



# Interpeak Wireless Supplicant

## Software component for wireless client devices using WPA™ and WPA2™

As equipment across many industries must operate over Wi-Fi networks, secure communication has become an area of particular concern for wireless equipment manufacturers. The wireless supplicant is a key part of the security solution that is embedded in devices that connect to a Wi-Fi network. The Interpeak Wireless Supplicant represents the latest advances in Wi-Fi security, providing WPA™ and WPA2™-level security to mobile wireless devices.

### Wireless Supplicant Features

- > Meets WPA and WPA2 supplicant requirements
- > Delivered as ANSI C source code
- > Runs on most popular operating systems out of the box (Integrity, Linux, OSE and VxWorks)
- > Supports all EAP methods mandated by the Wi-Fi Alliance
- > Functions in both Personal and Enterprise Modes

### WPA AND WPA2

The latest Wi-Fi security standards are WPA (Wi-Fi Protected Access) and WPA2. The Wi-Fi Alliance introduced WPA in 2003 to rectify the shortcomings of the original Wi-Fi security mechanism, WEP (Wireless Encryption Protocol). WPA2, introduced in 2004, implements all mandatory elements of IEEE's security standard, 802.11i. WPA2 is backwards compatible with WPA, which includes a smaller subset of the 802.11i requirements.

WPA and WPA2 can be enabled in two modes – Enterprise and Personal. Both modes provide user authentication and encryption of data traffic (see Table 1). For user authentication, WPA and WPA2 use Pre-Shared Keys (PSK) in Personal Mode and 802.1x/Extensible Authentication Protocol (EAP) in Enterprise Mode. For encryption, WPA uses the Temporal Key Integrity Protocol (TKIP) whereas WPA2 uses the stronger Advanced Encryption Standard (AES). AES satisfies the Federal Information Processing Standard (FIPS) 140-2 specification, a security requirement of many government agencies.

**Table 1: WPA and WPA2 Modes**

	WPA		WPA2	
Personal Mode	Authentication: PSK	Encryption: TKIP	Authentication: PSK	Encryption: AES
Enterprise Mode	Authentication: 802.1x/EAP	Encryption: TKIP	Authentication: 802.1x/EAP	Encryption: AES

## INTERPEAK WIRELESS SUPPLICANT

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The WPA/WPA2 security system requires a supplicant in the mobile wireless device and an authenticator in the access point. Interpeak's Wireless Supplicant satisfies the supplicant requirements of both WPA and WPA2 standards. It supports both Personal and Enterprise Modes, which use PSK and EAP for authentication respectively. Additionally, Interpeak's Wireless Supplicant supports all EAP methods mandated by the Wi-Fi Alliance for WPA2 compliance:

- > EAP-TLS
- > EAP-TTLS/MSCHAPv2
- > PEAPv0/EAP-MSCHAPv2
- > PEAPv1/EAP-GTC
- > EAP-SIM

Interpeak delivers its Wireless Supplicant with callback modules that interface with the TCP/IP stack and wireless driver. The Wireless Supplicant includes reference integrations for Interpeak's TCP/IP stacks and wireless drivers; other TCP/IP stacks and drivers may be used if the appropriate callbacks are implemented.

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