

Enterprise-Grade Wi-Fi Connectivity

The dB Performance Fast Supplicant 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 Fast Supplicant handles the Wi-Fi connection, authentication, encryption, and fast-roaming management.

With the Fast Supplicant 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.

Comprehensive Security

The Fast Supplicant supports the entire suite of Wi-Fi security mechanisms including WEP, dynamic WEP with 802.1X, WPA/WPA2 Personal, WPA/WPA2 Enterprise, WPS, Wi-Fi Direct, Passpoint, optional CCXv4/CCX-Lite, optional 802.11k/r/v, 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.



Point Mobile PM50 powered by dB Performance

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 Fast Supplicant provides optional support for CCXv4 and CCX-Lite standards in conjunction with a suitable WLAN chipset driver.

dB Performance is a world leader in CCX deployments, and provides CCX pre-certification testing with the same test bed as used by Authorized Test Labs.

KRAVE - Standards-Based Fast Roaming

dB Performance KRAVE supports emerging access point implementations of IEEE 802.11k, 802.11r, and 802.11v for standards-based Wi-Fi fast roaming.

The optional KRAVE software kit provides an end-to-end solution for WLAN drivers and supplicants that currently provide incomplete, incompatible, or disparate implementations of 802.11k, 802.11r, and 802.11v.

Leveraging our extensive industry experience in Wi-Fi fast roaming, dB Performance provides a test validation suite that exceeds industry standards to assure best-in-class performance.

Wi-Fi Passpoint

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

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

The Fast Supplicant 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.

FIPS 140-2

Government and healthcare applications requiring FIPS 140-2 can implement the optional Fast Supplicant FIPS module for tamper-proof AES encryption security.

Device Design Flexibility

The Fast Supplicant is written in thread-safe ANSI C, and full source code licenses are available. This gives device developers complete flexibility in porting the Fast Supplicant 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.

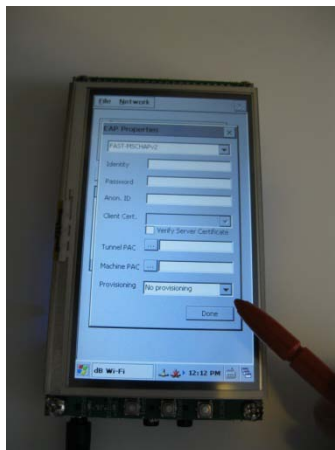
dB Performance

dB-FS Technology

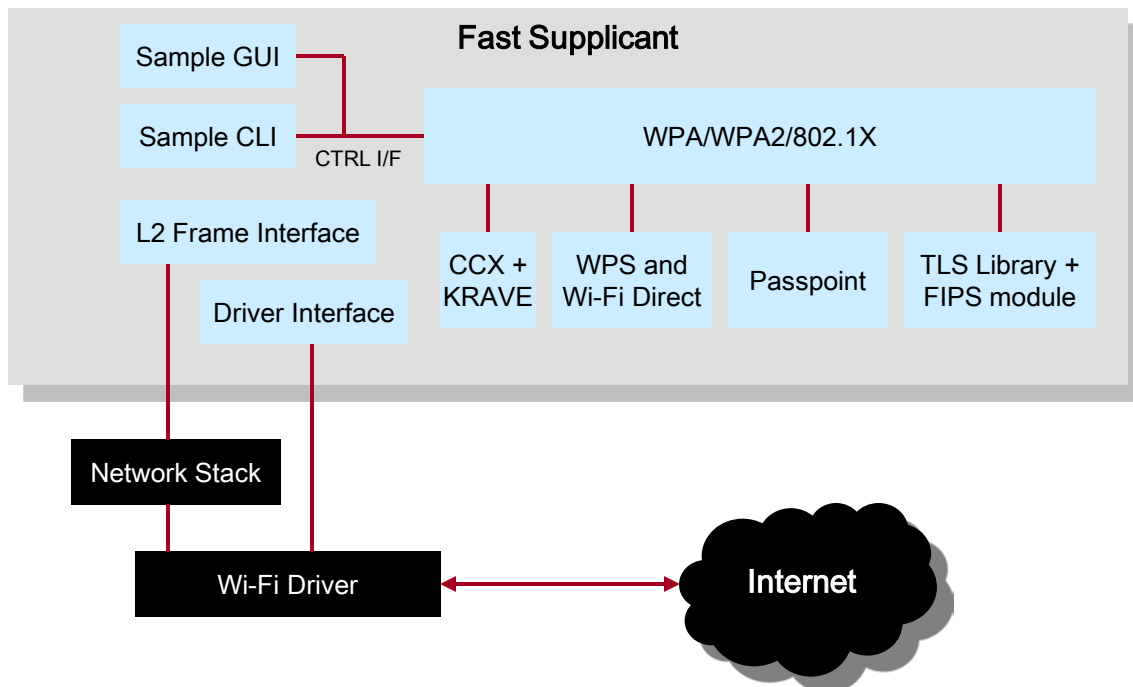
With dB-FS Technology, connection and roaming speed can be optimized on most platforms to provide a better user experience.

dB Performance Professional Services will make the necessary platform updates to provide optimal connection and roaming speed performance.

When combined with CCX or KRAVE fast roaming options, the Fast Supplicant provides excellent performance in a variety of commercial and emerging consumer Wi-Fi environments.



Fast Supplicant Architecture



Fast Supplicant Specifications

WIRELESS STANDARDS (with appropriate WLAN driver)

- IEEE 802.11 a/b/g/n/ac compatible
- IEEE 802.11i with PMKSA caching
- IEEE 802.11u Network Discovery
- IEEE 802.11w MFP
- IEEE 802.1X Authentication
- RSN pre-authentication
- WPA/WPA2 Personal/Enterprise
- WEP (64/128-bit)
- Wi-Fi Protected Setup (WPS)
- Wi-Fi Direct
- Wi-Fi Passpoint

OPTIONAL FAST ROAMING (with appropriate WLAN driver)

- CCXv4, CCX-Lite, or KRAVE
- CCKM-AES support
- IEEE 802.11k RRM
- IEEE 802.11r Fast Roaming
- IEEE 802.11v Network Management
- WLAN Chipset support:
 - Marvell 8x8x (Win Embedded)
 - MediaTek RT287x/307x (Linux)
 - Qualcomm ath6k, ath9k (Linux)
 - Qualcomm ath10k (Linux)
 - TI WiLink6/WiLink8 (Linux, Android 4.1+, Win Embedded)

OPTIONAL FIPS 140-2

- Self-contained software-based AES encryption module
- Works with compatible WLAN driver

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
- Control Interface
- Based on wpa_supplicant to maintain native API compatibility

OPTIONAL USER INTERFACES

- Sample Qt4 GUI for Linux
- Sample JAVA patch for Android
- Sample MFC GUI for Windows
- Sample CLI

AVAILABLE OPERATING SYSTEMS

- Linux 2.6+
- Android 4.1+
- Windows Embedded
- Windows Mobile 6.5

AVAILABLE DRIVER INTERFACES

- NDIS5
- nl80211
- WEXT

MEMORY FOOTPRINT

- 150 KB flash for base supplicant configuration
- Add approximately 200 KB flash for tunneled EAP modes: EAP-TLS, EAP-TTLS, PEAP and EAP-FAST
- Add 80 KB flash for WPS
- Add 150 KB flash for Wi-Fi Direct
- Add 100 KB flash for Fast Roaming
- 100 KB RAM during operation

DOCUMENTATION

- Release Notes
- Developer Guide
- API Reference Manual

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