Block Diagram

Main Feature

- End to end solution with DVB-IP streamer, IPTV encoder, Stream server, VoD server, Service platform, terminals, APK, MMI design
- Support Internet and Intranet
- Live TV Radio, VoD, MoD, EPG, Advertisement and Message push
- Video format MPEG-2/MPEG-4AVC/H.264 SD/HD, HEVC 4K,
- Audio format MPEG1 Layer II, MPEG2/4 AAC-LC, Dolby AC3 path through
- DRM for content protection
- Multi-protocol streaming: UDP, RTSP, RTMP, HTTP, HLS, FTP
- Trans-coding with adaptive bit rate for different IP networks
- Cloud PVR, EPG PVR, Timer PVR
- Service Platform for TV Radio service bouquet building and subscriber management
- APK for Android and iOS multi-terminals: STB, Smart Phone, PAD

IPTV/OTT Streamer and Delivery Station

DS-160

- Based on the powerful x86 PC server with Linux operating system
- PCI satellite, terrestrial tuner and encoder input cards
- DVB to IP streamer with demux MPTS to STPS IP streams
- TV and VoD content delivery streaming in HLS format
- Trans-coding H.265, H.264 and MPEG2 assisted by powerful GPU card
- Private DRM for content protection, managed by TMS-100
- Adaptive trans-coding in option
DVB-IP Streamer

DCP-3000, DCP-1000, DXP-3800D, DXP-8000D

- 1RU rack with dual power supplies
- Removable cooling fan assembly with alarm & speed control
- Control & Management by Front Panel Menu, Web and SNMP
- 4-24 Way DVB-S2, T2 and C tuner inputs
- CI card with 4 CAM slots to descramble pay TV channels
- 2 TS/IP SFP ports with max 920Mbps output for each port in IGMP v2/v3
- Up to 512 MPTS/SPTS TS/IP outputs,
- Main board with strong TS processing demux and remux
- Optional encoder, trans-coder cards

H.264 IPTV Trans-coder

DIH-4000V

- Video compliant with H.264/AVC Baseline, Main & High Profile @ L4.1 or less & MPEG-2 MP@ML
- Up to 4 way H.264 HD or 16 way H.264 SD trans-coding
- Audio compliant with MPEG-1 Layer II Audio, MPEG2 AAC trans-coding
- Support audio pass thru including Dolby AC+ and Multi-audio tracks
- Real time input program bit rate monitoring, TS packet error counter, PSI/SI analysis and CPU resource and temperature monitoring
- Supports TV channel demuxing and re-multiplexing
- Real time output trans-coding statistical report including bit rate, network data path, etc
- Separated TS/IP stream ports and system management port to ensure system security
- PCR self-correction
- PSI/SI edition and PID pass through
- Channel logo and message insertion
- Support 1+1 input stream backup for redundancy
- Remote management with Web GUI
- 3GbE, 2 for TS over IP streams, 1 for system management
- Single power supply, 1RU

H.264/H.265 IPTV Trans-coder

DIH-6000V

- Video compliant with H.265/HEVC Baseline, MainProfile@L6.2 or less, H.264/AVC Baseline, Main&HighProfile@L5.1 or less
- H.265/HEVC support 1 way 4K, 8 way HD in 1080P, 16-way HD in 720P and 32-way SD
- H.264/AVC support 16 way HD in 720P and 32 way SD
- Resolution from 96 x 96 to 4096 x 2160
- Input and output bit rate from 200Kbps to 20Mbps
- Support audio pass thru including Dolby AC+ and multi-audio tracks
- PCR self-correction
- PSI/SI edition and PID pass through
- Up to 200 MPTS/SPTS output, 100Mbps for each
- Channel logo and message insertion
- Support 1+1 stream input for redundancy
- Remote management with Web GUI
- 3GbE, 2 for TS over IP streams, 1 for system management
- Single power supply, 1RU, double power supply in option
IPTV Media Delivery Streamer

**MS-8001-B/S/P**

**Main Feature**
- Powerful media processing and streaming platform in 1RU rack
- CPU and memory and IP port refer to the configuration table below
- 4 GbE for data input and output configurable, 1 input/3 outputs as standard configuration
- Embedded TS demux to split MPTS to SPTS with TV channel management, bandwidth, service ID, service name, etc
- UDP/RTSP/RTMP/HTTP/HLS/FTP IP stream inputs, maximum 800Mbps per GbE
- H.264/MPEG/HEVC TV channel formats
- HLS/RTMP live TV channel streaming output
- HLS/RTMP VOD channel streaming output
- VOD service extension by external server via FTP
- Up to 500 live channels SD @2Mbps
- 2000 hours movies
- Support maximum 5000 users
- DRM en-cryptor for TV content protection, operating with TMS-100 for turn key DRM solution
- Catch TV and PVR via external NAS

<table>
<thead>
<tr>
<th>Profile</th>
<th>Basic</th>
<th>Standard</th>
<th>Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>MS-8001-B</td>
<td>MS-8001-S</td>
<td>MS-8001-P</td>
</tr>
<tr>
<td>CPU</td>
<td>Quad core 1.8GHz</td>
<td>1 x Intel Xeon 2.0GHz (8 core 16 threads)</td>
<td>2 x Intel Xeon 2.0GHz (8 core 16 threads)</td>
</tr>
<tr>
<td>RAM</td>
<td>4GB RAM</td>
<td>16G RAM</td>
<td>48G RAM</td>
</tr>
<tr>
<td>ROM</td>
<td>120G SSD</td>
<td>4TB (Enterprise-Level)</td>
<td>2 x 4TB (Enterprise-Level)</td>
</tr>
<tr>
<td>IP Port</td>
<td>2 x 10Gbe</td>
<td>4 x GbE</td>
<td>2 x 10Gbe and 2 x GbE</td>
</tr>
<tr>
<td>Live TV</td>
<td>50 channels @ 2Mbps</td>
<td>200 channels @ 2Mbps</td>
<td>500 Channels @ 2Mbps</td>
</tr>
<tr>
<td>VOD</td>
<td>60 hours of Movies @ 2Mbps</td>
<td>500 hours of Movies @ 2Mbps</td>
<td>2000 hours of Movies @ 2Mbps</td>
</tr>
<tr>
<td>No. of Client</td>
<td>200 users @ 2Mbps</td>
<td>1000 users @ 2Mbps</td>
<td>5000 users @ 2Mbps</td>
</tr>
<tr>
<td>Dimension</td>
<td>1344x1244x486mm</td>
<td>1U , 445 (W) x 650 (D) x 440 (H) mm</td>
<td>1U , 445 (W) x 650 (D) x 440 (H) mm</td>
</tr>
</tbody>
</table>

IPTV Content and Subscriber Data Server

**TMS-100-B/S/P**

**Main Feature**
- Content, subscriber management system, hotel information, EPG in 1RU rack
- Inter Xeon 4 core 8 threads CPU, 32GB RAM, 512GB SSD ROM and 2 GbE ports
- Remote Management by HTTP/HTTPS protocol
- Channel management system (CMS) can synchronize and input TV and VoD channels from IPTV Live and VOD Delivery Streamer
- Channel management system (CMS) with edition of program name, association of logo and generation the TV bouquet, VoD bouquet
- Propriety DRM for TV content protection, operating with MS-8001 for turn key DRM solution
- Authorization management system (AMS) can manage up to 5000 subscribers with open close of subscriber’s account, allocation of TV and VoD bouquet to each subscriber
- Authorization management system (AMS) can manage multiple terminals, STB, smart phone, PAD and PC
- TV channel EPG edition and generation
- Message and advertisement push
- Hotel information management
- Prepaid card management

<table>
<thead>
<tr>
<th>Profile</th>
<th>Basic</th>
<th>Standard</th>
<th>Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>TMS-100-B</td>
<td>TMS-100-S</td>
<td>TMS-100-P</td>
</tr>
<tr>
<td>CPU</td>
<td>Quad core 1.8GHz</td>
<td>Intel Xeon 3.2GHz (4 core 8 threads)</td>
<td>Intel Xeon 3.2GHz (4 core 8 threads)</td>
</tr>
<tr>
<td>RAM</td>
<td>4GB</td>
<td>6GB</td>
<td>32GB</td>
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<tr>
<td>ROM</td>
<td>64G SSD</td>
<td>128G SSD</td>
<td>512G SSD</td>
</tr>
<tr>
<td>IP Port</td>
<td>2 x GbE</td>
<td>2 x GbE</td>
<td>2 x GbE</td>
</tr>
<tr>
<td>Protocol</td>
<td>HTTP, HTTPS</td>
<td>HTTP, HTTPS</td>
<td>HTTP, HTTPS</td>
</tr>
<tr>
<td>No. of Client</td>
<td>200</td>
<td>1000</td>
<td>5000</td>
</tr>
<tr>
<td>Dimension</td>
<td>1344x1244x486mm</td>
<td>1U , 445 (W) x 550 (D) x 440 (H) mm</td>
<td>1U , 445 (W) x 550 (D) x 440 (H) mm</td>
</tr>
</tbody>
</table>
IPTV/OTT STB
TimBox-IP, G908

Main Feature
- Android 7.0 Operating System
- ARM Cortex 7 1.5GHz Quad CPU
- Mali-450 quad core GPU for 3D graphics processing
- MPEG2/H.264/H.265, H.264, AVS+, MPEG1,2,4,VC-1,VP6/8 video decoding
- MPEG L1/L2,AAC-LC,HE AAC V1/V2, Dolby in option audio decoding
- Support SD/HD up to 4k@60fps 10-bit high resolution
- IP stream input thru RJ-45 and 2.4G WiFi
- HDMI digital, CVBS analog outputs
- Airplay, Miracast, DLNA DMP(Digital Media Player) technologies
- Private DRM for audio video content protection
- Managed by PBI IPTV/OTT service platform TMS-100:
  1. Live TV channel streaming
  2. VOD streaming
  3. EPG, Message push, advertising
  4. Subscriber management
  5. Channel bouquet management

Specification

<table>
<thead>
<tr>
<th>System</th>
<th>details</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Android7.0</td>
</tr>
<tr>
<td>CPU</td>
<td>ARM CortexA7, up to 1.5GHz</td>
</tr>
<tr>
<td>EMMC Flash</td>
<td>4GBbyte or 8GBbyte</td>
</tr>
<tr>
<td>DDR3</td>
<td>1GBbyte or 2GBbyte</td>
</tr>
<tr>
<td>Video &amp; Audio Decoding</td>
<td>MPEG 1/L2,AAC-LC,HE, AAC V1/V2, APE, FLAC, Ogg, AMR, AMR-WB, Dolby in option</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interface</th>
<th>details</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED</td>
<td>Power (Orange/Green, Ethernet (Red/Green), Infra Red/Blue)</td>
</tr>
<tr>
<td>HDMI OUT</td>
<td>1 x HDMI, Version 1.4a, HDCP1.2</td>
</tr>
<tr>
<td>Infra Red</td>
<td>Remote control</td>
</tr>
<tr>
<td>S/PDIF</td>
<td>Optical</td>
</tr>
<tr>
<td>ETHERNET</td>
<td>RJ-45 10/100M Base-T</td>
</tr>
<tr>
<td>USB</td>
<td>2 x USB2.0</td>
</tr>
<tr>
<td>IR Extender</td>
<td>IR Cable (3.5mm phone jack type)</td>
</tr>
<tr>
<td>RESET</td>
<td>For STB reboot</td>
</tr>
<tr>
<td>WIFI</td>
<td>802.11b/g/n/2.4G</td>
</tr>
<tr>
<td>Power Supply</td>
<td>DC Input 12V/3A, &lt;24W</td>
</tr>
<tr>
<td>Power Control</td>
<td>Push type button</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Software</th>
<th>details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td>Multi languages, Multi templates for different operator and customization</td>
</tr>
<tr>
<td>Service</td>
<td>Live TV, VOD, EPG, Message push, advertising</td>
</tr>
<tr>
<td>Multi screen</td>
<td>Airplay, Miracast, DLNA DMP(Digital Media Player) technologies</td>
</tr>
<tr>
<td>Content Management</td>
<td>Managed by PBI Service and Data Server, TMS-100 Content Synchronization with PBI Media Delivery Streamer, MS-8001 TV bouquet, VOD creation, classification, supervision EPG, Message and advertisement edition, generation, pushing</td>
</tr>
<tr>
<td>Subscriber Management</td>
<td>Managed by PBI Service and Data Server, TMS-100 Subscriber creation, personal information edition Purchase of services by subscribers Management of subscriber right, start and end date. type of service Multi terminal management: STB, smart devices, rooms Electronic money coin management</td>
</tr>
<tr>
<td>Supervision</td>
<td>Terminal administration information management Terminal technical information management</td>
</tr>
<tr>
<td>DRM</td>
<td>Private content video audio content protection system in operation with PBI Media Delivery Streamer, MS-8001-B/S/IP PBI Service and Data Server, TMS-100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physicals</th>
<th>details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>Work Temperature: 5<del>45°C Storage Temperature: -10</del>65°C</td>
</tr>
<tr>
<td>Net Weight</td>
<td>About 300g</td>
</tr>
<tr>
<td>Net Dimension</td>
<td>120mm(L) x 220mm(W) x 20mm(H)</td>
</tr>
</tbody>
</table>

Note: All specifications are subject to change without notice
IPTV/OTT System in 2U Rack

- **Starter Kit:** 200 Subscribers, 50 TV Channels, 10 Films, 100 Musics, Messages, EPG and Ads push in option.

- **APK**
  - APK for Android and iOS
  - Smart TV
  - Smart Phone
  - Android STB

- **Application**
  - Residence
  - Hospital
  - Hotel

- **Sales Business Model:** Very Low cost ownership.

- **Location Business Model:** pay only hardware, Go and pay for software licenses.