OPC-UA Server SDK

Overview
OPC-UA Server SDK is the embedded SDK to realize OPC-UA Server function which is a recommended protocol by Industrie 4.0 as in "Reference Architectural Model Industrie 4.0". The SDK is based on C-Language and it makes easy implementation of OPC-UA Server function for those industrial equipment such as OPC-UA non-responding machine tools and robots.

Features
- C-Language based API
  - Not only API but also Internal implementation is written in C-Language. The best for embedded systems.
  - Completed the compliance test with OPC-UA standard.
  - Verified its functionality by UA Compliance Test Tool provided by OPC Foundation.
  - Supports Security Policy recommended by OPC Foundation.

Specifications
- Compliant with OPC-UA specification version 1.0.3
- Profile
  - Embedded Profile
    (* Please contact Macnica sales department about Micro, and Nano Profile.)
- Transfer Protocol
  - UA-Binary
- Security Policy
  - None, Basic128Rsa15, Basic256, Basic256Sha256

Required Resource
- ROM
  - Windows version: about 600KB
  - Linux version: about 550KB
- RAM
  - Windows/Linux: about 3MB

Verified OS
- Windows 10 Pro 64Bit
- Windows 7 Professional 64bit
- Linux Distribution
  - Debian v8.0 (jessie)
  - Raspbian v8.0 (jessie)
(* Please contact Macnica sales department about other versions.)

Development Environment
- Visual Studio 2017 Professional
- gcc version 4.9.3
(* Please contact Macnica sales department about other versions.)

Verified HW
- Dual ARM Cortex-R, A9 (Intel Cyclone V SoC)
- ARM Cortex-A8 (TI Sitara)
- ARM Cortex-A53 (Broadcom BCM2837)
- Intel Core i5, i7 series

Deliverables
- OPC-UA Server SDK (Binary or Source Code)
- Sample application (Source code)
- User’s manual
Software Configuration

OPC-UA Server Application

SDK API

OPC-UA Server SDK

ANSI C Stack
(from OPC Foundation)

OS Dependent Layer

Network Stack Dependent Layer

OS (Windows/Linux/RTOS, etc.)

H/W (CPU/FPGA SoC, etc.)

Platform Dependent Layer

Network Stack

OpenSSL

Security Dependent Layer

Evaluation Environment

Mpression Soda
(OPC-UA Server)

Image data acquisition

Windows PC

Image data is converted to be handled by OPC-UA

USB

Wire LAN

(OPC-UA Client)

Image data view
(Binary data)