

Product Brief HDG200, Wireless LAN 802.11b/g/n System in Package Module

INTRODUCTION

The HDG200 is a complete Wireless LAN System in-Package (SiP) with ultra-low power consumption, optimized for Linux devices. The HDG200 Wi-Fi solution is supported on leading platforms. The HDG200 supports data rates up to 72Mbps.

With the HDG200 developers are targeting applications such as, wireless sensors for industrial and home control, for smart and green energy control, remote device management such as location tracking and the growing segment of equipment and consumer electronic devices such as Portable Media devices, IP-radio, home security, wireless speakers and IP audio devices.

The HDG200 SiP, with its complete system functionality, leads to quicker design cycles, lower risk and simplified manufacturing, all in a tiny package (8 × 8 mm). Few external components simplifies assembly, test and reduces yield loss. The HDG200 SiP delivers a complete implementation of 802.11b/g/n fully tested and calibrated, resulting in lowest possible production and system cost.

Things will be IP-numbered
Wireless communication will
be built into every category of
products and make them
connected.
Embedded Wi-Fi is the natural
choice for this. Re-using
existing Wi-Fi infrastructure
for a new variety of IoT, M2M
and Smart Home devices.



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*H&D Wireless AB is a Global Smart Home
solution provider*

*Making Cloud Connectivity easy for SmartHome,
M2M, IoT applications and sensor networks*



HDG200
WLAN 802.11b/g/n



SPB200 – EVK
HDG200 mounted on SD EVK



Add Wi-Fi capability to your Linux platform!
Wi-Fi is a registered trademark of the Wi-Fi Alliance

KEY FEATURES – HDG200

- ✓ Ultra low power consumption solution for embedded applications
- ✓ Fully approved FCC and CE compliant reference design
- ✓ Low Cost
- ✓ SDIO and SPI Host Interface
- ✓ High RF output TX power (+17 dBm) and RX sensitivity
- ✓ Supports multiple SW features such as 802.11e/i (Security, Quality of Service), Soft AP and Wi-Fi Direct
- ✓ Pre-programmed with MAC address
- ✓ Pre-calibrated, no RF trimming needed
- ✓ WEP and AES hardware encryption accelerator up to 128 bit for WEP and WPA2 support
- ✓ RF filter for the ISM band 2.4GHz
- ✓ An internal 32 kHz oscillator maintains real time in power save mode, allows the high frequency clock to be turned off
- ✓ Extensive DMA hardware support for data flow to reduce CPU load
- ✓ Internal Boot-ROM. This allows firmware to be downloaded into SRAM from the host
- ✓ Calibration data stored in internal OTP
- ✓ RoHS Compliant

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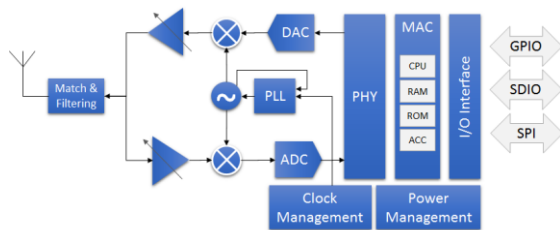
Technical Support
Software drivers
Wi-Fi Integration
Reference designs
Documentation

Turnkey Solutions
The reference designs provided are turnkey solutions that will work first time and can be modified and used for customers own products.

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HDG200 Block diagram



Software

The HDG200 device driver implements and reuses tools and interfaces that are de-facto standard in Linux systems. Conceptually, the Linux driver could be used on any host platform that supports Linux.

Demo images available for the following platforms:

Atmel SAM5 and others.

Contact sales@hd-wireless.se



Add Wi-Fi capability to your Linux platform!

H&D Wireless Linux driver distribution is license free

Evaluation Package

SPB200 is an evaluation board in SD card format mounted with HDG200, supported on Linux based platforms.

Distribution



Specification

Wireless Network Standard Support	IEEE 802.11b/g/n
Frequency Band	2.412-2.472 GHz
Data rates	802.11b at 1, 2, 5.5 and 11 Mbps 802.11g at 6, 9, 12, 18, 24, 36, 48, and 54 Mbps 802.11n at 6.5, 13.0, 19.5, 26.0, 39.0, 52.0, 58.5, 65.0, 72.2 Mbps
Hardware interfaces*	SPI SDIO GPIO
WLAN functions, QoS	Power save modes, automatic roaming, Ad-hoc, Soft AP, Wi-Fi Direct and Infrastructure mode
Wireless Security	✓ WEP-64 ✓ WEP-128 ✓ WPA-PSK ✓ WPA2-PSK
Hardware dimensions	8x8x1,2mm
Power consumption	68mA RX, 230mA TX och 0.7uA shut-down.
Supply Voltage	3.0-4.2V
Operating Temperature	-40 to +85°C (industrial)

Standards Compliance

Country	Approval authority	Regulatory	Frequency band
USA	FCC	FCC	2.412-2.462
Canada	IC	RSS	2.412-2.462
EU	National	ETSI	2.412-2.472

Order Information

Part No.	Description	Image
HDG200-DN-2	802.11 abgn SIP module on Tape&Reel	
HDG200-DN-3	802.11 abgn SIP module in tray	
SPB200-AL-1	SD card format evaluation kit with HDG200 on board	

For additional information please contact sales@hd-wireless.se
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