SYNC Application Development Kit

OVERVIEW

SYNC Application Development Kit enables users to build their own application software on SYNC devices. The development kit comes with toolkits and accessories to build applications using SYNC APIs.

SYNC Application Development Kit can be used to develop additional protocol drivers, data processing or visualization applications within SYNC devices. SYNC hardware platforms are substation ruggedized hardware with no moving parts. SYNC hardware platforms are also tested for stringent temperature and environmental levels, and have proved suitable for a variety of industrial environments. SYNC Application Development Kit considerably reduces OEMs’ and end customers' time for customizing software applications on SYNC products for their unique requirements.

DELIVERABLES & FEATURES

• Build Machine VM with compiler/debugger tool chains
• Data Simulator/Validator (ASE2000/ASE61850/ASE62056)
• Sample application source code and make files
• Configuration utility (EasyConnect)
• Target Machine (Selected SYNC Device)
• Integration and testing application as option (ASE2000/ASE61850)

INTEGRATION SERVICES

Development Support and Consultancy Services are offered for:
• Training on integration and SYNC API usage
• Design consultancy
• Third party application verification & testing

Interface Architecture

CUSTOM/THIRD PARTY APPLICATION SOFTWARE

Platform/Control Interfaces

Data Exchange Interfaces (push/pull)

Communication Interfaces

SYNC API

SYNC SOFTWARE PLATFORM

SYNC HARDWARE
ADVANTAGES OF DEVELOPMENT KIT

• Built-in SYNC Protocol Conversion Engine
• Supports extensive list of utility protocols like IEC 61850, IEC 60870, DNP3.0, Modbus
• Multi-application integration capability
• Multi-system (external device/software) connectivity option
• Connectivity with kalki.io Energy IoT Platform
• Obtain, store and push event and disturbance records
• Transparent/tunnelling support for end device management
• SNMP Agent/Manager for NMS Integration
• Dedicated tool for local and remote device management
• Inherent security features IE62351-3/-5 DNP3.0 SA/TLS
• IEC61131-3 based Logic Programming Options*
• Device and port level redundancy support

SUPPORTED HARDWARE

• SYNC 200
• SYNC 2000
• SYNC 2100
• SYNC 3000

Integration Workflow

1. Define Configuration Template (EC)
2. Code and Build Application (BM + Sample code)
3. Import Debug Firmware to APP template (EC)
4. Configure Device and APP (EC)
5. Download Configuration and Firmware to VM (EC + BM)
7. Rebuild for Target Machine (BM)
8. Import Target Firmware to APP Template (EC)
9. Integration Testing (EC + SYNC Device + Simulator/Validator)

White Box Testing
(Debug Environment)

Define and Code App
(Development Environment)

Integration Testing/Black Box
(Test Environment)

Contact sales@kalkitech.com for more details.

*Depends upon target hardware capability

EC - Kalkitech EasyConnect Utility
BM - Build Machine

Integration Workflow