

HW 86050

Embedded WLAN Module

Mobilize your industrial application with IEEE 802.11b



DATA  UNWIRED

Airborne Ethernet

Wireless LAN installations are rapidly spreading into many parts of industrial networking. As an extension of the wired Ethernet they ease the integration and operation of a wireless network and introduce mobility to network applications.

Today, WLAN components still focus on laptops, notebook computers and PDAs. Industrial applications have been forced to implement either PC card or Compact Flash interfaces for WLAN connectivity. Disadvantages are increased hardware and software costs and system complexity.

Unique Embedded Module enables WLAN to your Application

With the HW86050 module, Höft & Wessel now offers the simple solution for many mobile or fixed industrial applications. Easy integration without expensive sockets; easy to control without the need of protocol drivers on the embedded application.

HW86050 operates according to the IEEE 802.11b standard, commonly used in industrial environments, and supporting air data rates of up to 11 Mbps. The module incorporates one of the industry's latest and highest integrated IEEE 802.11b chipsets and a versatile high performance low power 16bit RISC application processor. The cost effective solution for industrial applications.

Serial Interface to WLAN

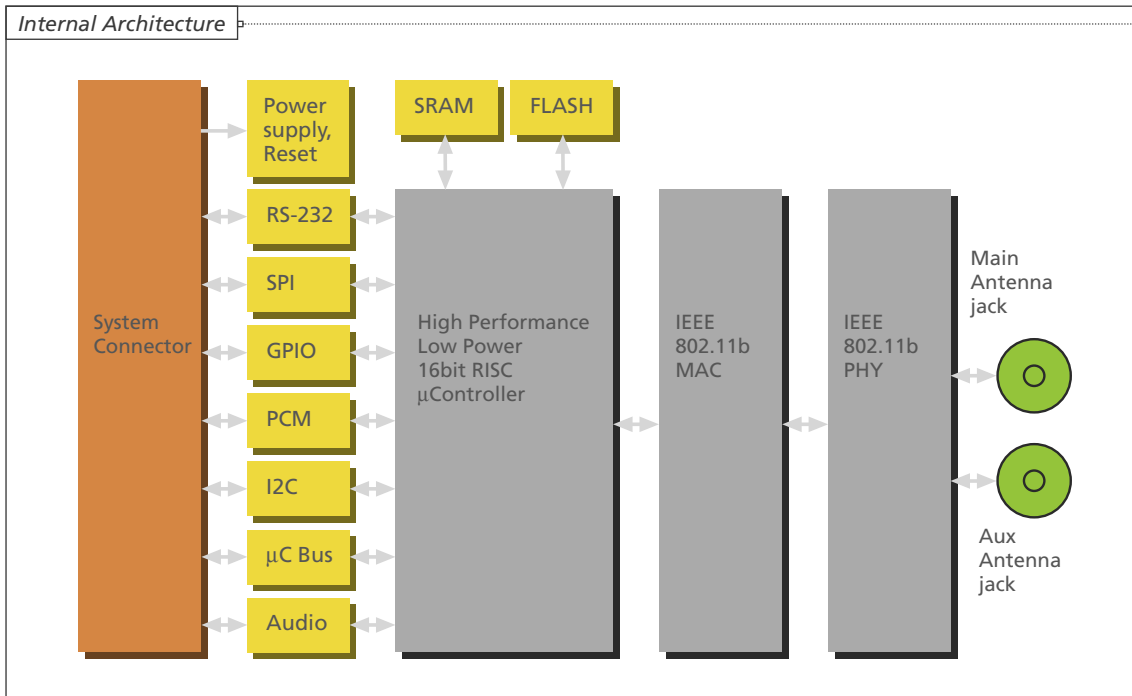
Just a simple unsynchronous (UART) or a synchronous serial interface (SPI) along with a power supply is needed to turn your device into a WLAN client. No need for implementing a protocol or a driver on your device, simply send and receive your data transparently. Transferring your existing RS-232 based applications to a WLAN infrastructure is plug and play.

Key Advantages

- UART or SPI data interface
- No driver or protocol needed at client
- TCP/IP Stack onboard
- Very small footprint for easy integration
- Low power consumption
- Infrastructure and ad hoc networking
- WEP128 and WPA security features
- Firmware upgradeable
- Analog audio interface for voice applications
- Compatible to HW86010 and HW86020 DECT/FHSS modules/ change easily between DECT and WLAN as needed
- Module concept results in fast time-to-market

Typical Applications

- Mobile data acquisition
- Automation
- Industrial control
- Wireless local loop



Technical Data

Dimensions	52 x 37 x 5mm	Standards	IEEE 802.11b
Weight	10g	Approval	ETSI (EU) / FCC
Temperature range	-20 to +70°C operating	Interface	50-pin system connector
Operating voltage	3.1-3.5V for digital part 3.1-5.5V for RF part	Data interface	UART SPI Parallel port Memory-mapped I/O
Power consumption ...	200mA typ., down to 25mA typ. in power save mode	Voice interface	Analog differential microphone with bias, differential speaker; digital PCM
Frequency range	2400 to 2483.5MHz	Other interfaces	GPIO, system bus interface, ADC, PWM, I2C
Transmit power	15dBm typ.	Antenna interface	2 surface mount coaxial connectors, 50Ω, automatic antenna diversity
Receiver sensivity	-93dBm (typ. @ 1Mbps) -84dBm (typ. @ 11Mbps)	Range	Up to 300m (outdoor), up to 60m (indoor)
Air data rate	11 / 5.5 / 2 / 1Mbps auto fallback		
Modulation	DSSS/CCK		
Certification	EN 300328 (radio) EN 60950/2000 (safety) EN 301489-1/-17 (EMC) FCC part 15		
Security features	WEP64, WEP128, WPA		