

ENHANCED DIGITAL HANDOVER TEST SYSTEM (eDHT)

Bascom Hunter's Enhanced Digital Handover Test System (eDHT) is a multi-channel signal processor product that provides the flexibility to tune to and extract individual carriers within 600 MHz to 6 GHz band. Once a carrier is extracted, the system performs adjacent channel filtering, updates the gain of the signal, modulates and outputs the resultant signal on the same carrier frequency.

OVERVIEW

Handover Test Systems are used to simulate the process of handing over signals from one base station to the next in cellular or WLAN networks. The Enhanced Digital Handover Test system (eDHT) takes the handover test system to the next level by including active components and filtering, in addition to the typical passive RF paths with attenuators, splitters/combiners and switches found in other handover testers.

The eDHT digitizes the RF paths to incorporate a variety of tight FIR filters (17 filters ranging in bandwidth from 1.25MHz to 100MHz). The eDHT cellular downlink architecture is an extensive RF chain of filters, attenuators, gain blocks, mixers, ADCs/DACs and supports tuning to any frequency in the three supported cellular bands (600MHz-960MHz, 1447MHz-2690MHz and 3.3GHz to 6GHz). The tight digital filtering cannot be achieved in the analog domain, and it allows the end user to ensure their DUT only sees the desired downlink RF signal.

Our system allows testing in real-world conditions using antennas and "live off the air" environments. For example, the carrier of interest could have adjacent carriers 40 dB higher, that the DUT would not be exposed to, which is superior to the typical passive box that simply attenuates the entire composite signal. eDHT allows over-the-air testing with antennas vs a cable-based test. Control of the eDHT can be via the GUI or SCPI commands. The GUI supports CSV scripts to automate multi-day test scenarios.



KEY FEATURES

- Up to 8 parallel RF paths supporting MIMO and SISO configurations
- Support for up to 100 MHz bandwidth on each channel
- Input RF and Output RF range from 600 MHz to 6 GHz
- Gain setting on individual channel basis
- Power level adjustment of up to 90 dB in 1 dB increments
- FIR based adjacent channel filtering
- Xilinx Zynq UltraScale+ MPSoC with plenty of resources for customization
- Support for 2 Uplinks paths with up to 90 dB control
- Graphical User Interface for control and monitor functions
- Standard 19" rack mountable 5U enclosure
- 100-240VAC power input

APPLICATIONS

- Channel emulation for LTE, 5G, 4G WiFi, Satellite IF or RF equipment
- Physical layer testing of Satellite transceivers
- Emulation of Diversity, Multi-path, and Fading channels
- Software Defined Radio (SDR) hardware platform
- Bluetooth and IoT RF equipment
- Satellite Hub MODEM
- Military Wireless Communication Systems
- Cellular 5G/4G/WiMAX/LTE Development
- Multi-user, simultaneous modulation/demodulation
- RF Automatic Test Equipment (ATE)
- Digital interference cancellation

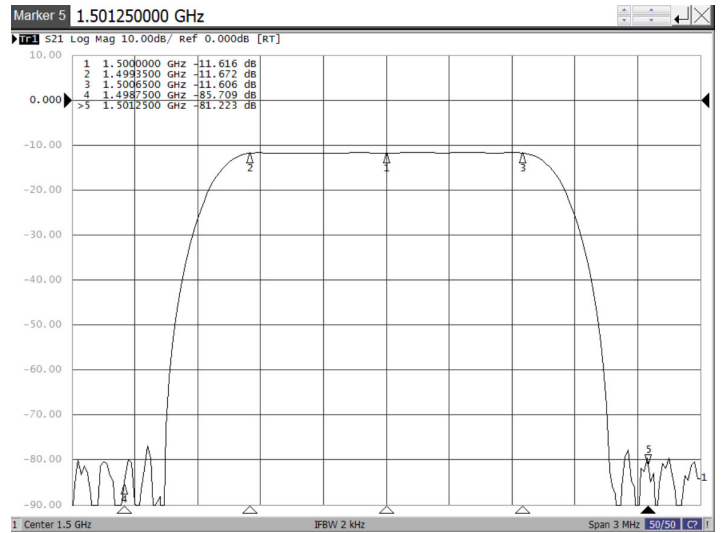
SPECIFICATIONS

MECHANICAL

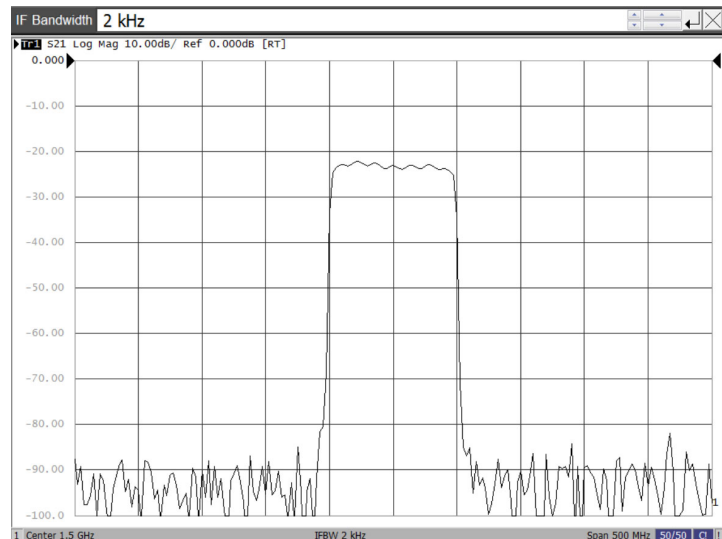
Dimensions	18" X 17" X 8.5" (LWH)
Weight	40 lbs.

ELECTRICAL

Power Input	100 - 240 VAC
Typical Power Consumption	~290 W
Cellular Downlink Input Power	-5dBm max total composite power in each band
Cellular Uplink Output Power	+23dBm max total composite power in each band
Cellular UUT Downlink Output	-40dBm to -110dBm
RF Frequency Range	600MHz to 960MHz, UL/DL 1.427GHz to 2.69GHz UL 1.447GHz to 2.69GHz DL 3.3GHz to 6 GHz UL/DL

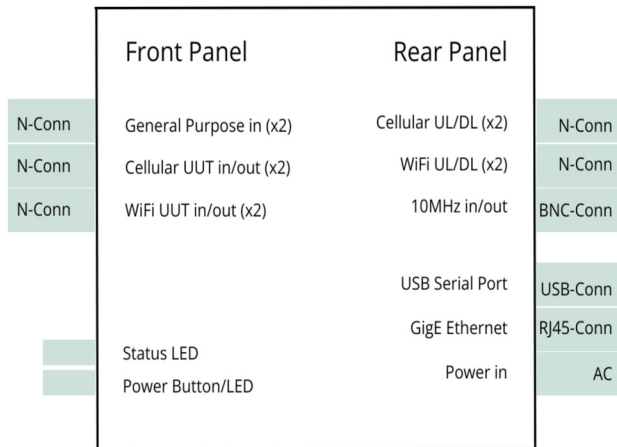


1.25MHz Digital Filter Sweep



100MHz Digital Filter Sweep

Interfaces Overview Diagram



For more information on the eDHT, visit our [website](#) or reach out to our team at inquire@bascomhunter.com

Bascom Hunter maintains a corporate commitment to quality, with our design and manufacturing operations certified to AS9100D and ISO 9001:2015

Specifications Subject to Change

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