Versatile, Low-Cost Embedded SMT WiFi Module for High-Volume Development

Connect One released Nano WiReach SMT, a 0.8” x 1.45” (2.0 x 3.7 centimeter) WiFi module offering 3G routing, WiFi client and access-point capabilities. Nano WiReach SMT offers multiple hardware interfaces and extensive firmware functionality that facilitates a full suite of secure Internet protocols for up to eight WiFi users in its router or access point mode. Connect One delivers this advanced, versatile WiFi solution at the lowest cost price point on the market today, making it ideal for high-volume production.

Boasting a full suite of Internet protocols and applications, Nano WiReach SMT powers immediate, full–featured connectivity for embedded solutions without any WiFi driver development or porting. The Nano WiReach SMT module can also serve as an independent WiFi access point where WiFi infrastructure does not exist. With the module acting as a WiFi access point, customers can connect to their deployed, in-field product via standard WiFi devices, such as iPhones, iPads and other mobile phones and devices, to control or manage their product.

To ensure complete security, Nano WiReach SMT offers a highly advanced level of Internet security. The module comes complete with the latest WiFi encryption algorithms (WPA/WPA2, in both PSK and Enterprise modes) as well as including Internet SSL communication and encryption algorithms. In addition, because it serves as a router to the customer product, it acts as an inherent firewall, protecting the embedded application from attacks originating from the Internet.

“Device-level connectivity has reached the commodity-level price point,” noted Erez Lev, Vice President Sales for Connect One. “With Nano WiReach SMT, Connect One has gone the second mile, delivering the most advanced WiFi module on the market today for the lowest price point. Given the suite of connectivity options, lock-down security, and design-in versatility, Nano WiReach SMT promises production houses a new standard of WiFi capabilities for their devices at a much lower cost.”

To maximize design-in flexibility, Nano WiReach SMT offers firmware support of

several modes of operation:

• Embedded Router—LAN or WiFi clients gain a single cellular WAN connection to the Internet (3G router) or routing between LAN and WiFi networks,
• Embedded Access Point—Devices containing WiFi can connect to the product's embedded access point to control or manage processes,
• LAN to WiFi Bridge—Transparent bridging of LAN over WiFi enables direct RMII connection to existing MAC hardware. Any microcontroller with a built-in Ethernet MAC can be connected to WiFi with zero development effort,
• Serial to LAN/WiFi Bridge—Transparent bridging of serial data over LAN or WiFi is boosted by the module's speedy 3-Mbps UART,
• Full Internet Controller mode—Simple microcontrollers can use Nano WiReach SMT's rich protocol and application capabilities to perform complex Internet operations, such as e-mail, FTP, SSL, embedded Web server and others. Internet controller mode can be used with any hardware interface, and
• PPP emulation—Existing (e.g., cellular modem) designs currently using PPP to interface to the cellular modem can connect transparently over WiFi with no changes to application or drivers.

Nano WiReach SMT includes RMII, USB, SPI and fast UART interfaces for easy integration into existing or new designs. It is available in two versions: one with an antenna connector and one with a built-in antenna.

Nano WiReach SMT supports 10 simultaneous TCP/UDP sockets; two listening TCP sockets; SMTP, MIME, POP3, FTP, Telnet, and HTTP/HTTPS clients; and an HTTP/HTTPS embedded Web server with a Web site for the host application and one for configuring the module. Nano WiReach SMT supports 64-/128-bit WEP, WPA/WPA2 (PSK and Enterprise), AES-128/256, SHA-128/192/256, and 3DES encryption; and the SSL3/TLS1 protocol for a secure client socket session and a secure FTP session.

The module operates at an extended temperature range of -10° to 65°C (14° to 149°F) and is RoHS-compliant.

Availability and Evaluation Board
Nano WiReach SMT is now available at $26 for high-volume projects. The II-EVB-365 evaluation board, priced at $160, provides an easy environment for developing applications and testing Nano WiReach SMT. Click through on the Nano WiReach SMT link for more information.

For further information, please visit the company's Web site at www.connectone.com [1].

Source URL (retrieved on *07/11/2014 - 8:49am*):
http://www.wirelessdesignmag.com/product-releases/2011/07/versatile-low-cost-embedded-smt-wifi-module-high-volume-development

Links:

[1] http://www.connectone.com