

# Bumble Bee-EX™



**HANDHELD RUGGEDIZED SPECTRUM ANALYZER**

## 2.0-4.0 GHz & 4.9-5.9 GHz

**SUPPORTS**

**Wi-MAX** frequencies

**IDENTIFIES**

**802.11b/a/g** frequencies

**SCANS**

**VoIP** frequencies

**ANALYZES**

**Bluetooth** frequencies



BVS custom hardware ensures the most accurate of measurements for any handheld on the market.

### **BUMBLE BEE-EX FEATURES:**

- 2.0-4.0 & 4.9-5.9 GHz SPECTRUM ANALYSIS**
- Wi-MAX, RFID, VoIP, 802.11 & OTHER ISM FREQUENCIES**
- COLOR, TOUCH-SCREEN INTERFACE**
- 3 WAVEFORM TRACES**
- PEAK HOLD / SEARCH**
- PACKET / INTERFERENCE TRIGGERS**
- WAVEFORM JPEG SNAPSHOTS**

**BumbleBee-EX™** is a rugged, calibrated spectrum analyzer all-in-one system. The handheld receiver measures the popular wireless Wi-Fi/Wi-MAX frequencies between 2.0-4.0 & 4.9-5.9 GHz. **BumbleBee-EX** allows users to scan, display and record multiple RF waveforms for network installation, coverage and interference analysis. The color, touch-screen allows field engineers to tap on points of interest in any waveform and “zoom” in for further analysis. Advanced spectrum analysis features include 3 waveform, peak hold, peak search and user selectable packet / interference triggers. **BumbleBee-EX** allows for realtime spectral analysis of many wireless standards including RFID, VoIP, 802.11b/a/g & Bluetooth as well as unidentified RF interference such as microwaves and cordless phones. **BumbleBee-EX** takes the power of sophisticated laboratory spectrum analyzers and puts it in user's hands.



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wireless products

# Bumble Bee-EX™



## HANDHELD RUGGEDIZED SPECTRUM ANALYZER

### Frequency:

|         |                 |          |                             |
|---------|-----------------|----------|-----------------------------|
| Ranges: | 2000 – 2500 MHz | ISM Band | (802.11/802.11b/g standard) |
|         | 3400 – 3600 MHz |          |                             |
|         | 4940 – 4990 MHz |          | (Public Safety Band)        |
|         | 5150 – 5500 MHz | U-NII    | (802.11a standard)          |
|         | 5500 – 5900 MHz | U-NII    | (802.11a standard)          |

### Span:

|                              |   |
|------------------------------|---|
| Resolution bandwidth:        | 50 kHz to 800 MHz                                   |
|                              | 50 kHz – 1 MHz (50, 100, 300, 500, 1 MHz)           |
|                              | Automatic 802.11 preset bandwidths                  |
| Video bandwidth (smoothing): | 100 kHz – 1 MHz (50 kHz steps)                      |
| Screen Averaging:            | 1 – 100 Averages                                    |
| Reference Stability:         | ± 2.5 PPM   |
| Sweep Time:                  | 800 mSec (20 MHz span, 50 kHz resolution bandwidth) |

### Amplitude:

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Average Noise Floor (No input): | < -100 dBm (reference level -70 dBm) |
| Dynamic Range:                  | > 40 dB                              |
| Level Accuracy:                 | ± 1.5 dB (25 deg. C)                 |
| Max input (safe):               | + 0 dBm                              |
| Max input (no saturation)       | - 20 dB                              |
| Reference level:                | -20 to -70 dBm (10 dB steps)         |

### Display/Operating System/Memory:

|                          |   |
|--------------------------|---|
| Number of traces:        | 3 colors  |
| Trace settings:          | Peak hold, screen average                         |
| Marker functions:        | Peak search, center frequency, left, right, delta |
|                          | Screen shots saved to .jpg file                   |
| Display (iPAQ):          | see HP2795 specifications                         |
| Operating system (iPAQ): | Windows® Mobile 5.0                               |

### Triggering:

|                              |  |
|------------------------------|--|
| Auto or Manual:              |  |
| Packet/Interference Trigger: | Trigger analyzer when input power meets or exceeds threshold (20 MHz span) |
| Trigger threshold:           | user settable in dBm.  |
| Trigger delay:               | user settable in mS.   |

**Input Connector:** SMA Female, 50Ω

### Power:

|                              |                   |
|------------------------------|-------------------|
| Internal battery:            | (Li-PO), AC or DC |
| Run time (internal battery): | > 3 hours         |
| Re-charge time:              | < 1 hour          |

### Physical Specifications:

|             |                 |
|-------------|-----------------|
| Weight:     | 3 lbs.          |
| Dimensions: | 6"H x 4"W x 6"L |