Product Brief

TurboDOX™ Bandwidth Acceleration Software

TurboDOX bandwidth acceleration software is a software enhancement upgrade to Texas Instruments (TI) standard DOCSIS™ and Euro-DOCSIS™ software that significantly increases the download speed of TCP applications (i.e. FTP downloads, HTTP web browsing, and MP3 downloads).

TI's TurboDOX software incorporates mechanisms that efficiently and effectively open bottlenecks in the DOCSIS networks. The direct result is a boost in the downstream throughput by factors up to 20 times the typical downstream rate. TurboDOX is a DOCSIS 1.0, 1.1, and 2.0 certifiable software add-on and resides at the CPE side only. TurboDOX is compatible with all DOCSIS 1.0, 1.1, and 2.0 networks and can be integrated into existing networks with all cable modem termination systems (CMTS). Thus, all TurboDOX powered modems will realize the improvement gains.

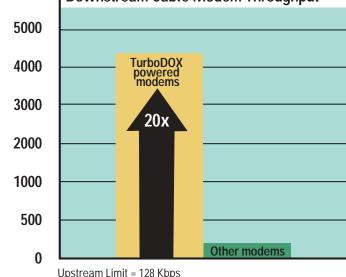TurboDOX is a "plant friendly" technology—it increases the available bandwidth and does not impair the performance of modems without TurboDOX. TurboDOX powered modems coexist with modems that are not TurboDOX enabled on the same CMTS without degradation in performance and without impairment to the modems that are not using TurboDOX.

TurboDOX is supported on all Texas Instruments' cable modem reference design platforms including data, voice-enabled, and Residential Gateway/CableHome™ cable modems.

Key Benefits

- Increased download speeds by up to 20X
- Improved user experience enabling end-product differentiation
- Improved utilization of the MSO's resources—opening bottlenecks in the downstream channel
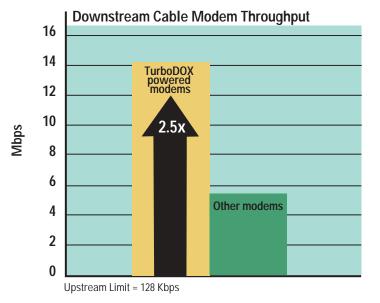- Enhanced ability for MSOs to increase the number of subscribers on the plant

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Scenario 1
Simultaneous upload and download from the same cable modem—TurboDOX bandwidth acceleration software boosts download rates by up to 20 times

Downstream Cable Modem Throughput

Kbps: 5000, 4000, 3000, 2000, 1000, 500, 0

TurboDOX powered modems — 20x

Other modems

Upstream Limit = 128 Kbps

Key Features

- Fully compliant with DOCSIS specification
- Resides at the CPE side only
- No changes required at the CMTS
- Works with any and all CMTSs
- TurboDOX modems coexist with non-TurboDOX modems on the same DOCSIS network
- Supported on all TI silicon-based cable modems

Scenario 2
Download from a single cable modem—TurboDOX bandwidth acceleration software boosts download rates by 2.5 times

Downstream Cable Modem Throughput

Mbps (vertical axis: 0, 2, 4, 6, 8, 10, 12, 14, 16)

TurboDOX powered modems

2.5x

Other modems

Upstream Limit = 128 Kbps

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TEXAS INSTRUMENTS

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