

System 2223

Portable, Ruggedized Multi-Channel Digital and Analog IF Recorder



Acquiring, Processing and Managing the World's Data.

What is the System 2223?

The DSPCon System 2223 is rugged, portable data acquisition and analysis system used to record digital, and base-banded, analog IF signals with a maximum bandwidth of 8 MHz. The digital channels are recorded synchronously with the analog channels. A variety of real-time and post-acquisition tools for viewing and analyzing data are provided.

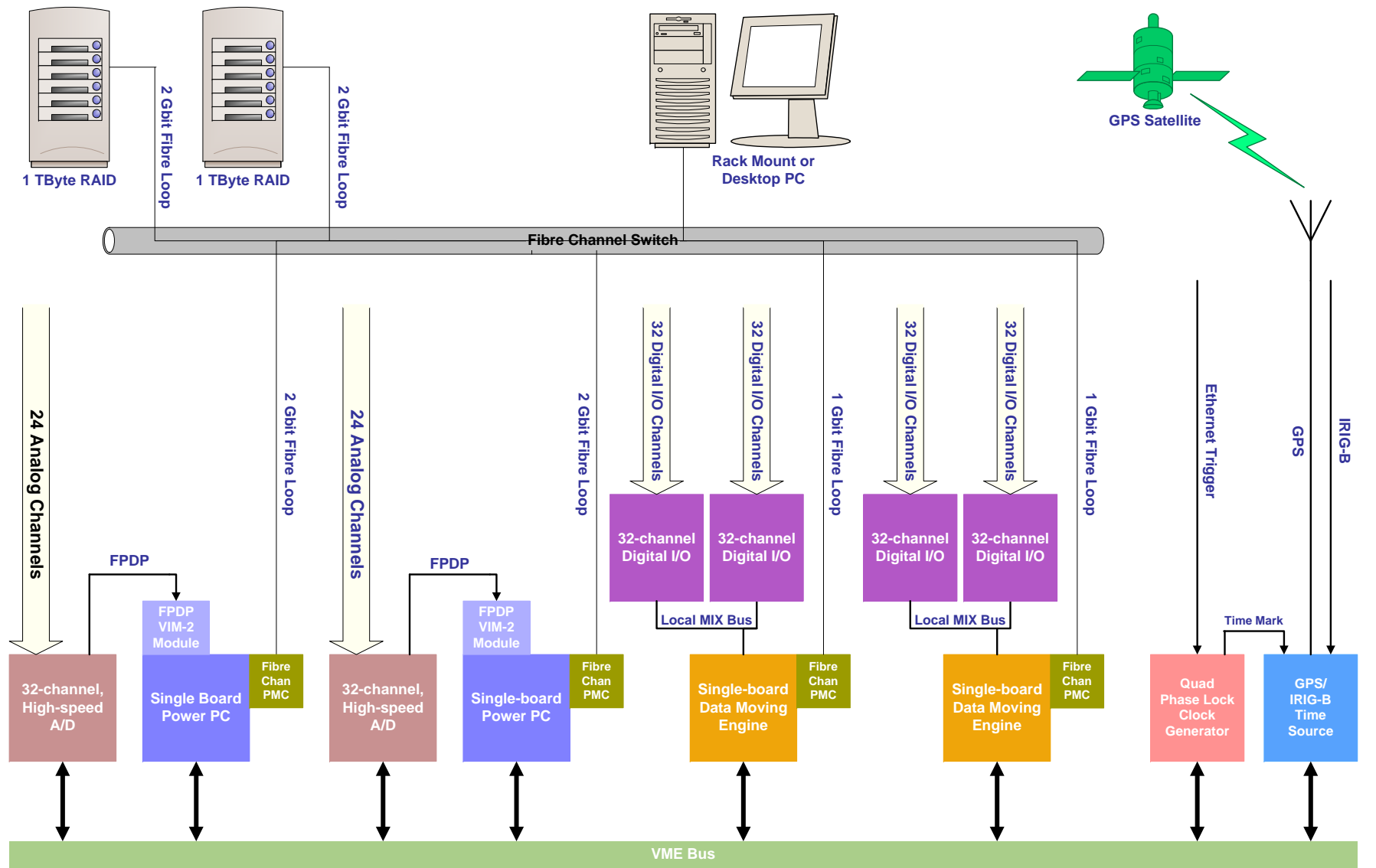
Applications

- RADAR Data Collecting

System Specifications

Number of Analog Channels	48
Number of Digital Channels	128
Input Bandwidth	8 MHz
Number of WB/NB Channels	48 WB
Number of A/D Bits	24 optionally rounded to 16
SNR	72 dB minimum
SFDR	80 dBFS
Processing Power	Two 1GHz, 3.0 GFLOPs+Power PC per every 24 channels
Storage Capacity	1 Tbyte in each of two RAIDs

System Block Diagram



System Features

- 48 Analog Channels
- 128 Digital Channels
- GPS and/or IRIG-based Time Stamping
- Large disk-based system for long acquisition
- Direct Fibre Channel connection for real-time displays and very fast (100 Mbyte/Second) off-load to PC
- Powerful, PC-based control and real-time display tools
- Powerful post-acquisition analysis tools

The Graphical User Interface

System Control

- Channel Setup
- Clock Source
- Sample Rate
- Time Stamp Source
- Trigger Control
- Upload Control

Real-time Displays

- Single/Multi-channel
- O-Scope
- Digital Strip Chart
- Time Domain
- FFT/PSD
- Waterfall
- Time



The DigiScope GUI

DigiScope Plot Configuration Tool

Plot Configuration

Display Name: My Display Configuration

Page	Page Name
1	1x1.Page_Settings
2	1x2.Page_Settings
3	2x2.Page_Settings
4	2x4.Page_Settings
5	4x4.Page_Settings
6	5x4.Page_Settings

Buttons: Add, Remove, Insert, Above, Below, Save

Page Geometry: 2x4, Page Master: 1024pts, Plot Type: HiRes

Tabs: Time, Lissajous, Spectral, Waterfall, ZMod, Campbell, Engine Order, 1 Rev

Process Parameters (Low Resolution): 1024pts, Mag Mapping, Log, Linear, Scaling, Allow, Freq Min: 0.000, Freq Max: 10.000k, Amp Min: -150.000, Amp Max: 100.000

Process Parameters (High Resolution): 1024pts, Mag Mapping, Log, Linear, Scaling, Allow, Freq Min: 0.000, Freq Max: 10.000k, Amp Min: -150.000, Amp Max: 100.000

Update Increment: 0.000

Plot Selection: 1, 2, 3, 4, 5, 6, 7, 8

Page Setup

Plot Selection

1024pts, Edit Process Param, Save

Tabs: Time, 1 Rev, Lo Res, Hi Res, ZMod Time, ZMod RPM, Campbell, Engine Order, Lissajous, Waterfall

Hi Res Plot Settings

Display_Setup_HIRes.ctThese settings apply to the display of the Hi Resolution data.

Window: As defined in the Test Definition

Process Parameters: 1024pts, Mag Mapping, dB EU, Freq Mapping, Linear, Scaling, Allow

Freq Min: 0.000, Freq Max: 10.000k, Amp Min: -150.000, Amp Max: 100.000

Plot Area: 5.000, -5.000, 0.00, 10.00m

Buttons: Save, Save This Param

Tabs: Spectral, Campbell, EngineOrder

Spectral Process Parameters: 1024pts

Low Resolution Spectraum Size: 2048

Low Resolution Spectral Window: Hamming

Low Resolution Spectral Representation: Peak

High Resolution Spectral Representation: Pk-Pk

Analysis Parameters

DigiScope Plot Configuration Tool (Cont.)

The image displays the DigiScope Plot Configuration Tool interface, which is used for configuring and displaying digital traces. The main window shows a grid of 14 plots (Plot 1 to Plot 14) and a central plot area. The top of the main window has a dropdown menu set to '1024pts' and '4x4', along with 'Select All' and 'Accept' buttons. Below this, there are tabs for 'Time, Lissajous', 'Spectral, Waterfall', 'ZMod', and 'Campbell, Engine Order, 1 Rev'. The 'ZMod' tab is active, showing 'ZMod Time' and 'ZMod RPM' parameters. The 'ZMod Time' parameters include 'Process Parameters' (1024pts), 'Freq Mapping' (dB EU), 'Time Slice (s)' (180.000), 'Freq Min' (0.000), 'Freq Max' (10.000k), 'Intensity Min' (-150.000), and 'Intensity Max' (100.000). The 'ZMod RPM' parameters include 'Process Parameters' (1024pts), 'Freq Mapping' (dB EU), 'RPM Min' (0.000), 'RPM Max' (1.200k), 'Freq Min' (0.000), 'Freq Max' (10.000k), 'Intensity Min' (-150.000), and 'Intensity Max' (100.000). A 'Select Plot Color' dialog box is open, showing a plot of a digital trace with a red line and a white background. The plot has a y-axis ranging from -10.000 to 9.999 and an x-axis ranging from 0.00 to 99.00. The dialog box has 'Plot Color' and 'BG Color' fields, both set to their default colors, and 'Apply' and 'Cancel' buttons. A 'Configure Digital Traces' dialog box is also open, showing a legend of 20 plots with their corresponding colors and waveforms. The legend has 'Apply', 'Reset', and 'Cancel' buttons. A 'Set the Display Type for each plot' dialog box is also open, showing a grid of 14 plots with 'ZModHiTime' dropdown menus. The main window also has a 'Plot 1' to 'Plot 14' grid with some plots crossed out.

Contact Information

DSPCon, Inc.
380 Foothill Rd.
Bridgewater, NJ 08807
888-DSP-CON8
Fax: 908-722-3259
E-mail: info@dspcon.com
Website: www.dspcon.com