Comedia targets DVB broadcast Set-Top Boxes, and is closely merged with iWedia’s Maestro application engine.

Comedia 3.0 is agnostic with respect to applications engines and adds connectivity features for hybrid Set-Top Boxes.

Comedia 4.0 extends the support to ATSC and analogue TV (PAL/SECAM and NTSC), and targets both hybrid Set-Top Boxes and Smart TVs.

All Comedia editions come with a Personal Video Recorder (PVR) option.

Features

- Versatile
  - Embedded within various SD and HD devices (set-top boxes, integrated digital TV sets, personal video recorders, etc.)
  - Deployed over various networks (cable, satellite, terrestrial)
  - Integrated with various security solutions (embedded Conditional Access Systems, DVB-Clv1, CI Plus)
  - Ported on top of various chipsets (Marvell, Neotion, STMicroelectronics, Trident/NXP, etc.)
- Easy to port: relies on the Comedia Hardware Abstraction Layer (CHAL) driver-level API
- Easy to integrate: exposes the Application Abstraction Layer (AAL) service-level API
**Comedia TV and STB middleware**

**DVB features**
- DVB SI engine compliant with EN 300 468, TS 101 211, TS 101 162
- Transmission: DVB-S/-S2/-T/-T2/-C
- Zapper features: installation, service management, favourite list management, configuration, parental control and channel lock, multi country and multi language support
- Events management compliant with EN 300 468, TS 101 211 and TS 101 162:
  - Now and next,
  - Electronic Service Guide (ESG),
  - 7-day Electronic Programme Guide (EPG)
- Subtitles engine compliant with EN 300 743 with support of:
  - DVB SD and HD subtitles
  - Teletext subtitles
- Teletext engine compliant with EN 300 472 with support of:
  - Level 1.5 and 2.5
  - TOP and FLOF modes
- Software upgrade engine compliant with TS 102 006 with support of:
  - Over-the-air download
  - Serial download
  - Download over USB
- DSM-CC client (compliant with ISO/IEC 13818-6 Part 6:Extensions for DSM-CC) ready to be integrated with:
  - iWedia MHEG-5 and HbbTV software components
  - Other 3rd party software

**PVR features**
- Recording
- Time shifting
- Pause & resume a live stream
- Watch & record
- Playback & dual recording
- Instant recording
- Scheduled recording (manual, via EPG)

**ATSC features**
- ATSC engine compliant with A/53 and A/72
- PSIP management (MGT, STT, VCT, RRT, EIT, ETT, DCCT, DCCSDT) compliant with CEA-C8B
- Modulation: 8VSB (terrestrial), QAM (cable)
- Parental control (V-Chip, RRT) compliant with CEA-766-C
- Closed Caption compliant with CEA-608-E, CEA-708-D

**Analogue TV (ATV) features**
- PAL/SECAM color standard stack compliant with ETSI 300731 and ETSI 300731
- NTSC color standard stack compliant with EIA-608-B and EIA-608-E
- VBI data management:
  - Teletext compliant with ETS 300708,
  - Closed Caption compliant with CEA-608
  - PDC compliant with ETSI 300231
  - VPS compliant with TS 101231
  - WSS compliant with EN 300294
- Country and Network Identification (CNI) compliant with TS 101231
- Automatic channel installation (ACI) compliant with EN 50203
- Audio/Video switch management
- Display modes: full screen, Picture in Picture (PiP), Picture and Picture (PaP), Picture and Text (PaT)
- HDMI CEC stack
- Audio control (speaker settings)
- Video control (panel settings)

**IPTV features**
- "Virtual IP tuner" support for IP services installation, management and playback
- Cisco VQE client
- Fast Channel Change (FCC)
- Transmission Error Repair (RET)

**Deliverables**
- Comedia software stack generated as a library on Customer environment (delivery of source code is an option)
- Driver-level API (Comedia Hardware Abstraction Layer - CHAL): API documentation, reference implementation (in ANSI C source code)
- Service-level API (or AAL - Application Abstraction Layer): APIs documentation
- CHAL test application (in ANSI C source code)
- Integration guidelines
- Validation Test Plan
- Reference system demonstrating Comedia features (reference application running on reference platform)

<table>
<thead>
<tr>
<th>Product name</th>
<th>Supported standards</th>
<th>Target device</th>
<th>Minimum processing power [DMIPS]</th>
<th>Platform OS</th>
<th>App/UI engine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comedia 2.0</td>
<td>DVB</td>
<td>Broadcast STB</td>
<td>400</td>
<td>Agnostic</td>
<td>Agnostic</td>
</tr>
<tr>
<td>Comedia 3.0</td>
<td>DVB</td>
<td>Hybrid STB</td>
<td>800</td>
<td>Agnostic</td>
<td>Agnostic</td>
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<tr>
<td>Comedia 4.0</td>
<td>DVB ATSC PAL/SECAM NTSC</td>
<td>Hybrid STB Connected TV</td>
<td>1000</td>
<td>Agnostic</td>
<td>Agnostic</td>
</tr>
</tbody>
</table>

**Licenses**