

Product Brief

PacketCable™ 1.0 Software

Texas Instruments' PacketCable™ 1.0 software provides cable modem vendors with the most modular and mature PacketCable 1.0-compliant solution in the industry. The TI PacketCable 1.0 software is pre-integrated with TI's DOCSIS® 2.0 software and TI's Telogy Software™ product.

High-Performance, Integrated Voice Software Solution

TI is a Voice over Internet Protocol (VoIP) market leader, having shipped millions of DSPs and VoIP ports worldwide. TI's PacketCable software provides competitive advantages in time-to-market, cost and the confidence in field-proven TI Telogy voice and DOCSIS 2.0 software stacks.

This software suite provides a turn key solution for a PacketCable 1.0-compliant embedded multimedia terminal adaptor (eMTA), with the added flexibility of easy integration enabling OEMs to customize it for specific market applications.

Comprehensive Essential Patent Indemnification

TI's unmatched patent and licensed IP portfolio enables TI to offer the most comprehensive indemnification program in the industry. The reality of this

market is the risk of an infringement claim is quite high. TI's comprehensive indemnification program bears all of the risk with respect to infringement (more details provided upon request).

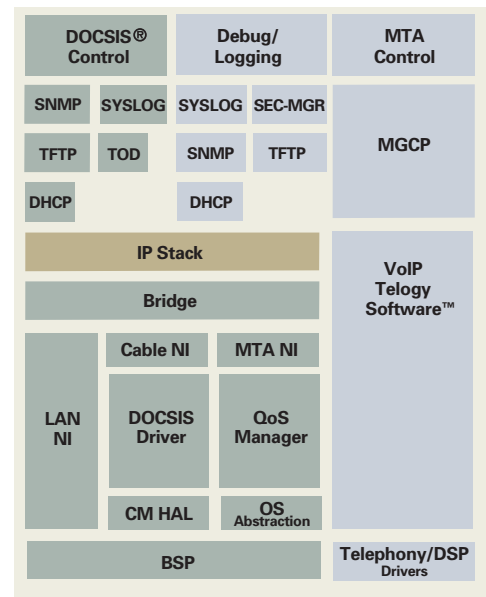
Both large and small companies are aggressively filing patent infringement claims in this communications space in order to protect their IP and extract royalty payments from OEMs. Further, IP consortiums are also aggressively pursuing royalties, putting non-indemnified OEMs at risk.

To the extent TI's customers and TI can enjoy limited risk in these market spaces, it is due to the considerable proactive efforts both in time and dollars that TI has, and is, devoting to IP management. TI's proactive efforts are valuable, not just because these efforts reduce the chances of an infringement claim actually succeeding, but because they reduce the likelihood of an infringement claim even being filed (which can be disruptive to the business even if the claim is indemnified). In the event of a third-party infringement claim, TI can bring its full patent portfolio strength (over 8500 patents) and patent expertise to resolve the claim and minimize disruption to a customer's business.

Key Features

- Leverages proven TI DSP technology, featuring advanced process technology, code compatibility and production facilities
- Optimized for highest performance voice packet throughput under real plant conditions
- Expandability supporting two, four or more LBR (Low bit rate) and PCM channels
- Multiple CODEC build configurations designed to match geographic requirements
- Modular architecture to allow original equipment manufacturer value-add
- Industry-leading Echo Cancellation and T.38 Fax Relay implementations
- Advanced power management for extended primary line battery life
- Rigorously tested for highest voice quality in the presence of data
- Backed by Texas Instruments' world-class technical support

PacketCable™ Software Solution Architecture



Legend

- DOCSIS
- OS
- PacketCable™

Customization: APIs and Customizable Components

<i>TI enables customers to tailor the following software components:</i>	
Board Support Package	
Operating system-dependent modules	
SNMP/MIB implementations	
Security <ul style="list-style-type: none"> • Authentication and Key Management • IPsec1/IPsec+AES • SNMPv3 secure provisioning • RSA/Open SSL 	
Quality of Service Management	
MGCP/Call signaling module	

<i>A carefully architected set of APIs enables customers to realize unique voice features:</i>	
Send Direct Functionality	High-performance transmission of voice packets with minimal delay (by bypassing typical DOCSIS® software upstream packet processing and queuing). Incorporates mechanisms to synchronize CMTS grants with voice packet generation for minimal jitter introduction.
Receive Direct Functionality	Fast processing of downstream voice packets, passing voice packets, bypassing typical DOCSIS downstream packet handling and filtering
Telephony Interface	Telephony Hardware Interface: Provides access to telephony hardware
Telephony Signaling Interface	Provides control of signaling functions, such as causing a phone ring and detecting hook events
Security	Provides control for security and security policy
Provisioning	Enables custom provisioning

Important Notice: The products and services of Texas Instruments Incorporated and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty or endorsement thereof.

Real World Signal Processing and the black/red banner are trademarks of Texas Instruments. Telogy Software is a trademark of Telogy Networks, a Texas Instruments Company. PacketCable is a trademark and DOCSIS is a registered trademark of Cable Television Laboratories, Inc.