

MOBILE WiMAX MODEL 1

MOBILE WiMAX DEMODULATOR SPECIFICATIONS

| | |
|-----------------------------------|-------------------------|
| BANDS SUPPORTED | 2.0 - 5.9 GHz (802.16e) |
| CHANNEL BANDWIDTHS | 3.5, 5, 7, 8.75, 10 MHz |
| RF SENSITIVITY (Wide Band) | -20 to -90 dBm |
| ID CELL & SEGMENT | |
| RSSI (CHANNEL) | -20 to -80 dBm |
| CORRELATED MULTIPATH MEASUREMENTS | 0 to -10 dB |
| CINR | 0 to +20 dB |

MOBILE WiMAX SPECTRUM ANALYZER SPECIFICATIONS

| | |
|--------------------------------|---|
| BANDS SUPPORTED | 2.0 - 5.9 GHz |
| AVERAGE NOISE FLOOR (NO INPUT) | < -100 dBm (reference level -70 dBm, resolution bandwidth=50 kHz) |
| DYNAMIC RANGE | > 40 dB |
| LEVEL ACCURACY | ± 1.5 dB (25° C) |
| MAX INPUT (SAFE) | + 0 dBm |
| MAX INPUT (NO SATURATION) | -20 dBm |
| REFERENCE LEVEL | -20 to -70 dBm (10 dB steps) |



FIXED WiMAX MODEL 2

FIXED WiMAX DEMODULATOR SPECIFICATIONS

| | |
|-----------------------------------|---------------------------------|
| BANDS SUPPORTED | 2.0 - 5.9 GHz (802.16d) |
| CHANNEL BANDWIDTHS | 1.75, 3, 3.5, 5, 5.5, 7, 10 MHz |
| RF SENSITIVITY (Wide Band) | -20 to -90 dBm |
| ID CELL & SEGMENT | |
| RSSI (CHANNEL) | -20 to -80 dBm |
| CORRELATED MULTIPATH MEASUREMENTS | 0 to -10 dB |
| CINR | 0 to +20 dB |

FIXED WiMAX SPECTRUM ANALYZER SPECIFICATIONS

| | |
|--------------------------------|---|
| BANDS SUPPORTED | 2.0 - 5.9 GHz |
| AVERAGE NOISE FLOOR (NO INPUT) | < -100 dBm (reference level -70 dBm, resolution bandwidth=50 kHz) |
| DYNAMIC RANGE | > 40 dB |
| LEVEL ACCURACY | ± 1.5 dB (25° C) |
| MAX INPUT (SAFE) | + 0 dBm |
| MAX INPUT (NO SATURATION) | -20 dBm |
| REFERENCE LEVEL | -20 to -70 dBm (10 dB steps) |



RECEIVER SPECIFICATIONS

TRIGGERING

| | |
|-----------------------------|---|
| USER CONTROL | auto or manual |
| PACKET/INTERFERENCE TRIGGER | trigger analyzer when input power ≥ threshold (20 MHz span) |
| TRIGGER THRESHOLD | user settable in dBm |
| TRIGGER DELAY | user settable in mS |

GENERAL SPECIFICATIONS

| | |
|--------------------------|-----------------------------------|
| INTERNAL GPS RECEIVER | 12-channel/satellite GPS receiver |
| INPUT CONNECTOR | SMA Female, 50 Ohm |
| POWER | Li-PO, AC or DC |
| RUNTIME INTERNAL BATTERY | > 3 hours |
| RECHARGE TIME | < 3 hours |

MECHANICAL SPECIFICATIONS

| | |
|------------|--------------------|
| WEIGHT | 4 lbs. |
| DIMENSIONS | 4" H x 7" W x 6" L |

OPTIONAL ACCESSORIES

| | |
|-----------------------------------|--------------------------|
| 2.4 GHZ DIRECTION FINDING ANTENNA | 2300-2600 MHz |
| 5 GHZ DIRECTION FINDING ANTENNA | 5150-5350 MHz |
| SITE SURVEY MAPPING SOFTWARE | DRAGNET |
| REMOTE MONITORING SOFTWARE | YELLOWFIN REMOTE MANAGER |



Mobile or Fixed WiMAX

RUGGED TABLET PC INTERFACE

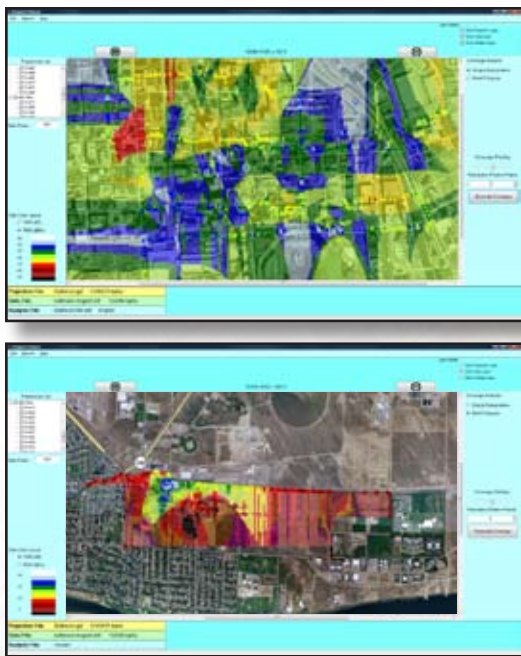
- ✓ MIL-STD-810F and IP54 compliant
- ✓ Drop tested to 4 feet (1.2m)
- ✓ Magnesium alloy cage chassis
- ✓ Removable solid state drive
- ✓ Sealed all-weather design
- ✓ Rain, spill, dust & vibration resistant
- ✓ Dual battery (9 hour runtime)
- ✓ Sunlight viewable

Panasonic Toughbook CF-U1
**FULL 3 YEAR
WARRANTY**
BVS YellowFin WiMAX Receiver



YELLOWFIN™ WiMAX analyzer is the world's first truly portable calibrated, demodulating WiMAX test receiver. This handheld unit utilizes a Panasonic Toughbook® tablet PC as an interface in conjunction with Berkeley's precision receiver technology for complete spectrum analysis as well as WiMAX packet demodulation. The Mobile WiMAX or Fixed Wireless receiver (please specify model) sweeps the 2.0 - 5.9 GHz spectrums to within ±1.5 dB accuracy. **YELLOWFIN™** performs full spectrum analysis allowing RF engineers to see the whole wireless network picture. Features include power triggers, peak hold/search, markers and multiple waveform traces. WiMAX 802.16e or 802.16d packet analysis includes RSSI measurements, Cell ID & Segment information, multipath analysis and CINR (Carrier-to-Interference-plus-Noise-Ratios) on a preamble basis. The optional DF (Direction Finding) Antenna allows engineers to pinpoint sources of WiMAX interference, rogue base stations and even nearby hackers. An internal 12-channel/satellite GPS receiver allows for geo-coded site surveys and drive-studies using optional DragNet™ mapping software.

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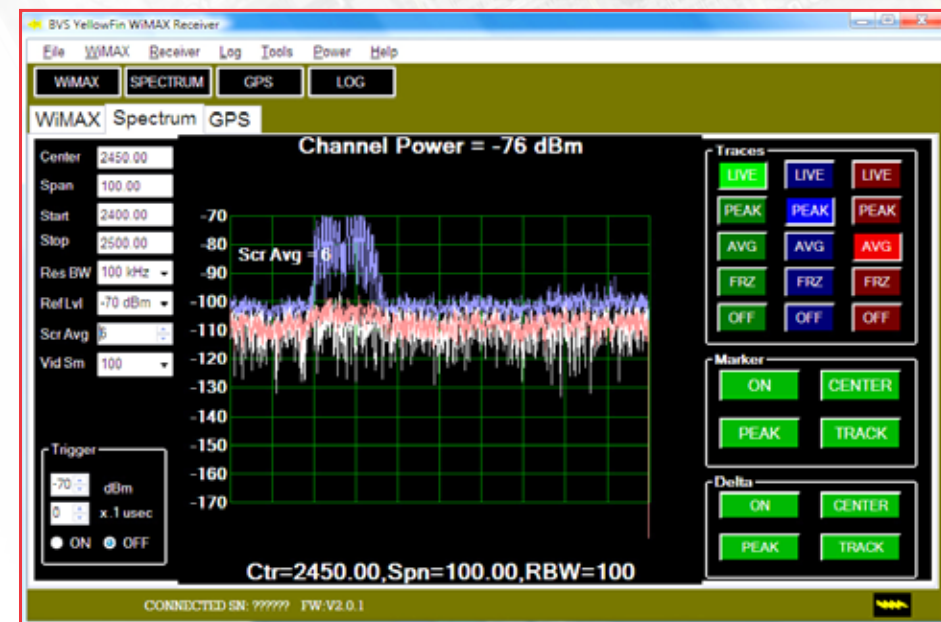
DRAGNET

WiMAX Site Survey Software

DragNet™ site survey software combines the power of real-time YellowFin™ Mobile or Fixed WiMAX measurements with GPS geo-coding accuracy. This optional software allows YellowFin users to walk or drive around any site with GPS reception and correlate all channel measurements to their exact location automatically. After DragNet has scanned and stored a network of GPS accurate measurements, the data may then be overlaid onto drivestudy maps, exported into tabular spreadsheet formats like Excel or analyzed further as KML files for plotting in applications such as Google Earth™. DragNet arranges all site survey data into comprehensive PDF mapping coverage reports.

MULTIPATH ANALYSIS

YellowFin displays all multipath components for any OFDMA preamble detected. This correlated measurement proves useful to engineers troubleshooting networks suffering from fading and delay due to wireless interference.

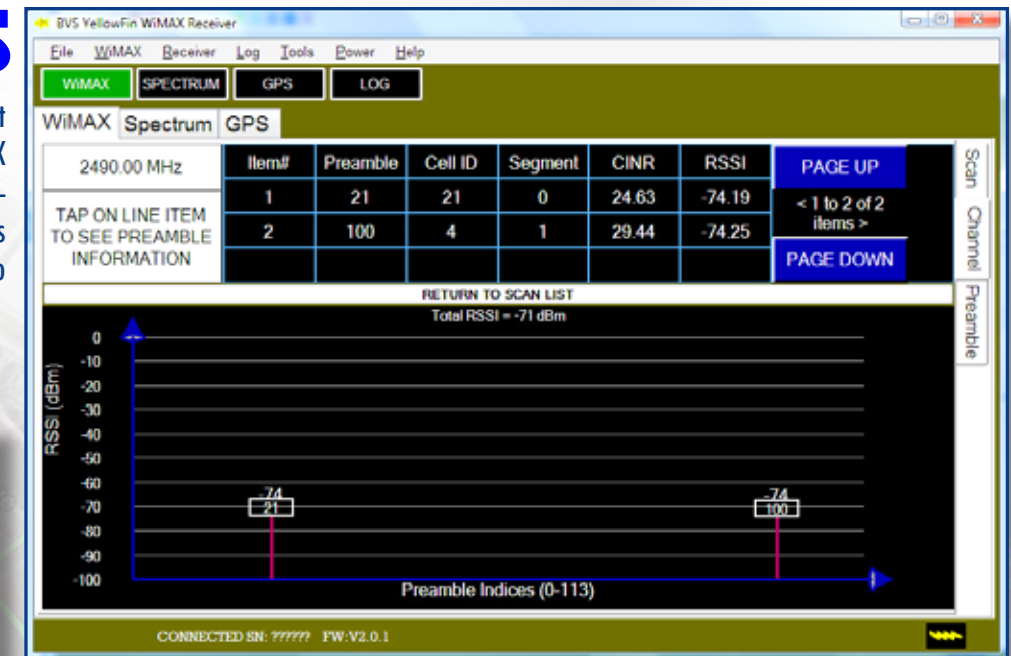
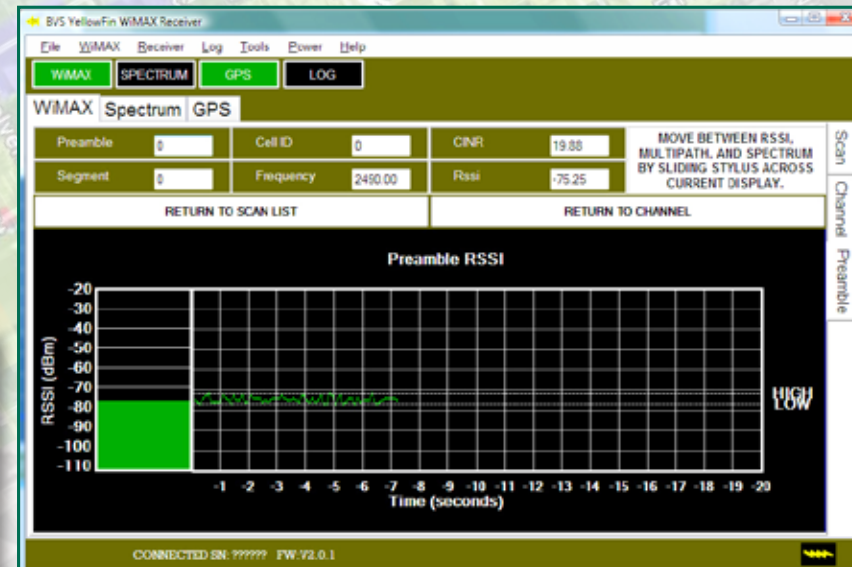


SPECTRUM ANALYSIS

YellowFin sweeps the 2.0 - 5.9 GHz spectrums to within ± 1.5 dB accuracy and features multiple traces, peak hold, video smoothing and screen averaging as well as packet and interference power triggering. The calibrated receiver is able to easily distinguish between WiMAX networks and any other forms of RF interference including rogue APs, hackers and other WiMAX networks.

PREAMBLE SCANS

YellowFin is the industry's only handheld 802.16e WiMAX receiver that scans all 114 preambles up to 20 samples per second. The Fixed WiMAX YellowFin receiver scans all 802.16d Base Stations and supports channel bandwidths 1.75, 3, 3.5, 5, 5.5, 7 and 10 MHz. Using Berkeley's optional DF (Direction Finding) antenna, users are able to "lock-on" to any nearby WiMAX source and pinpoint its location.



PREAMBLE RSSI

YellowFin scans, detects and demodulates all WiMAX packets on a preamble basis. RSSI is displayed for each preamble on either Fixed or Mobile WiMAX networks. In addition, the YellowFin displays the Preamble, Segment, Cell ID (Base Station ID for Fixed model), Frequency and CINR (Carrier to Interference + Noise Ratios).

YELLOWFIN-OEM

YellowFin-OEM is Berkeley's developer kit for the YellowFin Mobile or Fixed WiMAX receiver. The calibrated receiver also includes the DLLs (Dynamic Link Libraries) to get any developer up and running with their own custom software development.



Tortoise™ is a portable dual-band transmitter that outputs up to 20 watts of Class A power. The optional OFDMA modulator allows Tortoise to simulate WiMAX base station transmissions complete with adjustable step sizes, channel bandwidth and user settable ID Cell, Segment and frame lengths.

Tortoise

Optional
WiMAX
Modulator
Available

