

RapidSE Devices v1.10.19 – Flavors, Features and Functionality

RapidSE Devices v1.10.19 is an **SEP 1.0** application developed on the **EM357** platform and exercised via the **RapidSE Devices v1.10 Serial Protocol**. It is intended for easy integration with end devices that require **ZigBee Pro** and **SEP 1.0** compliance and functionality.

The application is available in the following flavor configurations (note that **CBKE** flavors may operate with **Test** or **Production Certificates**):

| Designation | Profile | Security | Communications | Commissioning |
|-------------|---------|--------------|----------------|--|
| RNU | SEP 1.0 | APS/Non-CBKE | UART | Configurable Preconfigured Link Key or fixed Installation Code |
| RKU | SEP 1.0 | CBKE | UART | Configurable Preconfigured Link Key or fixed Installation Code |
| RNS | SEP 1.0 | APS/Non-CBKE | SPI | Configurable Preconfigured Link Key or fixed Installation Code |
| RKS | SEP 1.0 | CBKE | SPI | Configurable Preconfigured Link Key or fixed Installation Code |

The application includes the following features and functionality:

| Feature Set | Functionality | Non-CBKE | CBKE |
|---|--|----------|------|
| Utility | Reset | ✓ | ✓ |
| | Serial Bootload | ✓ | ✓ |
| | Module Information | ✓ | ✓ |
| | Restore Defaults | ✓ | ✓ |
| | Error Reports | ✓ | ✓ |
| ZigBee Network | Scan and Join | ✓ | ✓ |
| | Permit Joining | ✓ | ✓ |
| | Leave Network | ✓ | ✓ |
| | Commission by/Write to Preconfigured Link Key | ✓ | ✓ |
| | Commission by Installation Code | ✓ | ✓ |
| | Network Status | ✓ | ✓ |
| | Device Announcement | ✓ | ✓ |
| | Device Discovery | ✓ | ✓ |
| | Device Descriptor | ✓ | ✓ |
| | Partner Link Key Request | ✓ | ✓ |
| | Remote Leave Network Request | ✓ | ✓ |
| Time | Read UTC and Local Time | ✓ | ✓ |
| | Network Heartbeat/Trust Center Keep Alive | ✓ | ✓ |
| Demand Response & Load Control (Client) | Cache up to 3 DRLC Events | ✓ | ✓ |
| | DRLC Event Start/Stop | ✓ | ✓ |
| | DRLC User Override | ✓ | ✓ |
| | DRLC Event Received | ✓ | ✓ |
| | DRLC Cached Event Request | ✓ | ✓ |
| Price (Client) | Cache up to 2 Price Events | ✓ | ✓ |
| | Price Event Start/Stop | ✓ | ✓ |
| | Price Event Received | ✓ | ✓ |
| | Price Cached Event Request | ✓ | ✓ |
| Message (Client) | Cache 1 Message | ✓ | ✓ |
| | Message Display Start/Stop | ✓ | ✓ |
| | Message Confirmation/Cancel Confirmation | ✓ | ✓ |
| Metering (Client) | Attribute/Formatting Request | ✓ | ✓ |
| Metering (Server) | Support for Mandatory Attributes | ✓ | ✓ |
| | Read/Write Supported Attributes via ZCL General | ✓ | ✓ |
| Key Establishment | CBKE with ECC (Test or Production Certificate) | | ✓ |
| Smart Energy Configuration | DRLC Advanced or "Pass-Through" Mode | ✓ | ✓ |
| ZCL Identify (Server) | Identify | ✓ | ✓ |
| ZCL General | Remote/Local Client/Server Attribute Request/Write | ✓ | ✓ |
| ZigBee Application Support Layer | Device ID Request/Write | ✓ | ✓ |
| | Supported Clusters Request/Write | ✓ | ✓ |
| | Security Options (APS Encryption Toggle, Commissioning Mode) | ✓ | ✓ |
| Custom Profiles and Messages | Custom Profile ID Request/Write | ✓ | ✓ |
| | Message Transmit/Receive | ✓ | ✓ |