

# BEEHD Cross-Platform Video Client Solution

The Softil BEEHD Client Framework offers chipset vendors, device manufacturers, system integrators, application developers and service providers an out-of-the-box, IP-based Voice and Video (V2oIP) communication solution that is suitable for any platform. By using its intuitive and flexible APIs, developers can easily enhance their applications with standards-based SIP, IMS, and H.323 protocol support, provide high quality Audio and Video, protect data with Authentication and Encryption, and provide value-added presence, Instant Messaging group chats, and more.

## Reducing Complexity

Developing a V2oIP and VoLTE/ViLTE (Voice and Video over LTE) client can be a tedious task: various standards requirements, support of multiple signaling protocols, media codecs and processing algorithms, security aspects and additional features all need to be integrated into the device - a handful for any developer. Softil's BEEHD solves this problem by providing a complete, pre-integrated solution that enables our customers to focus on the application and the UI while enjoying the benefits of using a complete client framework that can be easily modified and customized.

## The BEEHD answers the needs of

- ODM/OEM and device manufacturers that want to add video communications capabilities to their products
- Service Providers looking to offer VoLTE and RCS and video calling clients
- Chipset vendors pursuing a pre-integrated VoIP, VoLTE and RCS solution for their chipsets
- Application developers wanting to add VoIP to their applications
- Solution providers and integrators that want to develop Public Safety and Mission Critical Communication clients
- System integrators looking for a complete client solution to easily integrate into their system
- Contact centers looking to enhance their reachability and strengthen their engagement with customers
- The enterprise market for soft video and voice clients

## Highlights

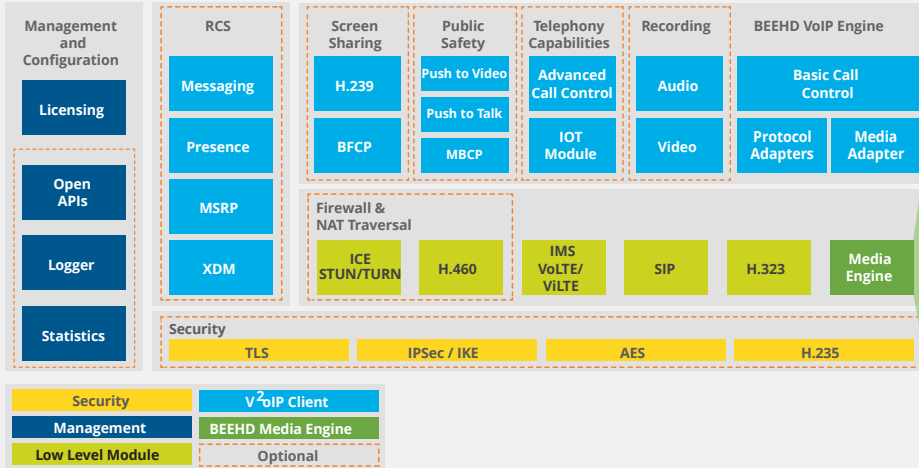
- **Ready-to-use, multi-platform client engine:** The framework is highly integrated and consists of signaling, call control, and media.
- **Shortest TTM (time-to-market):** Reduces development, integration, and testing cycles usually required when creating video communication clients.
- **Highest Quality of Experience:** Utilizes advanced algorithms, assuring superb video quality even in harsh network conditions.
- **Interoperability:** Backed with more than 20 years of market leadership in the VoIP industry, all application aspects are standards based and rigorously tested for interoperability.
- **Supports various hardware platforms:** Provides an optimized solution for specific chipsets and seamless integration with peripherals, such as cameras, display, speakers, and microphones.
- **RCS (Rich Communication Suite), VoLTE and IMS ready:** Built-in support of RCS, VoLTE, ViLTE and IMS enables quick development of solutions for these environments. The BEEHD is built and tested to interwork with various IMS systems.
- **Public Safety over LTE:** The BEEHD supports Mission Critical Push-to-Talk (MCPTT), Push-to-Video, One-to-many and Many-to-one communication, along with additional capabilities required for first responder communications.



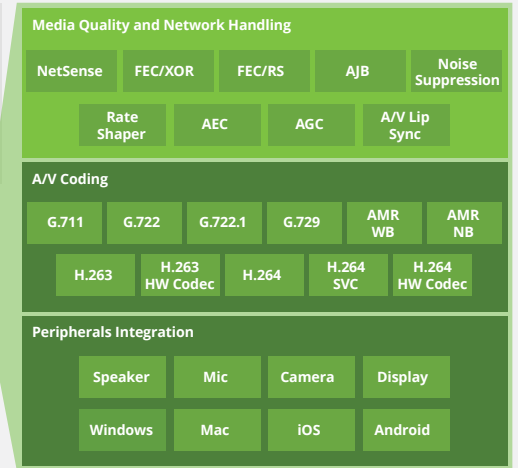
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## Modular Architecture:

### Framework



### Media Engine



Product Specifications			
<b>Public Safety</b>	<ul style="list-style-type: none"> <li>VoLTE IR.92 and IR.94</li> <li>Push-to-Video</li> </ul>	<ul style="list-style-type: none"> <li>Push-to-Talk</li> <li>One-to-many Audio and Video</li> </ul>	<ul style="list-style-type: none"> <li>Many-to-one Audio mixing</li> </ul>
<b>Signaling Protocols</b>	<ul style="list-style-type: none"> <li>SIP (RFC 3261)</li> <li>IMS/VoLTE SIP</li> </ul>	<ul style="list-style-type: none"> <li>H.323 V6</li> <li>Presence and IM: SIMPLE</li> </ul>	<ul style="list-style-type: none"> <li>FW/NAT Traversal: H.460, ICE, STUN</li> <li>TURN</li> </ul>
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>Windows</li> <li>Mac OS/X</li> </ul>	<ul style="list-style-type: none"> <li>Android (software codecs)</li> <li>iOS (software codecs)</li> </ul>	
<b>Hardware Codec Acceleration</b>	<ul style="list-style-type: none"> <li>Qualcomm Snapdragon</li> <li>Samsung Exynos</li> </ul>	<ul style="list-style-type: none"> <li>Intel Atom</li> <li>Texas Instruments</li> </ul>	<ul style="list-style-type: none"> <li>NVIDIA</li> <li>MediaTek</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>Configuration and provisioning logger</li> <li>Open APIs</li> </ul>	<ul style="list-style-type: none"> <li>Call history</li> <li>Web launcher supporting: Internet Explorer, Chrome, Firefox and Safari</li> </ul>	<ul style="list-style-type: none"> <li>Contact list management (in application)</li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>AES-128 and AES-256</li> <li>TLS</li> </ul>	<ul style="list-style-type: none"> <li>IPsec</li> <li>SRTTP</li> </ul>	<ul style="list-style-type: none"> <li>H.235</li> <li>IKE</li> </ul>
<b>Supplementary Services</b>	<ul style="list-style-type: none"> <li>Hold</li> <li>Mute</li> </ul>	<ul style="list-style-type: none"> <li>Transfer</li> <li>Forward</li> </ul>	<ul style="list-style-type: none"> <li>Multi-parties (using MCU)</li> <li>Inband DTMF (RFC 2833)</li> </ul>
<b>Quality</b>	<ul style="list-style-type: none"> <li>Reed Solomon FEC (Forward Error Correction)</li> </ul>	<ul style="list-style-type: none"> <li>NetSense™ bandwidth estimation and adaptation technology</li> </ul>	
<b>Collaboration</b>	<ul style="list-style-type: none"> <li>For SIP: BFCP</li> <li>For H.323: H.239</li> </ul>	<ul style="list-style-type: none"> <li>Ancillary data channel for user custom data communication</li> </ul>	
<b>Audio</b>	<ul style="list-style-type: none"> <li>G.711</li> <li>G.722</li> <li>G.722.1</li> <li>G.729</li> </ul>	<ul style="list-style-type: none"> <li>AMR WB, AMR NB</li> <li>Automatic Gain Control (AGC)</li> <li>Audio Echo Cancellation (AEC)</li> <li>Noise Suppression (NS)</li> </ul>	<ul style="list-style-type: none"> <li>Audio Packet Loss Concealment (PLC)</li> <li>Audio Recording</li> </ul>
<b>Video</b>	<ul style="list-style-type: none"> <li>H.264</li> <li>H.263</li> <li>Frame rate: up to 30fps</li> </ul>	<ul style="list-style-type: none"> <li>Resolution: CIF/VGA/SVGA/720p/1080p</li> <li>Supports H.264 cameras</li> <li>Capture snapshot to JPEG file</li> </ul>	<ul style="list-style-type: none"> <li>Text overlay</li> <li>Video recording</li> </ul>
<b>Interoperability</b>	<ul style="list-style-type: none"> <li>Interoperable with all leading vendors and any standard video calling systems</li> </ul>		
<b>RCS – Rich Communication Suite</b>	<ul style="list-style-type: none"> <li>Option based Capability exchange</li> <li>Stand Alone Messaging</li> <li>CPM, CPIM based Instant Messaging</li> <li>IM large message mode (MSRP)</li> </ul>	<ul style="list-style-type: none"> <li>Multiple recipients (multi 1-1 IM)</li> <li>Store &amp; Forward</li> <li>HTTP/HTTPS Provisioning</li> <li>Integrated Messaging Inbox, including SMS</li> </ul>	<ul style="list-style-type: none"> <li>Voice and Video Calls</li> <li>SIMPLE presence</li> <li>File Transfer</li> <li>XDM</li> </ul>

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