Preliminary

TeleSoft International introduces their new VAMOS family of cost effective ARM-based VoIP modules. Each VAMOS module provides a ready-to-integrate Voice over IP solution that can be used in a wide range of VoIP applications including Intercom Systems, Radio over IP, Paging Systems, Door Entry Systems and Alarm Systems.

TeleSoft has been a premier supplier of voice and data modules to the telecom and data communications marketplace for over 20 years. With modules deployed in Real-Time Embedded Systems, desktops and servers, and VoIP modules for mobile devices, TeleSoft understands your VoIP needs and can help you get your product to market quickly and cost effectively.
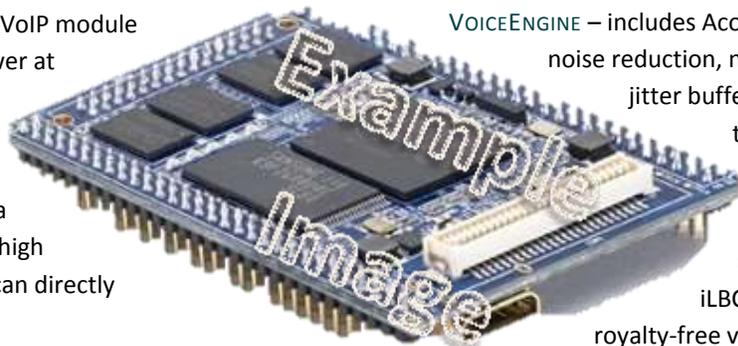
The VAMOS VoIP modules are supplied as comprehensive development kits that combine software with hardware to provide high performance with low power requirements. VAMOS modules enable rapid product development cycles and are ideal for product designers with no time to become experts in voice, video and SIP signaling technologies.

VAMOS VoIP modules are available connectorized for use as the main board in your system, or as a daughter module to connect onto your system board.

TELESOFT TSSMARTPHONE VAMOS100

VAMOS100 Hardware

Based on a 1GHz ARM processor, the TsSmartPhone VAMOS 100 VoIP module offers high processing power at a low cost, and low power usage. The Vamos100 has a Wolfson WM8960 codec, a 24 bit, 48KHz, low power, high quality stereo codec that can directly drive a speaker

Optionally, the VAMOS100 is capable of videocalls and includes a powerful graphics engine, LCD interface and CMOS camera interface.

VAMOS100 Software

The VAMOS100 comes complete with software in binary form with "C" source APIs to enable easy integration of customer supplied application software and customization of the GUI if required. Full source code is an available option.

THE FOLLOWING SOFTWARE IS INCLUDED:

TSSMARTPHONE – A call manager for VoIP calls that includes support for standard and custom dial plans, conferencing, hold, transfer, redial, mute, speed-dial, configuration menu, multiple line appearances, message waiting indication, start commands and more.

COMPACTSIP – A robust, full featured SIP stack that includes SDP. Also included is NAT traversal (STUN and RFC 3581 "Symmetric Response Routing").

COMPACTRTP – A high performance, low footprint RTP stack

VOICEENGINE – includes Acoustic Echo Cancelation (AEC) noise reduction, noise suppression, dynamic jitter buffers and error concealment techniques.

STANDARD AUDIO CODECS include G.711, the most common voice codec, and iLBC – a high quality, narrowband, royalty-free voice codec that is used in millions of VoIP endpoints.

HD AUDIO CODECS include G.722, a commonly used voice codec with an audio bandwidth of 0 – 8 KHz and the iSAC audio codec, a super-wideband voice codec and used in millions of VoIP endpoints. Both G.722 and iSAC codecs are royalty–free.

Runs on an industry standard ANDROID Platform.
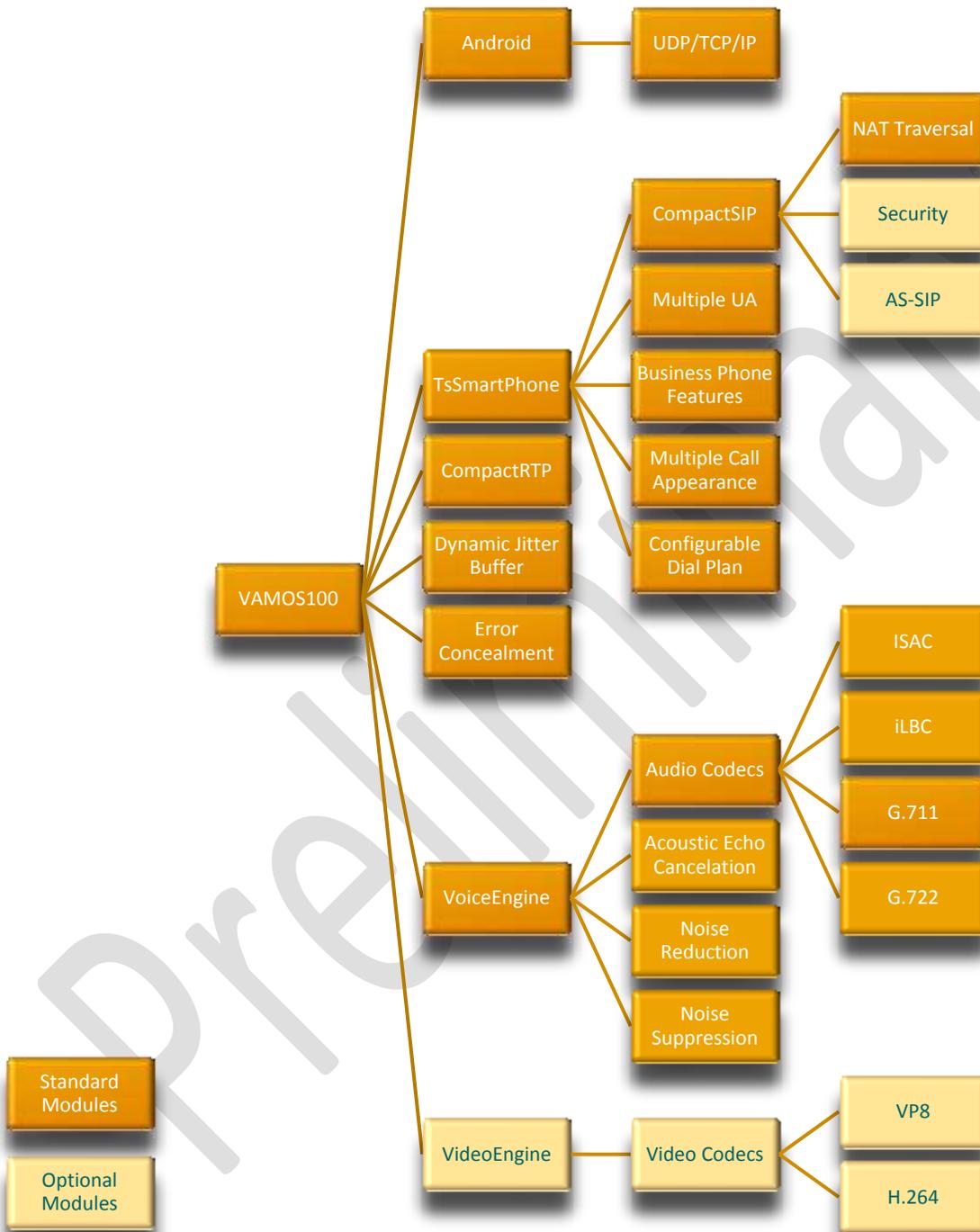
OPTIONAL SOFTWARE:

VP8 VIDEO CODEC – A codec that uses highly efficient video compression technology – royalty free

H.264 – The industry standard video codec (may require a royalty to be paid)

ENCRYPTION – TLS and SRTP

AS-SIP – Assured Services-SIP

V<small>AMOS</small> Software Diagram

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Android ──── UDP/TCP/IP

                                        NAT Traversal
                        CompactSIP ──── Security
                                        AS-SIP
            Multiple UA
            Business Phone Features
TsSmartPhone
            Multiple Call Appearance
            Configurable Dial Plan
CompactRTP
Dynamic Jitter Buffer
Error Concealment

VAMOS100

                                ISAC
                                iLBC
            Audio Codecs ──── G.711
                                G.722
VoiceEngine Acoustic Echo Cancelation
            Noise Reduction
            Noise Suppression

                                VP8
VideoEngine ──── Video Codecs ──── H.264
```

Standard Modules

Optional Modules

YOUR UNIQUE NEEDS

Many customers are able to use our standard modules without modification. Please contact us for more information if you require modifications to our standard products, or a custom design to meet your specific requirements.

Module Footprint

A custom hardware design would include changing the form factor of the board or its connectors, changing the amount of memory, and adding or removing I/O (e.g. adding an extra Ethernet port).

System Performance/Cost/Power

The VoIP software included with the hardware uses only a small portion of the available CPU power. This leaves plenty of bandwidth for you to integrate all of your system functions into this module, resulting in the overall highest performance, lowest cost and lowest overall power use.

Integrating the system eliminates the cost of multiple processors, second Ethernet Interface, additional memory chips, connectors, circuit board, etc. And having the system integrated means less chance of a mechanical failure, such as a bad connector or solder joint.

TeleSoft can change the module as you wish, and supply software running on the new module. We can help your engineers come up to speed so they can add the extra features that your customers want. If you wish, TeleSoft will design and develop these features for you.

Software Only

All TeleSoft software is available in ANSI C source form.

Additional Features

TeleSoft can perform consulting to develop your VoIP based system. We have the expertise to add features to meet your specific requirements.

VAMOS Example Applications

- IP Business Phone
- VoIP Intercom System
- VoIP Public Address Loudspeaker
- IP Remote Music Speaker
- VoIP Paging System
- VoIP Door Entry/Intercom
- Video over IP Security Camera
- VoIP Alarm System Console
- VoIP Patient Intercom
- VoIP Emergency Phones
- VoIP Fire Alarm and Mass Notification Speakers

"I know exactly where the code is going - with the other company's code, I couldn't pin things down."

-- Cisco

"I greatly appreciate your willingness to support us and your timeliness in answering our questions. Your help is enabling us to move forward towards our delivery goals without delay."

-- ITT Aerospace

"TeleSoft gets a very high grade for being solid, reliable, and dependable. Rock-solid throughout the whole project. Performance was also quite good. Didn't have to touch the TeleSoft code."

-- 3COM

"The TeleSoft code shortened our development time. Their technical support greatly exceeded our expectations in terms of both speed and depth of knowledge - super prompt and incredible technical expertise."

-- Dynalec

The TeleSoft Advantage

Manufacturers license TeleSoft's field-proven software to accelerate the development and conformance testing of their communications products.

Developers gain a competitive edge by reducing their development time when they license telecom and datacom protocol stacks from TeleSoft International. Stacks available include:

- SIP
- Worldwide ISDN
- PPP and ML-PPP
- T1 RBS and E1 CAS R2
- QSIG
- Frame Relay
- X.25

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