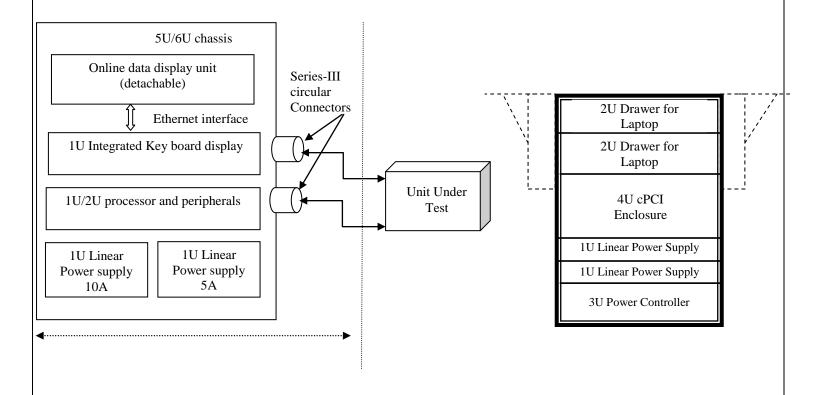


Section 1 : Objective Description

Portable Test Bed Systems to check the functionality of all of the subsystems of a system as well as the associated harness in standalone mode, in integrated mode and during various environmental tests, designed with around latest hardware & software platforms.

Simulation for functioning and testing of the embedded units at various places like assembly room, during environmental test and during integration with the other subsystems.

Section 2: System Block Diagram



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Section 3 : Description of Operation

MIL-1553 interface/ RS422 interface/ Ethernet interface connectivity between the test bed and the units.

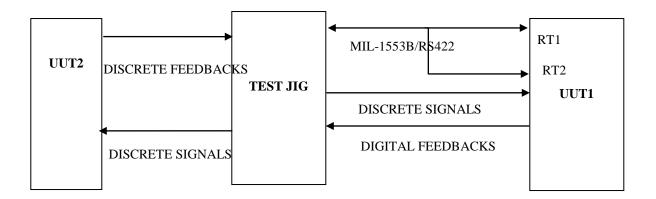
Various digital and discrete input outputs at the circular connectors.

Supply of Hardware, Test Software for all the interfaces, and integration of the all the items as shown in diagram above excluding the unit under test.

The system shall consist of a housing in which the following components will be mounted:

- ✓ Power supplies.
- ✓ Integrated keyboard display
- ✓ Online data monitoring unit
- ✓ Processor unit consisting of
 - A single board computer
 - MIL-1553B interface card
 - Optically isolated Digital inputs TTL compatible
 - Optically isolated discrete inputs
 - Timer counter module
 - Rs-422 board
 - Multifunction (ADC, DAC) board, bipolar, differential

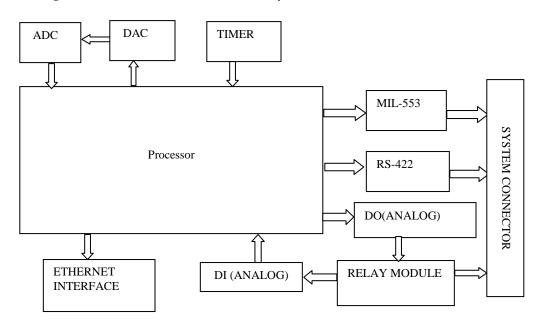
System will be configured to operate either in manual mode or either in auto mode. Interfacing to multiple units:





Section 4 : Building Blocks

Building Blocks and Internal interface of the system:



1 PMC-1553-DDC Module



2 IP – 48ADM – Analog to Digital Converter



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3 IP-SoftDAC – Software Programmable DAC



4 IP Cyclone FPGA with RS485/RS422/TTL Parallel I/O



5 Ethernet Switch



- 6 IP-opt-IN Digital Input Module
- 7 IP-opt-OUT Digital Output Module
- 8 Single Board Computer



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9 cPCI-4SIP Carrier module



Real Time Data Acquisition and Process Control : Integrated Solutions

10 Programmable Power supply



11 Laptop



12 Panel PC



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Section 5 : Deliverables with Brief Specs

SL No.	Deliverables	Remarks
1	4U- cPCI-Enclosure	
2	Single Board Computer with Software support for windows, RT Linux, Linux-works, Qnx	
2.1	PMC-1553-DDC Module configurable as BC/RT/MT	
2.2	IP-opt-IN – Digital Input Module	
2.3	IP-opt-OUT – Digital Output Module	
2.4	Relay board	
2.5	Timer counter module	
2.6	IP Cyclone FPGA with RS485/RS422/TTL Parallel I/O Board	
2.7	IP-SoftDAC – Software Programmable DAC	
2.8	IP - 48ADM - Analog to Digital Converter	
3	Ethernet Switch	
4	Programmable Power supply	
5	Laptop [or] Panel PC	
6	Integrated keyboard display 1 U size	
7	cPCI-4SIP Carrier module	

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