

TeamSpirit® 3.0 Voice&Video Engine Mobile

Unified Communications and Enterprise Mobility services offer enterprises a convenient and cost-saving way of intercommunications. While the employees are located physically in different places they all have immediate access to the centralized database and can make IP calls using softphone applications on their mobile devices and participate in video conferences.

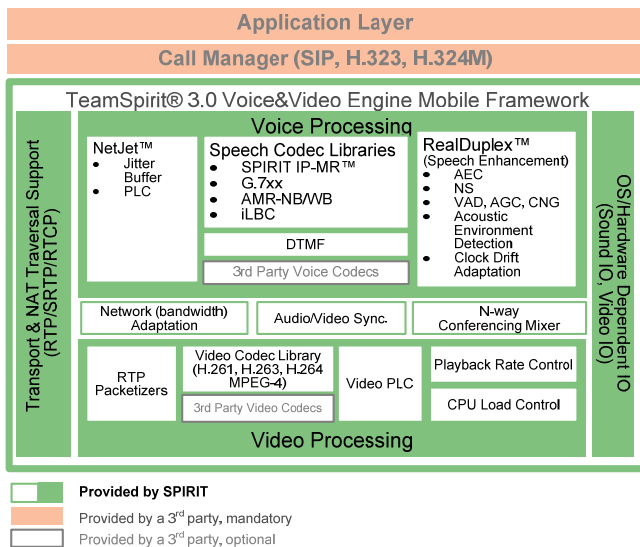
To achieve acceptance and popularity of the services, carriers need to be sure that the same quality and functionality is available across platforms (PC and mobile), without any interoperability issues. Carriers set strict requirements to mobile handsets used in Unified Communications and Enterprise Mobility services with a special emphasis on the VoIP quality.

The innovative TeamSpirit® 3.0 Voice&Video Engine Mobile enables high quality, real-time voice and video communication on mobile devices over IP, WiFi, WiMAX and 3G wireless networks.

Overview

TeamSpirit® Mobile is a comprehensive voice and video engine SDK, including a library of highly optimized low-MIPS consuming voice and video codecs to enable mobile video over IP communication on a broad range of handsets, speech enhancement and network adaptation algorithms. The tuning Wizard is used for automatic adjustment of AEC parameters to speed up deployment and secure flawless voice quality on every handset.

MHz-efficiency and WiFi adaptation are extremely important for resource-constrained mobile devices, intended for usage in public WiFi networks, more susceptible to delays, jitter, packet loss, aggregated echo, noise and congestion. The SPiRiT's Engine handles WiFi-specific network impairments and makes video transmission over WiFi/WiMAX more stable and reliable. The resource-efficient TeamSpirit® Engine can be run even on 200MHz processors. At the same time the Engine supports both software and hardware accelerators inside popular application processors to deliver 30 fps VGA video on mobile devices.



Although the mobile device market will record negative growth overall in 2009, the downward shift will be cushioned by strong sales of smartphones. Smartphone sales will hit 300 million units per year worldwide by 2013, rising from 13% of all handset sales in 2008 to 23%.

[Next Generation Smartphones](#),
Juniper Research, Feb-2009

Benefits

- Carrier-grade voice and video quality in operators' IP-services to meet their enterprise customers requirements
- Compliant with major telecom standards (ITU-T, TIA) to help OEMs pass carriers' acceptance tests
- Field-proven in Unified Communications and Enterprise Mobility services by world's top telcos
- Resource-efficient solution, to lower BOM cost and prolong battery life
- Simplified handsets' software development

Key Features

- The world's most compact voice engine: works even on 200 MHz processors
- Supports both software and hardware accelerated video (VGA, CIF, QCIF and QSIF with up to 30 fps)
- Tuning Wizard for automatic AEC configuration
- WiFi adaptation for reliable performance in public wireless networks
- Support for both IMS and traditional VoIP architectures

Applications

Carriers' IP services:

- Unified Communications
- Enterprise Mobility

Voice and video softphones on:

- Smartphones (including Apple iPhone)
- WiFi/WiMAX/WiBro handsets
- MiDs

Availability

- All ARM9/ ARM9E based processors (PXA, OMAP3, etc.)
- TI C64
- MIPS32
- Tensilica Xtensa HiFi 2 Audio Engine

Features

- Proprietary IP-optimized patent-free wideband voice codec SPiRiT IP-MR™ for superior voice quality
- Accurate voice and video synchronization
- Speech enhancement to provide high voice quality in full duplex mode
- Real-time wireless network adaptation and optimization to enhance and video quality by compensating for network impairments, such as varying delay (jitter), packet loss, congestions
- Voice and video conferencing option
- Dynamical adjustment of the Engine's resource consumption to prevent CPU overload. Support for both software and hardware accelerated video

Specifications

Speech Codecs	<ul style="list-style-type: none"> ▪ SPIRIT IP-MR* ▪ G.722, G.722.1, GSM AMR WB ▪ G.711, G.711 App.II, G.723.1, G.729AB, G.729.1, GSM EFR, GSM AMR NB, iLBC
Video Codecs	<ul style="list-style-type: none"> ▪ H.263 (up to 30 fps) ▪ MPEG-4** (up to 30 fps) ▪ H.264** (up to 30 fps) ▪ Hardware and software video accelerators support ▪ Video Conferencing Mixer**
Speech Enhancement - RealDuplex™	<ul style="list-style-type: none"> ▪ Acoustic Echo Cancellation (operates in full duplex mode, consumes 30 MIPS) ▪ Noise Suppressor (tightly integrated with AEC to provide superior voice quality) ▪ Automatic Gain Control (adjusts speaker and microphone gains) ▪ Automatic AEC Configuration Wizard ▪ Voice Activity Detection ▪ Comfort Noise Generation ▪ Clock Drift Control
Video processing	<ul style="list-style-type: none"> ▪ Audio/Video Synchronization ▪ CPU Load Control
Telephony Algorithms	<ul style="list-style-type: none"> ▪ DTMF over RTP in-band (ITU-T Q.23), out-of-band (RFC 2833)
Network Optimization	<ul style="list-style-type: none"> ▪ Adaptive Jitter Buffer ▪ Packet Loss Concealment (up to 30%)
Media Transport	<ul style="list-style-type: none"> ▪ RTP/RTCP
Supported OS	<ul style="list-style-type: none"> ▪ Apple iPhone OS ▪ Windows Mobile 5.0 (including SmartPhone Edition) ▪ Windows Mobile 6.x ▪ Windows PocketPC 2003 ▪ Symbian ▪ Linux**

* The SPIRIT IP-MR™ codec, which payload is currently being standardized by the Internet Engineering Task Force (IETF), has been developed specifically for packet networks and ensures maximum speech quality on both the LAN and global IP networks such as the Internet
 ** call for details

CONTACTS

General: 1-408-540-6033
www.spiritdsp.com

Russia: 7-495-661-21-78

France: 33-623-021-563

Israel: 972-3-736-9763

Italy: 39-02-6680-2557

Germany: 49-641-48-08300

USA: 1-888-374-4410

Canada: 1-888-374-4410

Japan: +81-3-6361-8080

Taiwan: 886-2-2888-1010, 886-2-2696-0055

Korea: 82-70-7780-9910, 82-2-33473-5080

China: 86-21-63502288-820

Singapore: 65-6744- 9789