

Enterprise-Grade Wi-Fi Connectivity

The dB Performance KRAVE Suppliant provides OEMs with a robust software solution for enabling Wi-Fi network connectivity across a broad range of mobile devices. Typically running in the application space of a device's operating system, the KRAVE Suppliant handles the Wi-Fi connection, authentication, encryption, fast-roaming, and load-balancing management.

With the KRAVE Suppliant and industry-leading expertise from dB Performance, you are assured of the smoothest integration, fastest time to market and best possible Wi-Fi connectivity experience.



*Point Mobile PM50 powered by
dB Performance*

Wi-Fi Passpoint

The KRAVE Suppliant supports the Wi-Fi Alliance Passpoint specification, ensuring seamless Wi-Fi access at public Wi-Fi hotspot locations.

Optional Cisco Compatible Extensions (CCX)

CCX provides carrier-grade fast roaming performance, expedited access, load balancing, location services, and network management for today's large installed base of Cisco Access Points.

The KRAVE Suppliant provides support for CCXv4 standards in conjunction with suitable WLAN hardware.

dB Performance is the world leader in CCX expertise and deployments, and provides CCX pre-certification testing using the same test bed used by authorized certification test labs.

Wi-Fi Protected Setup (WPS) and Wi-Fi Direct

The KRAVE Suppliant supports both WPS and Wi-Fi Direct for secure, easy connections to Wi-Fi Access Points or other Wi-Fi devices. Securely connecting the device to a home wireless router, printer, digital camera or smartphone is as easy as pushing a button or entering a PIN code.

Comprehensive Security

The KRAVE Suppliant supports the entire suite of Wi-Fi security mechanisms including WPA/WPA2 Personal, WPA/WPA2 Enterprise, WPS, Wi-Fi Direct, Passpoint, 802.11k/r/v (with WLAN hardware support), optional CCXv4/CCX-Lite, and optional FIPS 140-2. A full range of 802.1X Extensible Authentication Protocol (EAP) methods are supported to enable deployment in any type of enterprise security environment. Integrators can add or remove features as desired for a fully tailored solution.

Standards-Based Fast Roaming and Load Balancing

With appropriate WLAN hardware support, the KRAVE Suppliant supports IEEE 802.11k, 802.11r, and 802.11v for standards-based Wi-Fi fast roaming and load balancing.

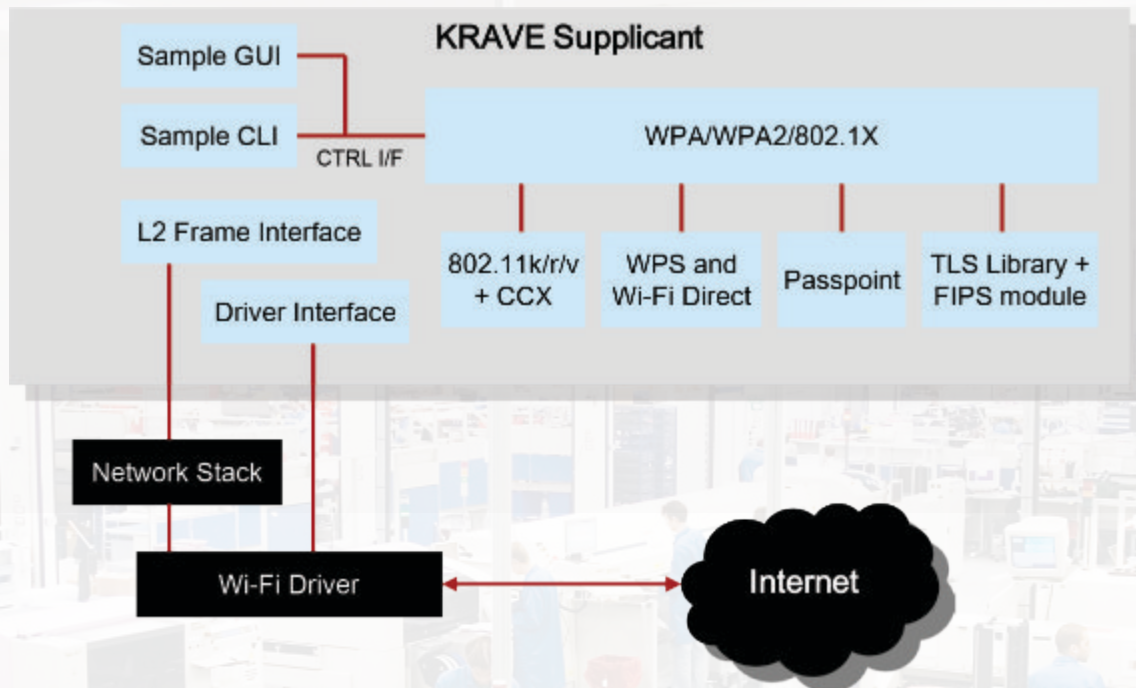
Optional FIPS 140-2

Government and healthcare applications requiring FIPSm140-2 can implement the KRAVE Suppliant FIPS module for tamper-proof AES encryption security.

Device Design Flexibility

The KRAVE Suppliant is written in thread-safe ANSI C, and a full source code license is available. This gives device developers complete flexibility in porting the KRAVE Suppliant to the device operating system, processor, and wireless chipset of their choice. A sample CLI and sample GUI are available on most platforms for rapid prototyping and development. In addition, dB Performance can provide Professional Services to deliver a turnkey solution.

KRAVE Supplicant Architecture



KRAVE Supplicant Specifications

WIRELESS STANDARDS

(with appropriate WLAN H/W)

IEEE 802.11 a/b/g/n/ac compatible

IEEE 802.11i with PMKSA caching

IEEE 802.11k Radio Measurements

IEEE 802.11r Fast Roaming

IEEE 802.11u Network Discovery

IEEE 802.11v Network Management

IEEE 802.11w MFP

IEEE 802.1X Authentication

RSN pre-authentication

WPA/WPA2 Personal/Enterprise

Wi-Fi Protected Setup (WPS)

Wi-Fi Direct

Wi-Fi Passpoint

OPTIONAL FIPS 140-2

Self-contained software-based AES encryption module

Works with compatible WLAN driver

WLAN CHIPSET SUPPORT

Marvell 88W8x8x

Qualcomm ath6k, ath9k, ath10k

TI WiLink6/WiLink8

Samsung

LG

Others available upon request

EAP METHODS

EAP-TLS

EAP-PEAPv0/v1 with:

EAP-MSCHAPv2

EAP-TLS

EAP-GTC

EAP-OTP

EAP-MD5-Challenge

EAP-TTLS with:

EAP-MD5-Challenge

EAP-GTC

EAP-OTP

EAP-MSCHAPv2

EAP-TLS

MSCHAPv2

MSCHAP

PAP

CHAP

EAP-LEAP

EAP-FAST

EAP-PSK

EAP-PAX

EAP-SAKE

EAP-IKEv2

EAP-GPSK

EAP-PWD

EAP-EKE

EAP-WSC

EAP-SIM (with SIM card H/W)

EAP-AKA (with USIM card H/W)

EAP-AKA' (with USIM card H/W)

DEVELOPMENT FEATURES

Extensive debug support

EAP/RSN testing tool (Linux)

Power management

Socket-based control interface

OPTIONAL USER INTERFACES

Sample Qt4 GUI for Linux

Sample JAVA patch for Android

Sample CLI

AVAILABLE OPERATING SYSTEMS

Linux 2.6+

Android 4.1+

Others available upon request

MEMORY FOOTPRINT

150 KB ROM for base supplicant configuration

Add approximately 200 KB ROM for tunneled EAP modes

Add 80 KB ROM for WPS

Add 150 KB ROM for Wi-Fi Direct

Add 100 KB ROM for Fast Roaming

Add 50 KB ROM for Load Balancing

100 KB RAM during operation

DOCUMENTATION

Release Notes

Developer Guide

API Reference Manual

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