



# RA Ecosystem Partner Solution

## Ubiquitous Network Framework

Compact, Efficient, and High-speed network platform



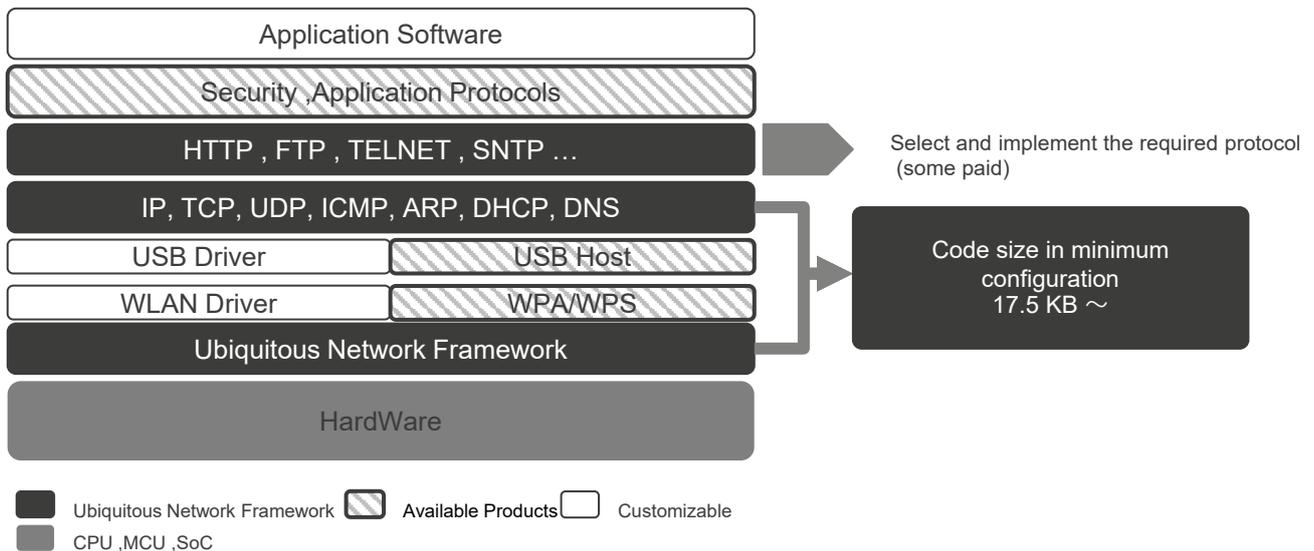
### 1. Overview

TCP/IP stack based middleware for enabling communication features on your embedded applications using [RA MCUs](#). Ubiquitous Network Framework does not limit hardware resource requirement such as MCU ROM/RAM size. In addition, it is also capable to be integrated into your current software architecture with RTOS (e.g. uITRON, Amazon FreeRTOS) or without RTOS (Bare metal case).

### 2. Features

- Does not limit hardware resource requirement such as MCU ROM/RAM size.
- One stop solutions for enabling network capability on your embedded devices
- Integrate into your current software architecture with RTOS (e.g. uITRON, Amazon FreeRTOS) or without RTOS (Bare metal case).

### 3. Block Diagram



### 4. Target market & Applications

- Wireless/wired LAN adapter for home air conditioners
- Home Control System
- Security Cameras
- Wireless adapter for water heater control
- Healthcare device
- Home gateway for smart meters
- Hoe Appliance
- IoT Edge devices



In order to maximize a value of “Ubiquitous Network Framework”, various option libraries are available for your system development

- **Security Components**

Component for secure communication in TCP/IP. Including necessary encrypted data communication protocols such as TLS and IPsec.

Supported protocols : **TLS, IPsec**\*, **PANA, DTLS**

※IPsec : IPsec is a group of protocols that are used to set up encrypted connections between devices. IPsec is used to set up VPNs, and it works by encrypting IP packets, along with authenticating the source where the packets come from.

- **Wireless Components**

Following major Wi-Fi protocols/features are available

WPA (Wi-Fi Protected Access)  
WPS (Wi-Fi Protected Setup)  
Wi-Fi Direct

- **Smart House Components**

Supported key components to design smart house applications.

**ECHONET Lite**  
**UPnP**  
**mDNS(bonjour)**  
**TFTPc**  
**USB Host**

**Web Inquiry form : <https://www.ubiquitous-ai.com/en/contact/product/>**

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