T
- Two USB 2.0 port

#### Front Panel

- LED: Two LEDs
- Front panel display
- Infrared (IR) receiver
- One Smartcard slot: ISO7816 (Optional)
- One USB2.0 (Optional)
- Function keys: 7- keys included  
Up, Down, Left, Right, Ok, Menu, Stand by/Power

#### General Data

- External power supply
- AC input voltage: 90 - 264 V, 50/60 Hz
- Power consumption: less than 15W
- Dimensions: 260x230x54 mm
- Net Weight: 1.2 kg.
- Operating temperature range +5 to +40(°C)
- EMI certification: FCC, CE, 3C
- Safety certification: UL & CSA compliance
- RoHS
- One-year warranty

#### Accessories

- IR remote control (Standard)
- Wireless Keyboard (Optional)
- Composite video & stereo audio cable (1.5m)
- SCART cable (Optional)
- HDMI™ cable (1.2m) (Optional)
- User manual

#### DVB-C Parameters

- Frequency range: 48-870 MHz
- Demodulation: 16/32/64/128/256QAM
- Input level: -10 to +20 dBmV (64QAM)
- Input impedance: 75Ω, F type
- C/N access condition:
  - ≥ 25dB (64QAM)
  - ≥ 30 dB (256 QAM)
- Frequency acquisition range: +/- 200KHz
- Band width: 6 or 8MHz (Specify)
- Symbol rate: 3.6~6.952 Mbaud

#### TCP/IP Connectivity Options:

- 10/100 BaseT Ethernet (Standard)
- 802.11b/g WiFi (Option)
- Built-In DOCSIS 2.0/3.0 compatible modem module (Option)

### Video, Audio and Picture Features:

#### Video Decoding and Processing

- MPEG-2 MP@ML (SD) and MP@HL (HD)
- MPEG-4/AVC MP@L3 (SD) and MP@L4.1(HD)
- VC-1 advanced profile @level 3, simple and main profile
- Video format 4:3, 16:9 with Pan Scan, Letterbox
- HDTV output resolutions: 720p/1080i
- SDTV output resolutions: 480i/480p/576i/576p
- Up-scaling of SD video on HD output
- Downscaling of HD video on SD output
- Analog NTSC/PAL video output

#### Audio Decoding and Processing

- AAC- LC
- HE-AAC Plus v1
- HE-AAC Plus v2
- WMA
- MPEG1 Layer 1,2
- MPEG1 Layer 3 (MP3)
- Dolby Digital

#### Picture Decoding and Processing

- JPEG
- BMP
- PNG
- TIFF
- GIF

## Software Features:

### OSD

- Color: 32-bit true color
- Alpha blending: 256 levels
- Graphic: Supports 2D graphic acceleration
- (Graphic Use Interface)

### OS

- Embedded Linux 2.6 operating system

### DVB-C

- Receives high bandwidth content via DVB-C QAM channels
- Set up menu
- Advanced EPG
- Automatic channel installation via scanning
- Channel configuration: Channel user definition, favorite channel configuration, etc.
- DVB-S and DVB-T Options are also available

### Network Communication Protocol

- IP protocol: TCP/IP, UDP, TFTP, FTP, HTTP
- IP address setup: DHCP, PPPoE and Static-IP
- Multicast: IGMP v1/2/3, TS over UDP, TS over RTP
- Transport and streaming media protocol: RTP/RTCP/RTSP/SDP
- Network management: SNMP and TR-069

### Browser (ANT Fresco, ANT GALIO or Oregon Advanced Browser)

- Supports HTML 4.01
- JavaScript 1.5
- Oregon Advanced TV Browser with customizable XHTML / AJAX UI and FLASH Support for functions of STB

### DLNA

- DLNA 1.5 Home Media Networking Module Certified Digital Media Player, Digital Media Renderer and Digital Media Control Point stack with customizable XHTML / AJAX UI

### Language Input

- Supports English, Alpha numeric digits and symbols input & display
- Supports Unicode
- Supports truetype fonts

### Middleware Options

- IP-NET VISION
- Alcatel OMP
- DigiSoft
- Sentivision
- Nextvision

### Security and DRM

- DRM: AES/1DES/3DES/C2/CSS, or customized DRM
- DRM: Verimatrix, Widevine, SecureMedia
- Selection of Conditional Access (Option)

### System Maintenance

- TR-069 based Management
- Software upgrade: remote upgrade via Internet (automatic and manual upgrade) or Loaded from Over-the-Air upgrade,
- RS-232 upgrade/diagnostic: S/W, F/W upgrade,
- Self-diagnostic, Signal test
- M&C: management via Ethernet port and embedded management engine
- Remote troubleshooting

### PVR Options

- STB HDD PVR options are available in 160 GB and 250 GB
- Network PVR options are available

### Housing & Packaging

- Housing Colors, Finishes and Logo and Packaging Options may be available

### NOTES:

- Hardware is configurable for each project's requirements
- Software is configurable for each project's requirements
- Audio and Video codecs are selected based on customer's requirements.
- Final Pricing is based on specific customer requirements. Not all features are included nor do all features need to be included.
- Most functions or options have dependencies on headend equipment and options
- Specifications subject to change without notice to improve product.
- Spec Sheet Update Date 9-29-08