

## cozybit **Zeroconf module**

The cozybit Zeroconf module allows devices to advertise services and announce themselves to users without requiring extensive network configuration. With Zeroconf, an embedded system can:

- Quickly point users to its web-based configuration page.
- Announce a wireless VOIP handset on the network.
- Enable users to browse for services such as printers, media devices, and network-attached storage.



## **Features**

The cozybit Zeroconf module provides:

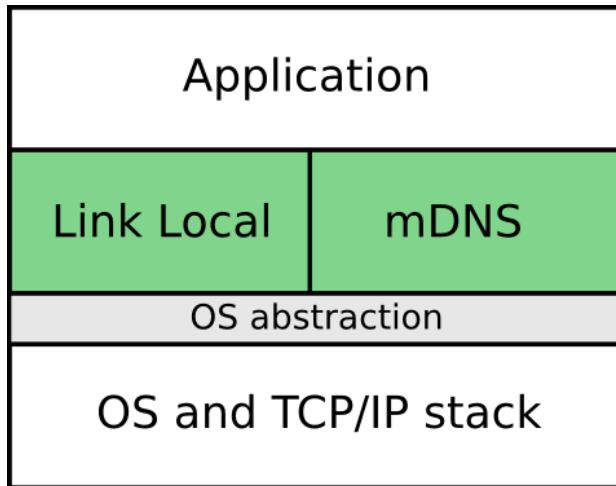
- Multicast DNS (mDNS) for automatic name resolution without the presence of a DNS server.
- mDNS Responder, enabling the device to advertise its services on to DNS-SD (Service Discovery) browsers on the network.
- mDNS Responder API, allowing the developer to configure the device to advertise a desired name and service or services.
- IP4LL (Link Local) address self-assignment when it is needed.
- Adherence to current Zeroconf and mDNS draft standards and compatibility with Zeroconf implementations on Apple, Windows, and Linux PCs.
- OS and TCP/IP stack independence.

## **Details**

The cozybit Zeroconf module is designed for small embedded systems. The mDNS Responder runs in a single thread and does not require the use of dynamically allocated memory. The mDNS service, at multicast address 224.0.0.251, uses UDP port 5353.

IP4LL allows devices to self-assign IP addresses in the 169.254/16 prefix. This allows devices to communicate on networks without DHCP or user configuration and is especially useful in ad-hock wireless networks. The mDNS Responder is capable of using an assigned IP or an IP4LL-provided address when needed.

The module consists of an mDNS Responder thread and an optional IP4LL thread for Link Local address self-assignment. An OS abstraction layer allows the module to be easily ported to many platforms.



## Supported Platforms

At this time, the cozybit Zeroconf module has been ported to Linux and Marvell 8388V (nohost SDK). The module's footprint when compiled with the ARM ADS toolchain is approximately 2KB.

## Standards

Please refer to the following draft standards and RFCs for details about the Zeroconf draft standard:

mDNS	draft-cheshire-dnsext-multicastdns
DNS-SD	draft-cheshire-dnsext-dns-sd
DNS SRV	rfc2782
IPV4LL	rfc3927

## Contact

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