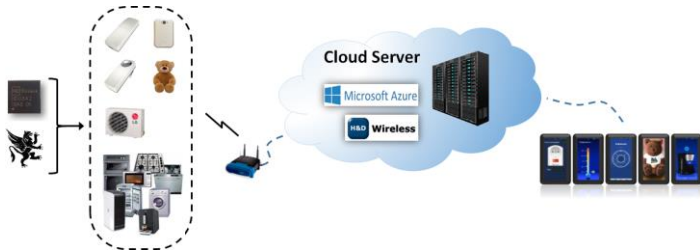


Product Brief HDG840, Wireless LAN System in Package (SiP) 802.11 b/g/n + GRIFFIN[®]™ API – Preliminary

INTRODUCTION

The HDG840 solution is an ASSP Wi-Fi module for sensor, control or communication applications. with state of the art embedded security protocols and low power features. HDG840 includes a matching low power, high performance 32-bit Microcontroller unit pre-programmed for common IoT profiles. The solution offers the complete system, from the functionality in the appliance to the server and configuration/control by a smartphone App, together with the Griffin[®]™ software Platform.

The HDG840 developers are targeting wireless sensors for industrial and home control (Smart Home), for smart and green energy control, M2M, CleanTech, White goods, Audio Messaging and other IoT Applications



Griffin[®]™ Platform is prepared with the following API profiles to be utilized in customer solutions. H&D Wireless offers custom integration

- Temperature Sensor
- Power plug ctrl and reading
- Audio Application
- LED and Switch Control

The HDG840 SiP format, with its ready to run functionality, allows the designer to focus on the system solution for the best end user experience.

H&D Wireless AB

H&D Wireless AB is a Global Smart Home solution provider. Making Cloud Connectivity easy for SmartHome, M2M, IoT applications and sensor networks. Latest News and Design Wins:

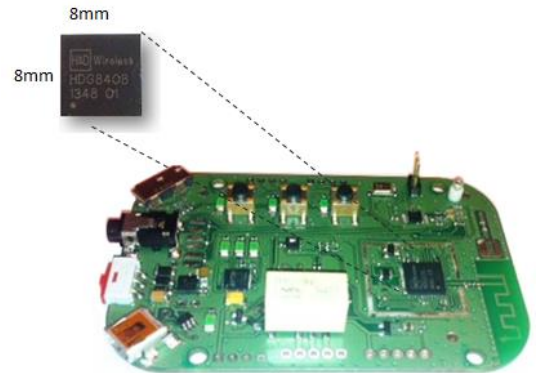
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HDG840

WLAN 802.11b/g/n

HDA840 – SW Design vehicle



Wi-Fi is a registered trademark of the Wi-Fi Alliance
H&D Wireless helps you create interactive Smart Home solutions!

KEY FEATURES – HDG840

- ✓ Ultra low power consumption solution for embedded applications
- ✓ Fully approved FCC and CE reference design
- ✓ Low Cost
- ✓ External interfaces Audio (PWM/PDM/ADC), User Interface(LED Ctrl, Switch Ctrl), Sensors (I2C)
- ✓ Supporting Griffin System Software with application profiles:
 - Power
 - Temperature,
 - Audio
 - Control
- ✓ High RF output TX power (+17 dBm) and RX sensitivity
- ✓ Low number of external discrets needed: 4 + antenna
- ✓ Pre-calibrated and pre-programme
- ✓ No RF trimming needed
- ✓ WEP and AES hardware encryption accelerator up to 128 bit for WEP and WPA2 support.
- ✓ On-chip RF filter for the ISM band 2.4GHz
- ✓ RoHS Compliant

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Global Presence & Distribution

- NORTH AMERICA
- EUROPE
- ASIA
- MIDDLE EAST
- AUSTRALIA
- SOUTH AMERICA

Technical Support

- Software drivers
- Wi-Fi Integration
- Reference designs
- Documentation

Turnkey Solutions

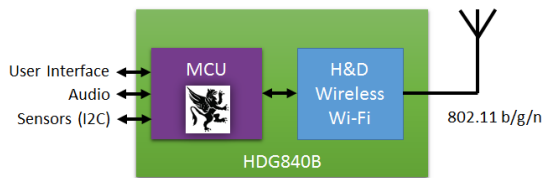
The reference designs provided are turnkey solutions that will work first time and can be modified and used for customers own products.

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Web site:
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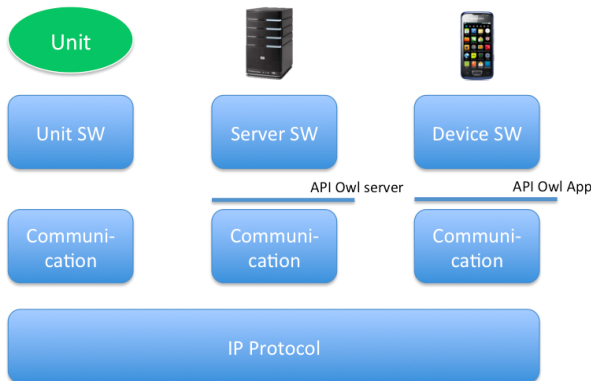
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HDG840 Block diagram



Software

H&D Wireless system software Griffin[®]™ with HDG840 Wi-Fi system in package (SiP) offers a complete solution from Wi-Fi SiP, the cloud to client.



With the Cloud Application Platform (CAP), H&D Wireless offers developers an end-to-end solution that can quickly and effortlessly be integrated into products and systems that need Wi-Fi connectivity.

The Server

- Allows you to store user accounts and paired devices
- Can be offered as a hosted service

The Client

- iPhone, iPad, Android and Windows Apps are supported
- Use our API, or let us develop the entire App
- Wireless setup by the use of ADHOC mode configuration

The Wi-Fi-system in packages, SiP:s

- Support Wi-Fi 802.11 b/g/n
- Frequency band: 2.412-2.484 GHz
- Wireless Security: WEP and WPA/WPA2
- Low standby power consumption

Evaluation Package

H&D Wireless provides a HDA840 starter Kit – the HDA842 – Your engine to Develop and test your application.



Distribution

| | |
|-----------------------------------|--|
| Wireless Network Standard Support | IEEE 802.11b/g/n |
| Frequency Band | 2.412-2.472 GHz |
| Data rates | <u>802.11b</u> at 1, 2, 5.5 and 11 Mbps <u>802.11g</u> at 6, 9, 12, 18, 24, 36, 48, and 54 Mbps <u>802.11n</u> at 6.5, 13.0, 19.5, 26.0, 39.0, 52.0, 58.5, 65.0, 72.2 Mbps |
| Hardware interfaces | I2C for Sensor Com Audio (16bit PWM & PDM, 12bit ADC) User Interface (LED Ctrl , Switch Ctrl) |
| 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 | Wi-Fi RX: 78mA, Wi-Fi TX: 240mA TX, Sleep mode: < 2mA and Wait mode: 10uA |
| Supply Voltage | 3.0-4.2V |
| Operating Temperature | -40 to +85°C (industrial) |

Specification

Standards Compliance

| Country | Approval authority | Regulatory | Frequency band |
|---------|--------------------|------------|----------------|
| USA | FCC | FCC | 2.4-2.4835 |
| Canada | IC | RSS | 2.4-2.4835 |
| EU | National | ETSI | 2.4-2.4835 |

Order Information

| Part No. | Description | Image |
|---------------|---|-------|
| HDG840 B-DN-2 | Wi-Fi SiP 802.11b/g/n component in 44-pin QFN, SDIO, SPI. Surface mount | |
| HDA842 | HDA842 starter Kit – Your engine to Develop and test your application. | |

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