

System 3721

UHF Narrowband Scanner and Spectrum Analyzer



Acquiring, Processing and Managing the World's Data.

What is the System 3721?

The DSPCon System 3721 is a compact, rack-mountable receiver system that is capable of receiving one, stable, UHF channel (500 to 800 MHz range), sweeping across this range, performing fast, FFT searching for energy on programmable thresholds. When energy is found, the system will perform demodulation, and will output the demodulated signal and a DC signal proportional to the spectral peak.

Applications:

- SIGINT
- COMINT

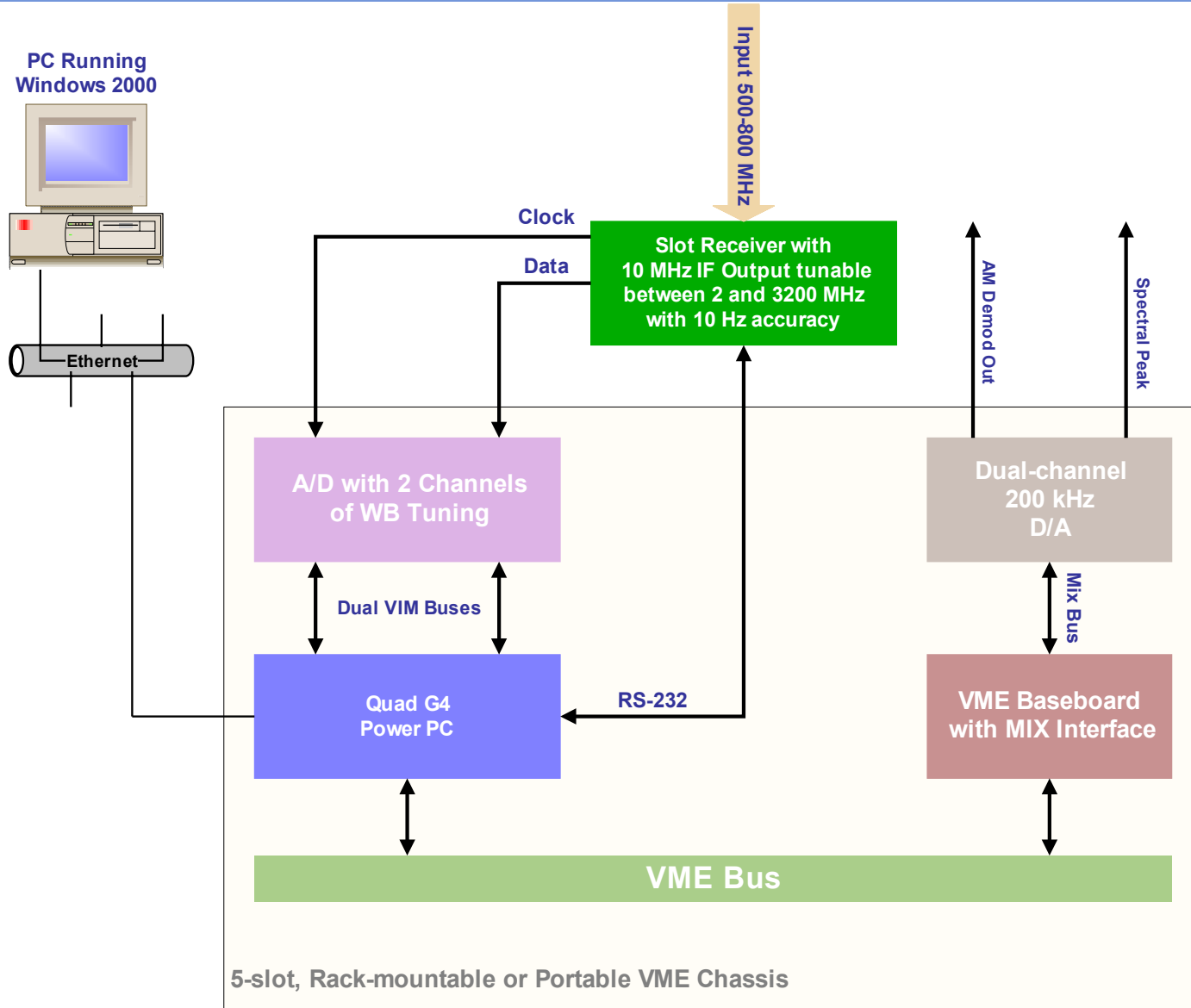
System Specification

Number of Channels	1
Input Bandwidth	5 MHz
Number of WB/NB Channels	1
Number of A/D Bits	14
SNR	72 dB minimum
SFDR	100 dBFS
Noise Floor	< -154 dBm
Processing Power	1.3 GHz, 3.0 GFLOP Power PC
Algorithms Supported	AM, FM

System Features

- Accepts a single analog input between 2MHz and 3200 MHz that contains a weak UHF signal
- Scanned and tune to any 5 MHz window between 500 MHz and 800 MHz
- Is able to perform an FFT of very narrow band signal of 1 Hz resolution
- Performs an AM or FM demodulation and outputs the demodulated signal to a D/A converter
- Generates a DC signal that is proportional to the spectral peak and outputs it to a D/A converter

System Block Diagram



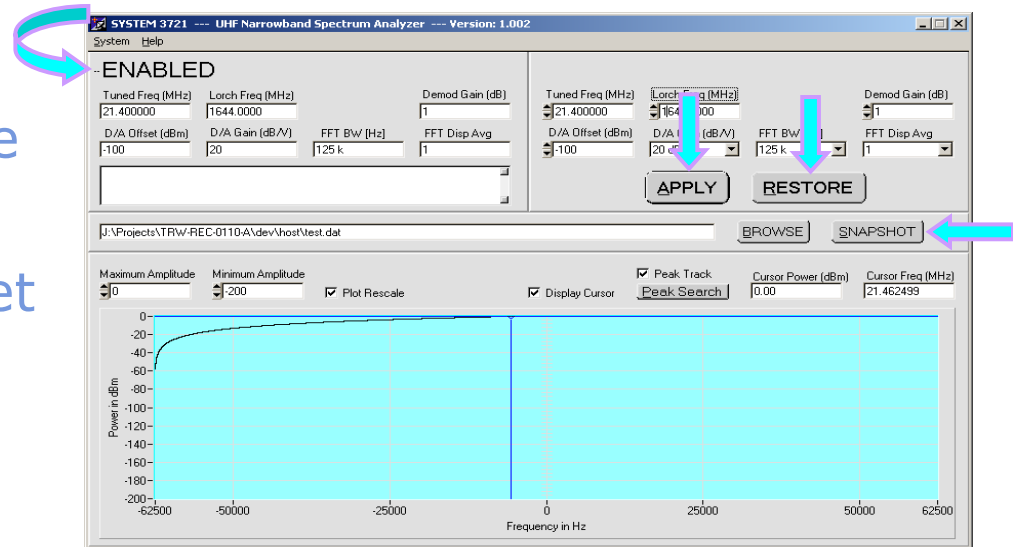
System Component Overview

- System contains one WJ-8611, Wideband, Programmable Down-converter (DC–1 GHz range) with Rubidium source as an LO
- Tunable Filter between 2MHz–3200 MHz
- Wideband, Down-converter signal is output to a VME chassis containing:
 - 1 A/D Converter—16 Bit, 21.4 MHz
 - 4 Digital Down Converters
 - 1 High-speed Power PC DSP (for performing overlapping FFTs)
 - 2 D/A outputs
- PC Computer for Control and Monitoring

Software Controllable Features

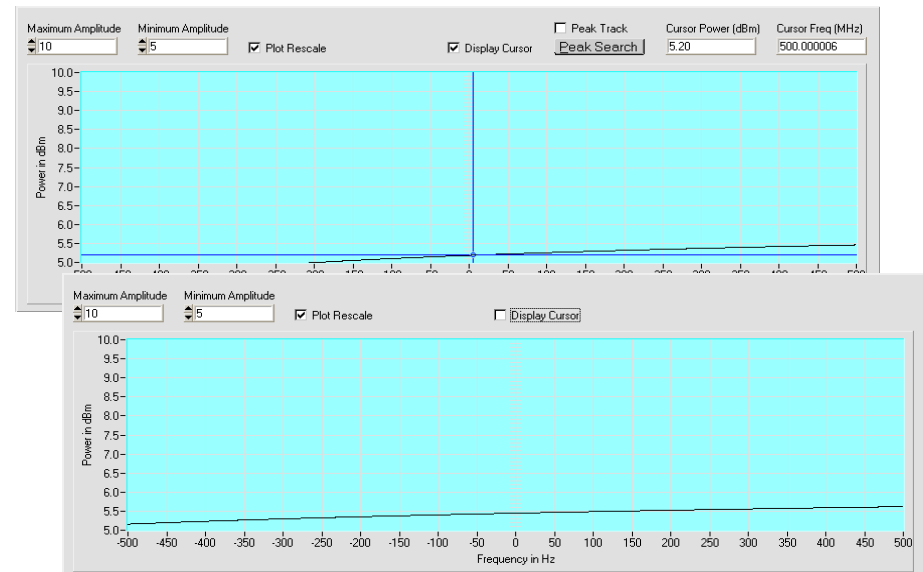
■ System Control

- Tuning (Scanning) Range
- Filter tuning
- Demodulation Gain/Offset
- FFT BW and Averaging Parameters
- Parameter Logging



■ Plot Characteristics

- Peak Tracking
- Peak Search
- Cursor Power Display
- Cursor Frequency Display
- Zoom Control



Contact Information

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