

The Vocera® Communications Badge

Wearable Instant Voice Communication

The Vocera® B2000 communications badge is the user interface to the Vocera communications system. The Vocera system enables instant, wireless voice communication that users control with naturally spoken commands. This easy-to-use system is ideal for hospitals, hotels, retail stores, and other in-building environments where mobile workers need to stay in contact to perform their jobs. The Vocera system has proven to improve staff communication, productivity, and teamwork by enabling immediate voice communication among teams.

The Vocera communications system consists of two key components: the Vocera system software that controls and manages call activity, and the Vocera B2000 communications badge, a lightweight, wearable, voice-controlled communication device that operates over a wireless LAN (802.11b/g). Together, the Vocera system software and the Vocera badge, allow users to instantly communicate with others throughout a networked building or campus environment.

Optional Vocera telephony solution software enables users to make and receive telephone calls directly from their badge through the PBX.

❖ Vocera B2000 Communications Badge

The Vocera B2000 communications badge is a small, wearable, wireless device that provides a voice-controlled user interface to the Vocera communications system. The badge enables immediate, hands-free conversations among people at the point of care or service. It contains a speaker, microphone, wireless radio, and high-contrast OLED display that shows caller ID, text messages, and alerts.



4.2"
(10.6 cm)

1.4"
(3.5 cm)
[Actual Size]

The Vocera communications badge: simple to use, lightweight, wearable (P/N 220-01557)



The AHA has endorsed the Vocera Communications System

❖ The Vocera B2000 Communications Badge

Features	Benefits
<ul style="list-style-type: none"> • Weighs less than 2 oz. (53.9 g) • Voice-controlled, one-button operation • Wireless performance • Interoperability 	<ul style="list-style-type: none"> • Lightweight, wearable • Virtually hands-free use to allow staff to keep working while communicating • High performance antenna for improved transmit and receive sensitivity • 802.11b/g wireless radio allows the badge to operate in 802.11b, 802.11g, or mixed environments
<ul style="list-style-type: none"> • Security 	<ul style="list-style-type: none"> • Authentication: Open, Pre-shared Key (PSK), PEAP v0 MSCHAP v2, EAP-FAST with CCKM, LEAP • Encryption: WEP 64, WEP 128, TKIP, AES • Maintains existing security protocol support
<ul style="list-style-type: none"> • Antibacterial • Supportability 	<ul style="list-style-type: none"> • BioCote® antimicrobial technology reduces bacteria growth on the badge • Badge-based diagnostics improve reporting and trouble shooting • Upgradeable platform • Linux-based modular software platform • Scalable hardware platform with enhanced CPU and memory
<ul style="list-style-type: none"> • Durability 	<ul style="list-style-type: none"> • Single circuit board design • Patch antenna mounted directly onto PCB • Enhanced design for durability
<ul style="list-style-type: none"> • Usability 	<ul style="list-style-type: none"> • High contrast OLED display for readability • Enhanced badge status notifications • Multi-colored sleeves for departments/functions
<ul style="list-style-type: none"> • Additional features 	<ul style="list-style-type: none"> • Do-not-disturb button • Headset jack • Multiple wearing options

Note: Requires the Vocera system software release 4.0 SP8 or higher.

Accessories

The Vocera solution offers a full range of hardware and accessories designed to enhance the end-user experience. Wearing the badge in the appropriate manner (no more than six inches from the user's mouth) and using an approved accessory provide optimal speech recognition.

The Vocera B2000 communications badge can be worn on a lanyard around the user's neck, or with a universal clip to attach to the user's apparel or existing lanyard. Additionally, Vocera offers a headset-ready lanyard that has the headset cables and connector built into it to reduce the amount of wires hanging around the user's neck.

System Requirements

Vocera server software release 4.0 SP8 or higher.

System Specifications

Badge Specifications

Physical Dimensions

4.2 x 1.4 x .6 in. (10.6 x 3.5 x 1.5 cm)

Weight

1.9 oz. (53.9 g), with standard battery

LED Indicators

Two Indicators: single and two-color

Display Screen

- 80 x 48 bit-mapped display
- Supports 4 lines of text, 15 characters per line, up to 150 characters per message (font dependent)

Controls

- Call button
- Hold/do-not-disturb button
- Volume/Menu Selection buttons

Headset Support

- 2.5 mm headset jack
- Visit www.vocera.com for a list of approved headsets

Electrical

RF Output Power

16 dBm Max

Results are based on laboratory testing under ideal conditions. Please refer to the Vocera Infrastructure Guide for network design recommendations.

RF Coverage Recommendations

-75 dBm at 11 Mbps, -65 dBm at 54 Mbps

Microphone Frequency Range

350 Hz to 3.75 kHz

Microphone Directionality

Unidirectional cardioid response

Speaker Frequency Range

950 Hz to 3.75 kHz

Peak Speaker Loudness

75 dBSPL at 25 cm

Peak Speaker Loudness with Optional Speaker Horn

85 dBSPL at 25 cm

Batteries

- Standard Battery: Lithium Ion, 660 mAh typical
- Extended Life Battery: Lithium Ion, 850 mAh typical

Battery Life¹

- Standard: 2 hours of talk time; 20 hours of standby time
- Extended: 2.5 hours of talk time; 27 hours of standby time

Environmental

Operating Ranges

- Temperature Range: 0° C to 40° C
- Humidity Range: 5 to 95% relative humidity, non-condensing

Storage Ranges

- Temperature Range: -20° C to 40° C
- Humidity Range: 5 to 95% relative humidity, non-condensing

Drop Specification

1.5 meters onto concrete

Wireless Specifications

Network Standard

IEEE 802.11b/g standards

Frequency Band

2400-2484 MHz

Data Rates Supported

1, 2, 5.5, 11, 6, 9, 12, 18, 24, 36, 48, 54 Mbps

Wireless Medium

- Direct Sequence Spread Spectrum (DSSS)
- Orthogonal Frequency Division Multiplexing (OFDM)

Media Access Protocol

Carrier sense multiple access with collision avoidance (CSMA/CA)

Modulation

- DBPSK@ 1 Mbps
- DQPSK@ 2 Mbps
- CCK@ 5.5 and 11 Mbps
- BPSK at 6 and 9 Mbps
- QPSK at 12 and 18 Mbps
- 16-QAM at 24 and 36 Mbps
- 64-QAM at 48 and 54 Mbps

Operating Channels

- 11 channels (FCC)
- 13 channels (ETSI)

Roaming

- IEEE 802.11b/g compliant

WLAN Security

Vocera supports standard and vendor-specific security suites. The following modes are supported:

- Encryption: 64-bit and 128-bit WEP, TKIP, AES
- Authentication: Open, WPA-PSK, PEAP v0 MSCHAP v2, EAP-FAST with CCKM, and Cisco EAP (LEAP²) using 802.1x framework.

² Cisco LEAP must be used with TKIP encryption. WEP 128 in combination with CISCO LEAP is no longer supported.

Regulatory

RF Certifications

For a list of all certifications, visit www.vocera.com



Vocera B2000 Communications Badge

Black Badge
220-01742
White Badge
220-01557



Available Accessories

Attachments

All attachments sold in 25-packs

Lanyards

200-01044

Universal Clips

200-01045

Pocket Clips

200-01046

Magnetic Clips (available Q1 2009)

230-01750



Protective Sleeves

All sleeves sold in 10-packs

230-01311 Translucent White

230-01760 Purple

230-01762 Pink

230-01764 Yellow

230-01766 Violet

230-01768 Red

230-01718 Black

230-01761 Dark Blue

230-01763 Green

230-01765 Aqua

230-01767 Orange

230-00537 Black

230-01011 Black

230-01772 White

230-00531

230-00532

230-01771

230-01770

230-00533

230-00534

230-00535

230-00536

230-00537

230-00538

230-00539

230-00540

230-00541

230-00542

230-00543

230-00544

230-00545

230-00546

230-00547

230-00548

230-00549

230-00550

230-00551

230-00552

230-00553

230-00554

230-00555

230-00556

230-00557

230-00558

230-00559

230-00560

230-00561

230-00562

230-00563

230-00564

230-00565

230-00566

230-00567

230-00568

230-00569

230-00570

230-00571

230-00572

230-00573

230-00574

230-00575

230-00576

230-00577

230-00578

230-00579

230-00580

230-00581

230-00582

230-00583

230-00584

230-00585

230-00586

230-00587

230-00588

230-00589

230-00590

230-00591

230-00592

230-00593

230-00594

230-00595

230-00596

230-00597

230-00598

230-00599

230-00600

230-00601

230-00602

230-00603

230-00604

230-00605

230-00606

230-00607

230-00608

230-00609

230-00610

230-00611

230-00612

230-00613

230-00614

230-00615

230-00616

230-00617

230-00618

230-00619

230-00620

230-00621

230-00622

230-00623

230-00624

230-00625

230-00626

230-00627

230-00628

230-00629

230-00630

230-00631

230-00632

230-00633

230-00634

230-00635

230-00636

230-00637

230-00638

230-00639

230-00640

230-00641

230-00642

230-00643

230-00644

230-00645

230-00646

230-00647

230-00648

230-00649

230-00650

230-00651

230-00652

230-00653

230-00654

230-00655

230-00656

230-00657

230-00658

230-00659

230-00660

230-00661

230-00662

230-00663

230-00664

230-00665

230-00666

230-00667

230-00668

230-00669

230-00670

230-00671

230-00672

230-00673

230-00674

230-00675

230-00676

230-00677

230-00678

230-00679

230-00680

230-00681

230-00682

230-00683

230-00684

230-00685

230-00686

230-00687

230-00688

230-00689

230-00690

230-00691

230-00692

230-00693

230-00694

230-00695

230-00696

230-00697

230-00698

230-00699

230-00700</