Texas Instruments’ (TI) certified DOCSIS™ 1.0/1.1/2.0 software enables modem developers to provide robust cable modem solutions to operators quickly, with low risk, and without supporting a large development team. The software architecture gives customers the ability to customize the end product with added value software, private Management Information Base (MIB) and hardware adaptation.

TI has demonstrated unmatched success in DOCSIS 1.1 certification. TI’s DOCSIS 1.1 software was combined with TI silicon to become the first DOCSIS 1.1 modem certified through CableLabs®. TI has maintained a 100% certification pass rate for all cable modem vendors who used TI chips and software since Certification Wave 19 (3Q01). This success rate is attributed to the maturity of TI’s solution as well as the ability to test its silicon and software products to DOCSIS 1.0 and 1.1 requirements in its world-class testing facility prior to submission to CableLabs.

TI has also recently received DOCSIS 2.0 certification from CableLabs in the first DOCSIS 2.0 certification wave (CW24, 4Q01). TI’s DOCSIS 2.0 solution, which supports both advanced time division multiple access (A-TDMA) and synchronous code division multiple access (S-CDMA) modes, will enable operators to create and support new services for both home and business such as video conferencing and peer-to-peer applications over cable. With the success in certification wave 24, TI extends its unprecedented DOCSIS and Euro-DOCSIS™ certification pass rate success. The new DOCSIS 2.0 specifications will enable cable modems to deliver increased upstream throughput from the end user to the Internet, as well as give the network operator the ability to offer symmetrical bi-directional data services.

The addition of DOCSIS 2.0 was completed with an emphasis on stability, performance and testing. In addition, TI's world-class testing facility has been expanded to include all of the necessary equipment and tools required for rigorous DOCSIS 2.0 pre-certification testing.

TI’s DOCSIS software provides competitive advantages in time-to-market, cost savings, and the confidence that comes with CableLabs certification. Together with TI’s cable modem reference design platforms, our software provides a complete, proven, field-deployed solution.

The Key Benefits include:

- Received DOCSIS™ 2.0 certification from CableLabs in the first DOCSIS 2.0 certification wave (CW24, 4Q02)
- 100% DOCSIS certification pass rate since CW 19 (3Q01) for all vendors who based their designs on TI DOCSIS software and silicon
- The industry’s first DOCSIS 1.1-certified cable modem used TI DOCSIS software
- The value of proven, certified DOCSIS 1.0, 1.1, and 2.0 compliance as the result of over 4 years investment in software development
- A complete solution means low-cost ownership for modem provider
- APIs provide for rapid customization of customer’s unique features
- Optimized integration of software and silicon for high performance
- World-class technical support and knowledge base

The DOCSIS 1.0/1.1/2.0 software uses a layered, modular and open architecture that enables smooth development and integration of new applications such as PacketCable residential gateways, and CableHome™. The software package also includes a dynamic quality of service (DQoS) application program interface (API). This combination delivers complete DOCSIS functionality, including:
Customization—Points of Access in the Software
TI provides access points enabling customers to tailor the following software components:
• Elements within the board support package
• Operating system-dependent modules
• SNMP/MIB implementations
• Web (HTTP) interface.

Software Product Release
TI provides software releases that are aligned with CableLabs Certification Waves. Releases implement all the mandatory engineering change notices (ECN) for CableLabs certification.

Key Features
• DOCSIS/EuroDOCSIS™ 1.0/1.1/2.0 certifiable
• Layered, modular, open architecture enables smooth development and integration of new applications
• SNMPv3, OSSI 1.1, Dynamic QoS, Bridging, HTTP, IPv4
• May be complemented with TI's TurboDOX™ software enhancements for increased throughput and capacity
• Residential gateway and CableHome™ stacks available through 3rd parties
• Runs on TI reference board platforms
• Supports multiple RF tuners