

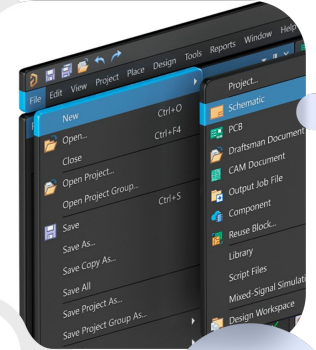
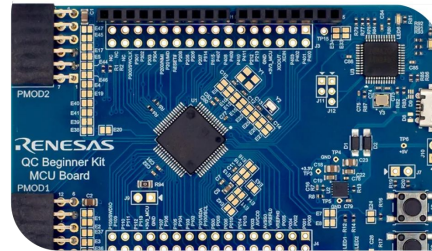
EMBEDDED SYSTEMS: FROM PRODUCT DESIGN TO PCB LAYOUT

Check-list

ChipIN CDAC
Bangalore



Renesas QuickConnect
Design Kits



License Related: Altium Designer

1. Activate Altiumlive account before installing the Altium Designer tool
2. Students need to have an active student license.
3. Educators should have an Educator license upon confirmation from the URM.
4. One license should be used on only one system. If you want to use it on another system, make sure to first log out from the system you're currently using, and then log in on the new one.
5. Use your own Altium account credentials to activate your student license. Do not share your login details with others.
6. The student license is typically valid for one year and can be renewed if still eligible.
7. Always use the latest version of Altium Designer

Prerequisites for Set-up: Altium Designer

1. Operating System : Windows 7 or newer (64 -bit recommended)
2. RAM: 4 GB (8 GB or more for better performance)
3. Processor: Intel Core i3 or equivalent (i5/i7 recommended for complex designs)
4. 10 GB free space
5. Dual Monitor Setup
6. Separate Mouse and Keyboard

Prerequisites for Set-up: Renesas QuickConnect Studio

1. Renesas QuickConnect Beginners Kit V2.0 – The kit includes all the hardware components needed for this lab.
2. Windows PC – A computer running Windows operating system. Renesas recommends using a system running Windows 10 or later versions, equipped with at least one available USB port.
3. Web Browser – Ensure a web browser is installed on a Windows PC. For optimal performance, it is advised to use Google Chrome.
4. MyRenesas Registration – An active MyRenesas account must be obtained to access QuickConnect. If you do not have one, register on the MyRenesas page.
5. Internet Connection: A stable internet connection is required to access online resources and download necessary files.
6. Segger J-link flasher – SEGGER - The Embedded Experts - Downloads - J-Link / J-Trace. To flash the boards, Renesas recommends downloading and installing the 64-bit installer, ensuring it is the latest version compatible with the user's device.
7. RTT Viewer – Download and install the RTT Viewer application (version 8.24) which is used to view the debug logs from the Renesas365 Dev Kit.
8. QuickConnect Sandbox application – For applications based on Bluetooth connectivity, download and install the QuickConnect Mobile Sandbox application for Android or iOS.
9. Wi-Fi security requirements – The DA16xxx series Wi-Fi modules support the following WiFi security types: 0 (OPEN), 1 (WEP), 2 (WPA), 3 (WPA2), 4 (WPA+WPA2), 5 (WPA3 OWE), 6 (WPA3 SAE), 7 (WPA2 RSN and WPA3 SAE). The "Sensor Data to AWS IoT" application used in this lab uses WPA2 security type by default. Verify that the security setting on the Wi-Fi access point(AP)/router matches this requirement. If not, update the settings accordingly either in the application or on the Wi-Fi AP/router.
10. MQTT Explorer – Download and install the MQTT Explorer application, which is used to view the MQTT messages published by the Renesas365 Dev Kit to AWS IoT. AWS account required for creating AWS IoT.

Internet connectivity

1. Required for license activation, Altium 365 cloud collaboration, and downloading updates.
2. A stable broadband connection (at least 5 Mbps download) is needed, offline mode is limited after initial setup.
3. For QuickConnect Studio integration, low-latency internet ensures smooth remote debugging.
4. Altium Designer needs internet for initial activation, updates, and Altium 365 features. After activation, core design tools work offline, but occasional online license checks are required.
5. Renesas QuickConnect Studio is a fully cloud-based design environment. To ensure smooth drag-and-drop layout, automatic code generation, and responsive remote debugging, the platform requires a stable internet connection (minimum ~5 Mbps; 10 Mbps or more recommended).