

**HW 86052** Linux-Driven Embedded WLAN Module

**HW 86062** Linux-Driven, User Programmable Embedded Computer

**HW 86952** Evaluation & Development Environment Kit

Mobilize your industrial application with IEEE 802.11b/g

DATA  UNWIRED



HW 86052, HW 86062, original size



Linux Kernel 2.6.24

### Pure Versatility – The Mean Machine For Any Application

Imagine a self-contained, Linux-driven WLAN communications module which isn't simply a wireless gateway – it's a ready-to-use, user programmable embedded Linux computer, equipped with various data interfaces, such as:

- UART1 (9-wire DCE)
- UART2 (5-wire DCE)
- Debug-UART (3-wire)
- USB device, USB host A, USB host B
- Ethernet RMII
- Multimedia card/SD card
- Synchronous serial interface
- I2C interface
- External bus interface
- SPI
- GPIO
- Digital audio (voice) interface

### The HW 86952 Evaluation & Development Environment Kit: Next best thing to a time machine

What's more annoying than wasting your time on wiring chips when you've got the opportunity of starting up with a ready-to-use embedded Linux computer, supported by a hard- and software development kit right on your bench?



HW 86952 Evaluation & Development Environment Kit

### Take the Advantages

- Ready-to-use hardware development kit
- Ready-to-use software development environment

### All Accessories Included

- WLAN module HW 86052
- Hardware development board
- Power supply, selectively EU, UK or US type
- Serial data cable set
- Swivel antenna
- DVD with VMware<sup>1)</sup> image, software documentation, hardware documentation, schematic diagram sample

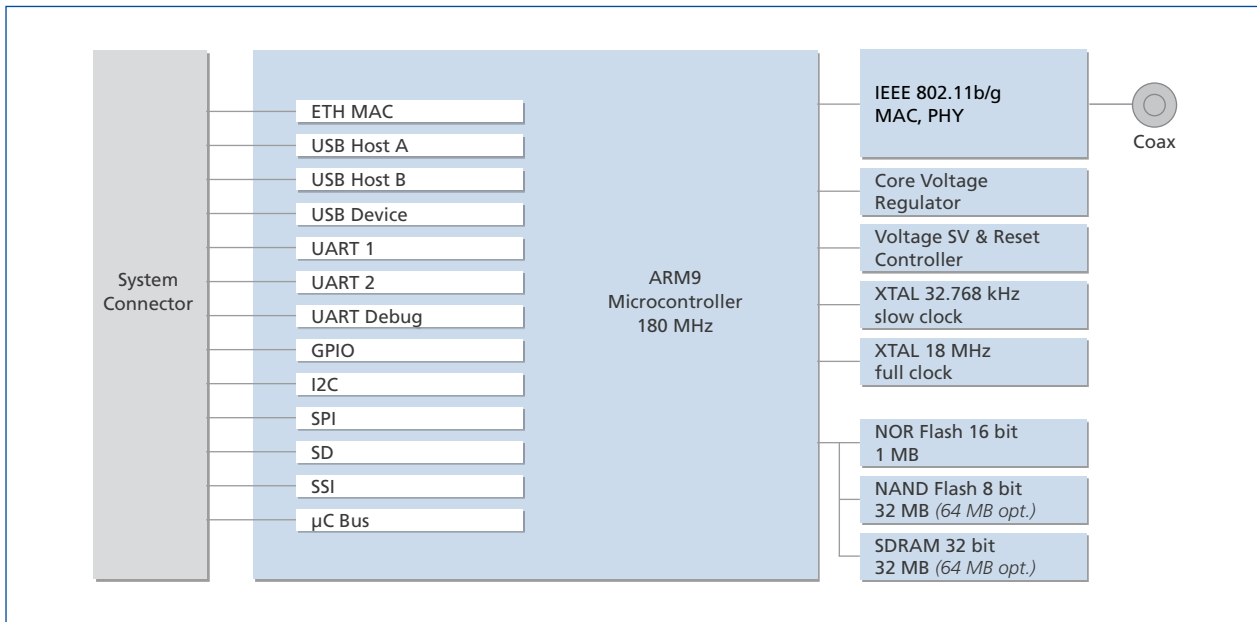


VMware<sup>1)</sup> image included!

### Start Developing Your Own Application

Boot VMware<sup>1)</sup> image ...  
... run compiler ...  
... and simply enjoy!

<sup>1)</sup> VMware is a registered trademark of VMware, Inc



Block Diagram HW 86052

SPECIFICATIONS

<b>Dimensions</b>	47 mm x 37 mm x 3 mm (L x W x H)
<b>Height with RF connector mated<sup>2)</sup></b>	3.5 mm (max.)
<b>Component height top side</b>	2.0 mm (max.)
<b>Component height top side with RF connector mated<sup>2)</sup></b>	2.5 mm (max.)
<b>Component height bottom side</b>	0.0 mm
<b>PCB Thickness</b>	1.0 mm (typ.)
<b>Stacking height (varied by host side part)</b>	3.0/3.5/4.0/4.5 mm (typ.)
<b>Weight</b>	6.8 g
<b>Temperature range</b>	-20 to +70 °C operating, -40 to +80 °C storage
<b>Operating voltage</b>	3.0-3.45 V, 3.3 V nominal
<b>Power consumption<sup>3)</sup></b>	180-250 mA typ., down to 45 mA in power save mode, 1 mA typ. in suspend mode
<b>Processor</b>	32 bit ARM9 microcontroller, 180 MHz
<b>Memory</b>	NAND Flash 8 bit 32 MB (64 MB opt.), SDRAM 32 bit 32 MB (64 MB opt.)
<b>Standards<sup>2)</sup></b>	IEEE 802.11b/g
<b>Modulation<sup>2)</sup></b>	DSSS/OFDM
<b>Air data rate<sup>2)</sup></b>	Up to 54 Mbit/s
<b>Frequency range<sup>2)</sup></b>	2400 MHz to 2483.5 MHz
<b>Transmit power<sup>2)</sup></b>	15 dBm (11b) typ., 13 dBm (11g) typ.
<b>Receiver sensivity<sup>2)</sup></b>	-85 dBm (typ. @ 11 Mbps), -71 dBm (typ. @ 54 Mbps)
<b>Certification<sup>2)</sup></b>	ETSI EN 300328 (radio) compliant to FCC part 15
<b>Approval<sup>2)</sup></b>	ETSI (EU)
<b>WLAN Security features<sup>2)</sup></b>	<p><b>Supported WPA/IEEE 802.11i features:</b>                      Key management for WEP64, WEP128, WEP152, WPA-PSK („WPA-Personal“), WPA with EAP („WPA-Enterprise“), WPA (with TKIP) and full IEEE 802.11i/RSN/WPA2 (with TKIP or CCMP/AES)</p> <p><b>Supported EAP methods (IEEE 802.1X Supplicant):</b>                      EAP-TLS, EAP-PEAP, EAP-TTLS, EAP-SIM, EAP-AKA, EAP-PSK, EAP-FAST, EAP-PAX, EAP-SAKE, EAP-IKEv2, EAP-GPSK (experimental), LEAP</p>
<b>Interface</b>	120-pin system connector
<b>Data interfaces</b>	UART1 (9-wire DCE), UART2 (5-wire DCE), Debug-UART (3-wire), USB Device, USB Host A, USB Host B, Ethernet RMII, MultiMediaCard/SD Card, synchron. Serial Interface, I2C Interface, external Bus Interface, SPI
<b>Voice interface</b>	Optional through Digital Audio Interface
<b>Other interfaces</b>	Power Supply, GPIO, Boot Control, LED Status Control
<b>Antenna interface<sup>2)</sup></b>	1 surface mount coaxial connector, 50 Ω
<b>Range<sup>2)</sup></b>	Up to 300 m (outdoor), up to 60 m (indoor)
<b>Startup time</b>	approx. 15 sec (cold boot), approx. 3 sec (resume)

<sup>2)</sup> HW 86052 only

<sup>3)</sup> HW 86062: 35 mA-100 mA (typ.), 1 mA (suspend mode)