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Bluegiga Simplifies Bluetooth Networking with its WRAP Access Server

Bluegiga, available through [GLYN High-Tech Distribution](#), introduces its C-tick approved Bluetooth WRAP Access Server™ for Bluetooth networking. WRAP Access Server™ is a cutting edge wireless Bluetooth router, supporting multiple communication standards including Ethernet, WiFi, and GSM/GPRS enabling full media-independent TCP/IP connectivity. WRAP Access Server™ is easy to deploy and manage in existing wired and wireless networks without compromising speed or security. For very fast deployment, WRAP Access Server™ configurations can easily be copied from one device to another using USB memory dongles. The device can be conveniently managed and upgraded remotely over SSH secured links and by supporting SNMP (Simple Network Management Protocol), WRAP Access Servers can also be connected to customer's management and monitoring systems.



WRAP Access Server™ is targeted at system integrators and original equipment manufacturers wanting to deploy a secure, cost effective, low power consuming and up to 100-meter range wireless network for Bluetooth-equipped devices. These devices include products such as barcode readers, pay-terminals, medical instruments, special purpose PDAs and mobile phones, and telemetry and machine-to-machine units.

Available with an optional mounting accessory, WRAP Access Server™ can be firmly and securely placed on walls and ceilings.

Key features of the WRAP Access Server™:

- Enables Bluetooth networking between multiple devices
- Serves up to 21 simultaneous Bluetooth connections
- Offers an open platform for adding local applications
- Acts as a transparent router or bridge
- Supports all key communication medias:
 - Bluetooth
 - Ethernet
 - WiFi, GSM, and GPRS with CF card
 - USB and RS232
- Incorporates packet filtering firewall

Target Applications:

- Point-of-sales systems
- Logistics and transportation systems
- Telemetry and machine-to-machine systems
- Medical and healthcare systems
- Fitness and sport telemetry systems
- Cable replacement

- Content and application distribution to mobile phones and PDAs

Networking Features:

- Bluetooth version 1.1 and 1.2 compliant
- RFCOMM, HCI, L2CAP, SDP, LAP, SPP, PAN, ObJP and FTP
- Point-to-Point, Point-to-Multipoint, Piconet and Scatternet
- Class 1, up to 100 meters. Software configurable to support Class 2, up to 10 meters
- Full TCP/IP support
- Transparent router or bridge
- Packet filtering firewall
- With optional compact flash card WiFi 802.11b or GSM and GPRS
- Remote management and monitoring software

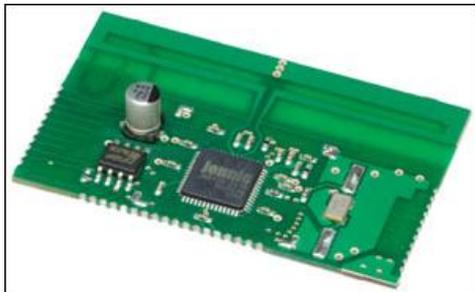
For additional information and pricing on Bluegiga WRAP Access Server™, please send your enquiries to sales@glyn.com.au



Jennic Reduces BOM Cost for ZigBee/IEEE802.15.4 Reference Designs to Under US\$5

Jennic, available through [GLYN High-Tech Distribution](#), has achieved a new price point for ZigBee and IEEE 802.15.4 nodes with the introduction of a low-cost reference design for its JN5139 wireless microcontroller which reduces the volume bill of materials (BOM) cost of modules for wireless sensor networks to well under \$5. This includes the cost of the Jennic JN5139 wireless microcontroller, a high performance PCB antenna design, and all other ancillary components.

The use of wireless to connect devices such as thermostats and light switches can save on installation costs when compared to wired solutions. However, the cost of the node itself can be a significant proportion of the total and hence determine the choice of system implemented. To address the cost issue, Jennic has developed a reference design that enables manufacturers to implement the microcontroller and radio related functions of a system at under \$5. The reference design provides excellent RF performance, achieving a range in excess of 1km. Its availability also ensures that product time to market is kept to a minimum by providing a ready to use and proven RF board layout.



The sub \$5 price point is achieved as a result of several factors. In the RF circuit, Jennic has eliminated the antenna and RF balun (the other key component in the RF path) components by using a balanced antenna printed on the circuit board, requiring no additional components to match perfectly to the chip's 200 ohm resistive differential RF interface. The benefits are many – by designing the antenna to interface directly to the chip, the balun losses are removed, giving an instant 1.5dB improvement in receive sensitivity and transmit power. Secondly, the design of the antenna ensures that it has significantly higher gain (around 4dBi) than the ceramic antenna (approximately 1.5dBi) it replaces – due to the design's larger size, giving higher radiation efficiency, and the lower resistivity of the pcb metallization when compared with the sintered metal commonly used in ceramic antenna designs. The design has been tested for spurious emissions and meets the regulatory requirements of both the US and Europe.

For the crystal, Jennic has used a HC49U surface mounted package measuring approximately 12.5x3.7x4.2mm high, which costs about half the price of equivalent but miniature devices. The increased physical size of the resonating element gives higher performance - the equivalent series resistance is smaller, resulting in lower system phase

noise and faster oscillator start-up times, saving on overall system power consumption. For the PCB, by providing a two-layer reference design measuring just 49x25mm, including the antenna area, the cost of the entire application board can be kept to a minimum. This is important in many low cost products with large application boards such as lighting or remote control, where the design cannot sustain the cost of a four layer board, as used in many conventional RF reference designs. The reference design is freely available from Jennic's support website – www.jennic.com/support.

To learn more and read the background information on this reference design [click here](#)



FTDI Announces VDRIVE2 and VMUSIC2 Vinculum USB Host Controller Development Modules

FTDI, available through [GLYN High-Tech Distribution](#), is pleased to announce the availability of two new development modules based on the VNC1L Vinculum embedded USB host controller IC. Using FTDI's Vinculum firmware, the VDRIVE2 can be used to add USB Flash disk connectivity to virtually any system, allowing files to be written directly to a USB Flash disk. The VMUSIC2 module provides all the functionality of the VDRIVE2, but uses an extended version of FTDI's VDAP firmware with a VLSI VS1003 IC to allow MP3 file playback directly from a USB Flash disk.

VDRIVE2 and VMUSIC2 are functionally similar to the first generation VDRIVE1 and VMUSIC1 modules respectively. The main differences between these two generations are the plastic enclosure, different PCB layout and included cable with headers on the second generation development modules.

VDRIVE2

The [VDRIVE2](#) module provides an easy solution for adding a USB Flash disk interface to an existing product. Only four signal lines plus 5V supply and ground are required to be connected.

Using the Vinculum [VDAP firmware](#), the VNC1L's I/O interface can be selected between the serial UART or SPI using the on-board jumper pins.

Key Features:

- Uses FTDI's [VNC1L](#) embedded USB host controller IC device
- USB 'A' type socket to connect USB Flash disk
- Traffic indicator LED
- 2mm (0.08") pitch 8-pin connector.
- 8-way header interconnect cable provided
- Only four signals to connect, excluding power and ground
- Jumper selectable UART or SPI interfaces
- Single 5V supply input
- Uses Vinculum [VDAP firmware](#) and command set
- Enclosure with snap in place clips allows for easy front panel mounting
- Program or update firmware via USB Flash disk or via UART or SPI interface
- VNC1L firmware programming control pins PROG# and RESET# brought out onto internal jumper interface (only accessible on internal module PCB)
- VDRIVE2 is a Pb-free, RoHS complaint development module
- [Schematics](#) and [firmware files](#) available for download from the [Vinculum website](#)



A PCB only version is available for larger volume OEM customers.

VMUSIC2

The [VMUSIC2](#) module is a product which not only lets you add USB Flash disk interfacing to your product, but also allows you to play back MP3 and other popular digital music formats directly from a USB Flash disk. Only four signal lines plus 5V supply and ground are required to be connected. Extensions to the Vinculum VDAP command set allow you to play a selected file, as well as control the volume, balance, etc. of the sound channel and monitor the status of the file being played. The Vinculum VDAP firmware also allows the VNC1L's I/O interface to be selected between the serial UART or SPI using on-board jumper pins.

The VMUSIC2 is ideal for adding MP3 playback from USB drive capability to home entertainment and in-car audio systems, as well as other appliances requiring audio playback capability from USB Flash disks.

Key Features:

- Uses FTDI's [VNC1L](#) embedded USB host controller IC device combined with VLSI VS1003 IC for music playback
- USB 'A' type socket to connect USB Flash disk
- Stereo 3.5mm headphone jack socket for audio playback
- Audio line-out connector for audio playback
- Only four signals to connect, excluding power and ground
- Jumper selectable UART or SPI interfaces
- Single 5V supply input
- Traffic indicator LED
- Uses extended Vinculum [VDAP firmware](#) and command set
- Program or update firmware via USB Flash disk or via UART interface
- VNC1L firmware programming control pins PROG# and RESET# brought out onto internal jumper interface
- VMUSIC2 is a Pb-free, RoHS complaint development module
- [Schematics](#), and [firmware files](#) available for download from the [Vinculum website](#)



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Micronas Introduces Most Accurate Linear Hall Sensor for Automotive Applications

The new HAL[®] 82x offers accurate position sensing of newest-generation throttle valves

Micronas, a leading supplier of innovative application-specific IC system solutions for consumer and automotive electronics and available through [GLYN High-Tech Distribution](#), announced the HAL 82x family of programmable Hall-effect sensors designed to meet the latest accuracy requirements of many automotive applications."

"We designed the HAL 82x to meet the increasing demands on engine management in the automotive industry. Ever more accurate readings of key vehicle parameters means lower emissions and better fuel economy," according to Micronas. "The sensor offers highest precision to meet the requirements of next-generation throttle valve position sensors. This reduces pollutant and CO2 emissions." Other target applications include linear movement measurement, flow measurement, position detection and contactless potentiometers.



Like its predecessors of the second generation, the HAL 82x has an integrated EEPROM to store the sensor parameters. Proven in previous generations of Micronas Hall-effect sensors, the EEPROM is extremely robust and reliable, even at the allowed maximum junction temperature of 170 °C.

The sensor's high accuracy is based on the 14-bit signal path, the integrated digital signal processing and the ratiometric 12-bit analog output. The sensor also features a multiplexed analog output. With this new output format, developed by Micronas (patent pending), the 12-bit D/A-converter of the HAL 82x achieves the actual resolution of a 14 bit-converter, while

avoiding the small quantization intervals. This delivers an excellent signal-to-noise ratio on the output.

Micronas designers put extra effort into minimizing the drift of sensitivity and offset over the temperature range. This guarantees long-term stability of the main parameters, which helps to ensure the car's optimum performance for many years. The differential non-linearity (DNL) is below one LSB. Electrostatic discharge (ESD) is a severe issue in automotive applications and the 4-kV rating of the HAL 82x significantly surpasses other existing linear Hall sensors.

Automobile trouble-shooting and repair is enhanced by an integrated wire break detection system. This makes it easy for the engine control computer to detect and report problems with the car's wiring.

Micronas offers a development board for design and production of the Hall sensors. The required software is available free of charge.

The RoHS-compliant HAL 82x is available in the TO 92UT package, suitable for overmolding, and operates at ambient temperatures between -40 °C and +150 °C. Samples will be available in July 2007.



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