



SMP8634 802.11n Wireless IPTV Set-top Box Development Kit

The Metalink *WLANPlus*[™] 802.11n wireless module, combined with Sigma Designs' Vantage 8634 IPTV Set-top Box development kit, enables the rapid system development of Wireless IP STBs, Digital Media Adaptors, PVRs, wireless HDTV and more.

The seamless 802.11n wireless connectivity allows meeting the full performance connectivity requirement of the digital home. Sigma Designs' Vantage 8634 development kit enables the rapid development of a "triple-play" IPTV set-top box that supports two DVB or ATSC digital tuners, VoIP and wireless home networking.

Based on Sigma Designs' SMP8634 Secure Media Processor[™], it also supports a HDMI output, two USB 2.0 Host ports, an Ethernet port and a smartcard interface.

Combining Sigma Designs' powerful multimedia support with Metalink's unique CE grade wireless performance provides the best of breed home multimedia solution. It enables sharing and enjoying the full suite of AV formats while benefiting the full merits of convenient and flexible wireless connectivity at a wire line quality.

Sigma Designs' Vantage 8634 Key Features and Specifications

Video Outputs

- NTSC/PAL composite and S-video
- Analog YPbPr video
- HDMI v1.1 with audio
- Macrovision copy protection on 480i, 576i, 480p and 576p analog outputs

Audio outputs

- Stereo analog audio
- Optical and coaxial SPDIF digital audio

Memory

- 64MB NOR flash
- Supports using 128MB to 2GB NAND flash module (M-Systems)
- 256MB DRAM

Other I/O

- Two USB 2.0 high speed (embedded host)
- 10/100 BaseT Ethernet (RJ45)
- IDE connector (40-pin header)
- ISO 7816 smartcard
- IR and VFD front panel connector (5-pin header)
- mPCI and Local Bus connectors (for Metalink's *WLANPlus* 802.11n card)
- May be ordered with no tuner (user installs their own), one DVB-T tuner or one ATSC tuner
- SPI/SSI input connector (26-pin header) for optional second 3rd party digital tuner
- 8-bit digital video input connector (26-pin header)
- VoIP (RJ-11)

802.11n Wireless Connectivity

WLANPlus is an optimal high-throughput wireless interface for various consumer electronics products such as Residential Gateways, DTV, HDTV, Set Top Boxes, Media Adaptors, Digital Video Recorders (DVR), Portable display appliances, and game consoles. With the use of Metalink's WLANPlus mPCI card, wireless connectivity to 802.11n draft compliant devices as well as to legacy 802.11 a/b/g devices is guaranteed. WLANPlus enables sending and receiving multiple HDTV streams over a robust and reliable wireless link, providing seamless connection between the video source (live or stored) and the display device.

WLANPlus Key Features

- Compliant with the IEEE 802.11n approved draft
- Backward compatibility with legacy devices - 802.11 a/b/g
 - Supports Mixed-mode to enhance performance while interoperating with legacy devices
- Enhanced MAC Efficiency
 - Up to 210 Mbps effective throughput (payload) using
 - Frame Aggregation and Block Acknowledge
- Dual Band support - 2.4 GHz and 5 GHz
- Fast Link Adaptation for throughput maximization under QoS and delay constraints
- PHY transmission rates of up to 300 Mbps
 - 2x3 MIMO delivers extended throughput and QoS
 - Maximum Likelihood (ML) Slicer doubles coverage area
 - Channel bonding, supports 20 Mhz and 40 MHz channels
 - Advanced Coding (LDPC) extends coverage area by up to 70%
- Advanced Security Scheme, 802.11i-compliant
- Advanced QoS Scheme, 802.11e-compliant



Technical Specifications

Frequency Band:	2.400 - 2.485 GHz 4.900 - 5.950 GHz
Network Standards:	802.11n 802.11a/b/g
Data Rates:	802.11a - 6 to 54 Mbps 802.11b - 1 to 11 Mbps 802.11g - 6 to 54 Mbps 802.11n - up to 300 Mbps
Modulation Modes:	(OFDM) - BPSK, QPSK, 16QAM and 64QAM (DSSS) - DBPSK, DQPSK, CCK
Channel Code (FEC):	Convolution Code Advance Coding (LDPC)
Security:	Compatible with 802.11i 64 bit/128 bit key WEP, AES, TKIP, WPA, WPA2
QoS:	Compatible with 802.11e EDCA, EDCA w/Admission Control Direct Link Setup (DLS) Fast Link Adaptation

