

# FAIRBANKS MORSE DEFENSE TECHNOLOGY

# Kitefin™ System

FAIRBANKS MORSE  
**DEFENSE**



Fairbanks Morse Defense, in collaboration with pureLiFi, introduces Kitefin, the first mission deployable, non-RF wireless communication solution for mission-critical operations. Non-jammable and fully cyber secure, it provides enhanced force protection and security.

### Military Grade Security



Kitefin is compliant with DISA WLAN STIGs, building on the inherent physical security of containable light communications. LiFi is not vulnerable to jamming or interception. Data transmitted is only available to the authorized people in the designated place.

### Near Zero Electromagnetic Signature



Unlike RF communications such as WiFi, Kitefin has an insignificant electromagnetic signature. Designed to operate in congested and contested environments, Kitefin operates undetected and unimpaired in critical situations.

### Unlicensed Spectrum



LiFi operates in visible and infrared light spectrum which is not subject to licensing in any country, ensuring that capabilities designed and deployed in one location can be easily replicated anywhere else.

### Quick Deployment & Take Down



When minutes matter, Kitefin delivers. In field trials, pureLiFi systems were up and running in tens of minutes compared to hours for Ethernet-based comms, and were quicker to disassemble when it was time to move out.

### Significant Second Order Benefits



Kitefin significantly reduces the required support logistics, from less cabling to fewer operating personnel, reducing the burden on troops, fuel, vehicles, training and more.

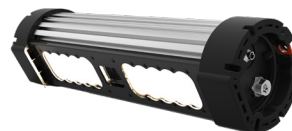
## HARDWARE

### LiFi Station



Stations are matched with Access Points for enhanced security. They can connect to Windows or Linux devices via USB.

### Tactical LiFi Access Point



Designed for the field, the Kitefin Tactical Access Points are ruggedized and water resistant for rapid deployment in harsh environments.

## System

FEATURES	VALUE
Management Protocol	TR-069
Network Protocol	IPv4, IPv6
Near Zero Electromagnetic Signature	
Interference Mitigation Algorithm to ensure connectivity in cases of access-point coverage overlap	
Integration with client OS 802.11 / WiFi framework with support for mac80211 on Linux & native WiFi on Windows	
Auto configuration server with dedicated light management capacity	
IEEE 802.1Q / D	

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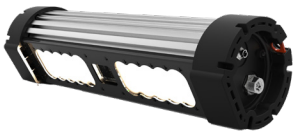
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## ADVANTAGES



**Military Grade Security**



**Near Zero Electromagnetic Signature**



**Unlicensed Spectrum**



**Quick Deployment & Take Down**



**Significant Second Order Benefits**

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### Access Point

Characteristics	VALUE	UNIT
Dimensions (LxWxH)	504 x 138 x 134	mm
Weight**	4.5	kg
Mounting Features Included	Hanging Wires	-
Task Light Color Temperature	4000 +/- 500	K
Task Light Color	>75	CRI
Task Light Luminosity (30 deg offset at 3m)	90	Lux
Task Light Dimmable Through Software	Yes	-
Power Consumption (PoE)	51W	W
Optional DC Power Input Connector	3-Pin Circular	-

PERFORMANCE	VALUE	UNIT
Transmission / Receive Angle (FOV)	60	deg
Transmission / Receive Half Angle	30	deg
Operating Distance and Coverage Area	0.5 to 3.0 on axis	m
Downlink Data Rate Throughput at 1.5m on axis	30	mbps
Uplink Data Rate Throughput at 1.5m on axis	25	mbps
Inter Access Point Handover*	<1	second

SECURITY
Compliant with Defense Information Systems Agency (DISA) WLAN Access Point & Station STIGs
Matched with Access Points operating at defined wavelengths
Extensible Authentication Protocol - Transport Layer Security (EAP-TLS)
US Government compliant security login shell & ACS splash-page
WPA2 Personal and Enterprise (802.1X) Authentication
Lockable Connector COver, with no Accessible Screws

ENVIRONMENTAL	VALUE	UNIT
Operating Temperature	-20 to +40	0
Ingress Protection Class	IP67	-

### LiFi Station

CHARACTERISTICS	VALUE	UNIT
Dimensions	85 x 29.4 x 10.2	mm
Weight	42	g
Interface	USB 2.0	-
Max. Power Consumption	2.5 (MAX)	W
Operating Temperature	-20 to +40	-

### Regulatory Compliance

Full System Compliance
CE Compliant
IEC 62471:2006 (Risk Category 2)
IEC 60598-2-1:2020
Full-duplex physical layer on different wavelengths helping improve the security for any key exchange

### STACKING THE DECKS

Fairbanks Morse Defense is revolutionizing technology solutions for today's maritime defenses.

Mission-driven and honor bound, our commitment is to equip the U.S. fleet with the latest technological innovations and strategic solutions.

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