

# **Vocera V-Series Smartbadge Data Sheet**

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## System Specifications

This document describes the Smartbadge specifications, network specifications, electrical specifications, environmental specifications, storage specifications, and drop specification for your Smartbadge.

### V5000 Smartbadge Specifications

Specifications	Details
Dimensions	4.0 x 2.0 x 0.7 in. (10 x 5.2 x 1.7 cm)
Weight	3.1 oz. (89 g), with standard battery
LED Indicators	Tri-color LED State indicator
Display screen	2.4 in. color TFT display with touch screen
Controls	Dragontrail cover lens
	Call button
	Hold/Do Not Disturb (DND) button
	Volume Control
Wired Headset Support	Emergency Call Button
	USB C headset port

### Network Specifications

Specifications	Details
Network Standard	IEEE 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac
	IEEE 802.11w, 802.11k, 802.11d, 802.11h, and 802.11r
Frequency Band	2400–2483.5 MHz, 5180–5835 MHz
Data Rates Supported	1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48, 54 Mbps, MCS0-MCS9
Wireless Medium	Direct Sequence Spread Spectrum (DSSS)
	Orthogonal Frequency Division Multiplexing (OFDM)
	Single Input Single Output (SISO)
	HT40 and VHT80 support, at 5 GHz only
Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)
Modulation 2.4 GHz	DBPSK at 1 Mbps
	DQPSK at 2 Mbps
	CCK at 5.5 and 11 Mbps
	BPSK at 6 and 9 Mbps

Specifications	Details
	QPSK at 12 and 18 Mbps
	16-QAM at 24 and 36 Mbps
	64-QAM at 48 and 54 Mbps
Modulation 5GHz (HT20)	BPSK at 6.5 and 7.2 Mbps
	QPSK at 13, 14.4, 19.5, and 21.7 Mbps
	16-QAM at 26, 28.9, 39, and 43.3 Mbps
Modulation 5GHz (HT40 and VHT80 only at 5GHz)	64-QAM at 52, 57.8, 58.5, 65, and 72.2 Mbps
	MCS0-MCS9, 13.5, 15, 27, 30, 40.5, 45, 54, 60, 81, 90, 108, 120, 121.5, 135, 150, 180, and 200
Operating Channels (2.4GHz)	11 channels (FCC)
	13 channels (ETSI)
Operating Channels (5 GHz)	25 channels HT20 (FCC)
	12 channels HT40 (FCC)
	6 channels VHT80 (FCC)
	56 channels ETSI (Varies by country)
Roaming	IEEE 802.11a compliant
	IEEE 802.11b compliant
	IEEE 802.11g compliant
	IEEE 802.11k compliant
	IEEE 802.11n compliant
	IEEE 802.11r compliant
Authentication	Open
	PSK
	PEAP
	EAP-FAST
	EAP-TLS
	LEAP
Encryption	64-bit WEP
	128-bit WEP
	TKIP-WPA
	AES-CCMP

## Electrical Specifications

Specifications	Details
RF Output Power (2.4 GHz)	+17.5 dBm maximum at 802.11b
	+15 dBm maximum at 802.11g
RF Output Power (5 GHz)	+15 dBm maximum at 802.11a
	+15 dBm maximum at 802.11n
	+12 dBm maximum at 802.11ac

Specifications	Details
RF Receive Sensitivity (2.4 GHz)	-90 dBm at 11 Mbps -78 dBm at 54 Mbps -76 dBm at HT20 MCS7
RF Receive Sensitivity (5 GHz)	-76 dBm at 6 Mbps -73 dBm at 54 Mbps -70 dBm at HT20 MCS7 -61 dBm at HT40 MCS7
Microphone Frequency Range	350 Hz to 3.75 KHz
Microphone Directionality	Quad MEMS Microphone array
Speaker Frequency Range	500 Hz to 3.75 KHz
Peak Speaker Loudness	87 dB SPL at 10 cm
<b>Batteries</b>	
Battery Type	Lithium-ion Polymer
Battery Life	4 hours talk time, with display active (U-APSD enabled); 40 hours of standby time.



**Note:** Results for RF output power (2.4 GHz and 5 GHz) and RF Receive Sensitivity (2.4 GHz and 5 GHz) is based on a controlled test environment. For information on network design guidelines, refer to [Vocera Infrastructure Planning Guide](#).

## Environmental Specifications

Specifications	Details
Temperature Range	32° to 104° F (0° to 40° C)
Humidity Range	5% to 95% relative humidity, non-condensing
Ingress Protection	IP54

## Storage Specifications

Specifications	Details
Temperature Range	-4° to 104° F (-20° to 40° C)
Humidity Range	5% to 95% relative humidity, non-condensing

## Drop Specifications

Specification	Details
Drop	1.2 meters onto linoleum