



# MIMO SDR V1.0 PLATFORM

High Speed A/D and D/A Multiple-Input Multiple-Output (MIMO) Software Defined Radio Development Platform V1.0,  
April 17<sup>th</sup>, 2006

## Overview

*MIMO SDR v1.0 is FPGA-based SDR development platform, based on Xilinx Virtex-4 technology and high speed analog to digital and digital to analog converters placed at four radio boards along with RF transmitters/receivers.*

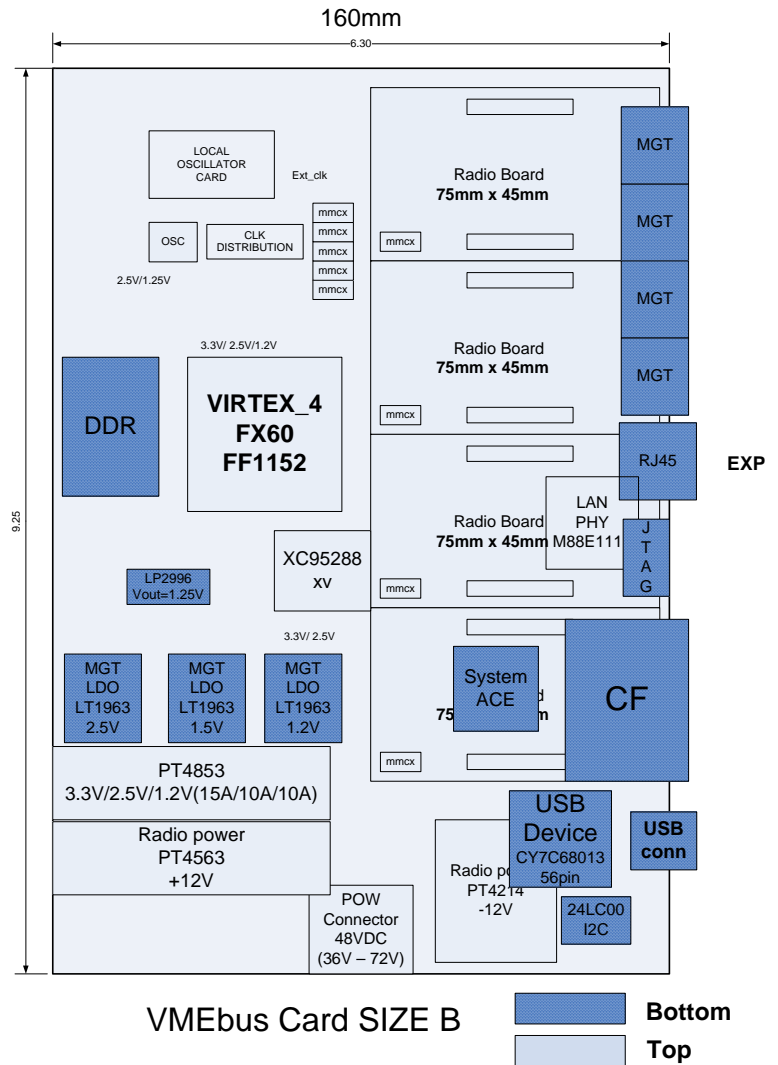
*It lends itself to various applications requiring very high speed data conversion and massive DSP processing engine.*

*High speed USB 2.0 interface enable user to minimize the development time and focus attention to the problem at hand, and not on development environment.*

*Multiple MIMO boards can be connected into system by means of MGT connections (Multi gigabit transmitters/receivers).*

*Configuration is obtain through Compact Flash system image.*

*For expanded system connectivity Gigabit LAN is added to MIMO board.*



## Key Features

- *Multi gigabit serial connection with other MIMO boards*
- *USB 2.0 support via Virtex4 firmware*
- *Xilinx Virtex 4 FX60 User FPGAs*
- *4 connectors for RF boards*
- *Gigabit LAN on board*
- *Configuration through Compact Flash*
- *100 MHz system synchronous clock scheme to RF boards*

## Advantages

- *Ultra high speed digital I/O connected directly to FPGA resources, thus enabling user to process RF data*
- *High speed interface support for development time reduction and advanced debugging*
- *Biggest and fastest processing power from state of the art Xilinx Virtex-4 generation of FPGAs.*

## Specifications

### **Processing engine**

- *One Xilinx Virtex 4 FX60 FPGA -12 with six million equivalent gates suited for DSP*

### **Digital I/O**

- *Four adequate connectors for Radio board*
- *Four multi gigabit connectors for data transferring to other MIMO boards or main board in MIMO system*

### **Power**

- *External power supply 48V DC*

### **Configuration**

- *Via USB 2.0 interface*
- *Via Compact Flash*
- *On board JTAG connectors*

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