



CohdaWireless™

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CohdaMobility MKx SDK

Software Development Kit for Cohda's MKx family.

Description

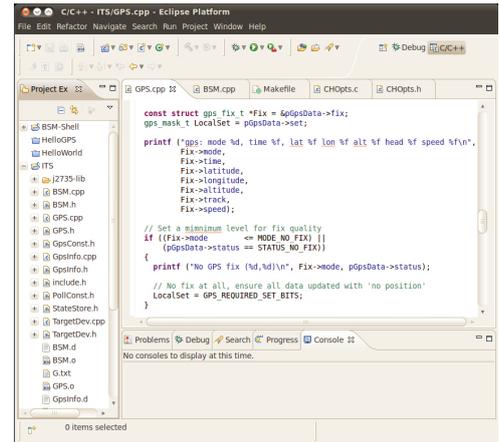
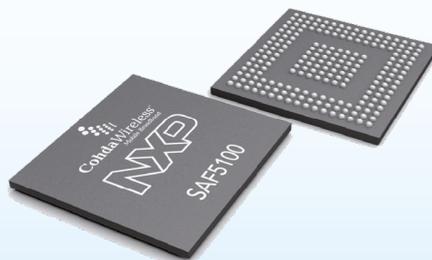
The MKx SDK is a virtual machine that allows anyone with previous embedded Linux experience to quickly compile & run applications on the MKx family. It also includes several example applications to demonstrate the various APIs. In addition to applications, the SDK includes all software (mostly source and a few binaries) necessary to modify and rebuild the MKx firmware to your own specifications, e.g. adding kernel features & drivers.

Applications

- Development of Application Layer software for the MKx family
- Documentation of MK2, MK3, MK4 and MK5 APIs
- Complete control of the MKx Linux system (vers. 3.10.17)

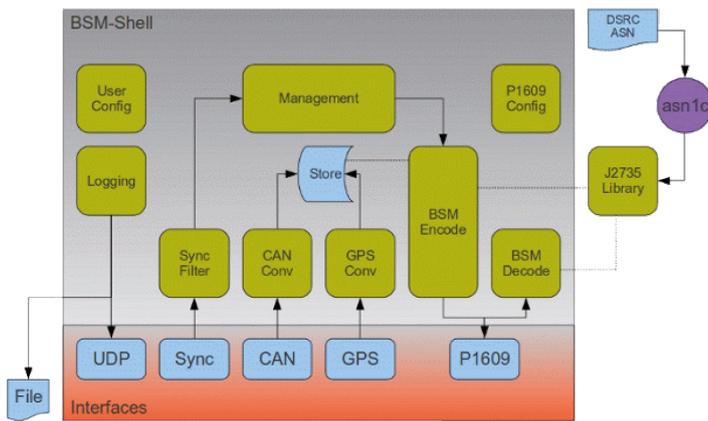


RoadLINK



Features

- API documentation
- Both HTML and Doxygen formats
- Complete Build Environment
- Tools for in-field updates of MKx
- Updates via Ethernet port or microSD card
- Virtual Machine Emulation
- Allows testing of applications in the absence of hardware
- Numerous example applications
- Eclipse Integrated Development Environment
- Linux operating system
- Kernel version 2.6
- Command line building via a 'make' command
- gdb server, allowing remote debugging of applications



Functional Description

The SDK includes BSM-Shell, an example application that demonstrates the usage of the MKx APIs: CAN, GPS, P1609, J2735, TCP/IP, etc. Its purpose is to enable customers to become familiar with the MKx family APIs and potentially use it as a base to create simple V2x applications like EEBL, ICW, etc. The BSM-Shell application provides the following functionality:

- Example MKx API interactions
- Periodic (50ms) BSM transmission based on GPS and CAN information
- File and/or UDP logging of all transmitted and received BSMs
- The BSM-Shell application provides example access to the following interfaces:
 - Sync: The wave-sync network interface (raw socket) emits a message every 50ms for both radios
 - P1609: The IEEE1609_WSMP protocol socket provides a WSMP/ WSMP-S interface for Tx and Rx
 - GPS: The gpsd daemon provides access to the on-board GPS device's position via libgps
 - CAN: socketCAN sockets provide both Tx and Rx access to the high-speed and low-speed CAN transceivers on the MK2
- The ETSI-Shell, an example application for the ETSI TC-ITS Network Layer, are also available.

To allow the development of applications in the absence of hardware, the SDK also comes with an emulation environment:

- The emulation environment is a virtual machine, allowing the applications to be built, run, and debug on any PC
- Communications Services are looped back at the bottom of the IEEE 1609.4 layer, allowing IEEE 1609 message transmission and reception to be tested
- NMEA log files can be replayed by the Time/ Position Services, allowing applications that use GPS to be tested
- CAN bus log files can be replayed by the Vehicle Interface Services, allowing applications that read CAN messages to be tested
- Applications that use the User Interface Services can be tested using the video and audio of the virtual machine

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