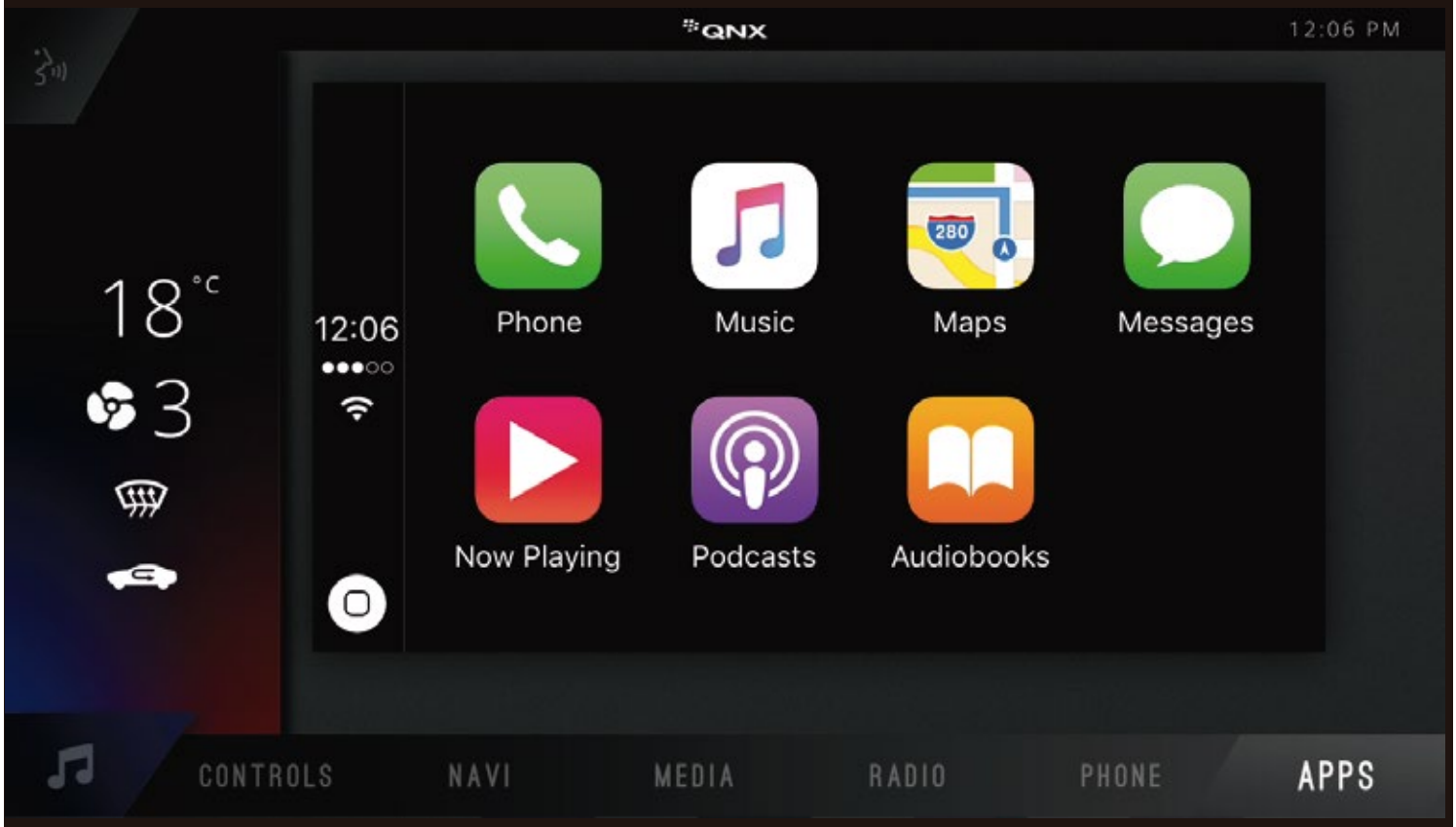
BlackBerry | QNX

PRODUCT BRIEF

QNX SDK for Smartphone Connectivity



The QNX SDK for Smartphone Connectivity is a full-featured offering that supports the latest protocols for phone projection technology. At the heart of the SDK is the projection manager framework which works in concert with plugins for various phone mirroring projection standards including Apple CarPlay® and Android Auto™. These technologies are table stakes in infotainment systems today, enabling safe and easy access and control of smartphone applications via a vehicle's head unit display.

Overview

Automotive smartphone connectivity has evolved dramatically over the last few years with solutions such as Android Auto, CarPlay, MirrorLink, Baidu's Carlife, and SmartDeviceLink all deployed in vehicle lines globally. Virtually every automaker now offers support for Android Auto and CarPlay for access to Google and Apple curated app stores for maps, phone, messages and music.

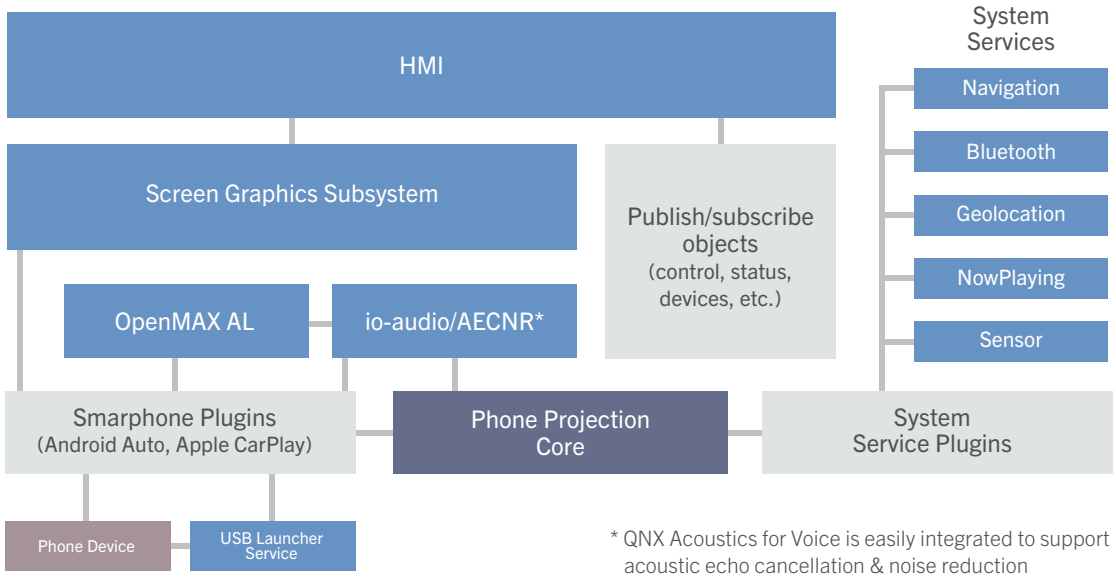
Smartphone projection technologies are part of the vehicle's infotainment functionality with the primary goal of providing access to mobile apps in a manner that reduces distractions and improves driver safety. While CarPlay and Android Auto are essentially just apps presented in the vehicle's dashboard display, providing a seamless integration with the infotainment platform to ensure the best user experience is paramount.

The QNX SDK for Smartphone Connectivity includes the projection manager framework and various smartphone connectivity plugins such as Android Auto or Apple CarPlay. The product interfaces with various infotainment system components and is an integral part of the QNX CAR Platform for Infotainment. The SDK interfaces with the HMI (human to machine interface), multimedia functionality for video rendering and display composition, touch and hard button inputs, audio management, and various other services including USB, WiFi, and Bluetooth, as required by the underlying protocol.

Key Features

- Support for the latest smartphone connectivity standards including Apple CarPlay, Android Auto, and Baidu CarLife
- Easy blending of built-in and brought-in content into the infotainment platform environment
- Modular architecture facilitates development of new plugins to support new protocol capabilities and features
- Seamlessly handles discovery and connection management to the smartphone
- Automatically manages functionality overlap, such as termination of embedded navigation or speech when equivalent feature is invoked on the phone
- Tight integration with QNX system services including:
  - o Bluetooth service via QNX SDK for Automotive Bluetooth Connectivity
  - o Location manager service for providing geolocation data
  - o Navigation service available as part of the QNX CAR Platform for Infotainment
  - o NowPlaying service used to arbitrate between the different audio sources (e.g. media players, phones, navigation) on the system so they do not clash
  - o Sensor service for delivering input sensor data available in the infotainment system to the phone
  - o Optionally pre-integrated with QNX Acoustics for Voice to support acoustic echo cancellation & noise reduction (AECNR) to meet all telephony and speech recognition use-cases and performance specifications
- Source code available for development of custom plugins for new services

Architecture



* QNX Acoustics for Voice is easily integrated to support acoustic echo cancellation & noise reduction

Plugin Architecture Benefits

- Promotes efficient use of system resources by including only the plugins required
- Easy customization by building customized system services that connect the service directly to phone projection core
- Phone projection core APIs available for building various types of system service plugins
- Smartphone plugins implement interfaces for passing input to the phone, controlling services on the phone, and receiving events from the phone

Hardware Architectures Supported

- ARM
- X86

Additional smartphone connectivity plugins for industry standard or proprietary protocols are available via BlackBerry QNX services team. Contact your BlackBerry QNX sales associate for any enquires.

About BlackBerry QNX

BlackBerry QNX, is a leading supplier of safe, secure, and trusted operating systems, development tools, and professional services for connected embedded systems. Global leaders such as Ford, Audi, Cisco, General Electric, Lockheed Martin, and Siemens depend on BlackBerry QNX technologies for their next generation of secure vehicle software platforms, network routers, medical devices, industrial automation systems, security and defense systems, and other mission and/or life-critical applications. This includes full software lifecycle management via secure over the air software updates. Founded in 1980, BlackBerry QNX is headquartered in Ottawa, Canada, with its products distributed in over 100 countries worldwide.

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