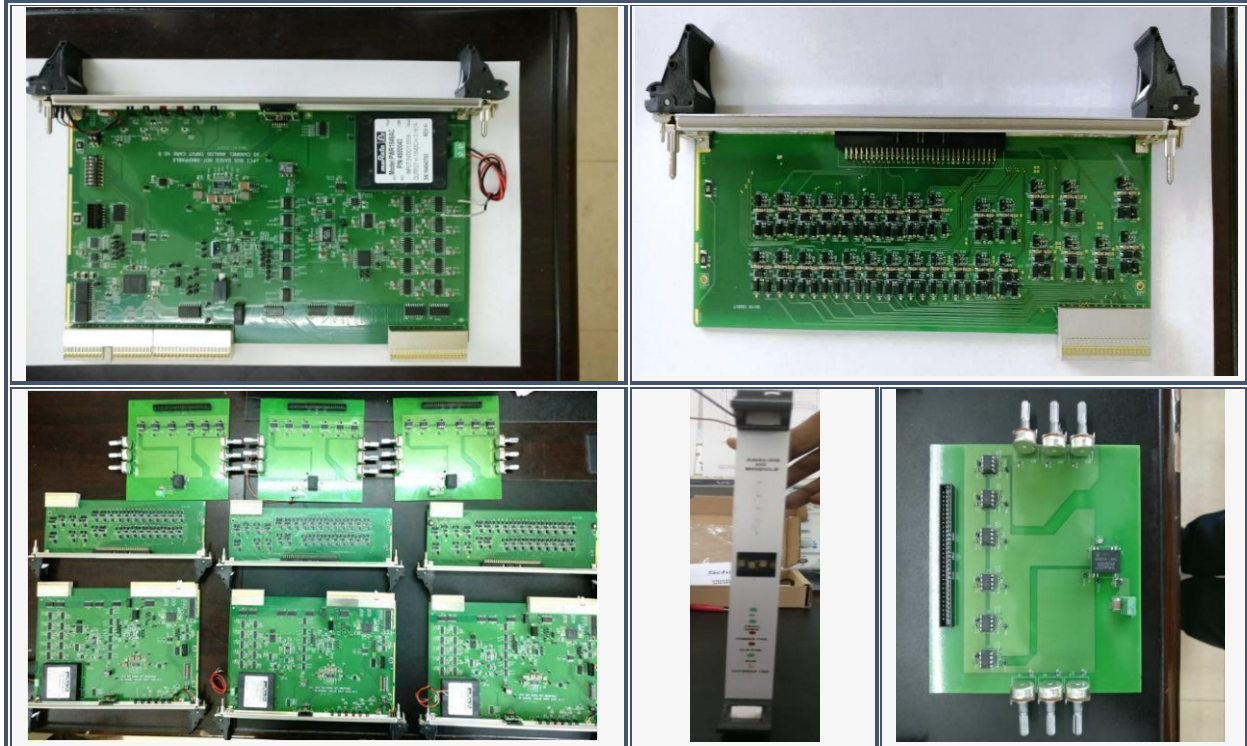




Table 1 - ANALOG INPUT, RTU AND BOARD TESTER CARD



ANALOG IO CARD:-

Spartan 6 FPGA based cPCI Interface based Industrial grade, 6U, 4HP, 66MHz, 30 channel Isolated Analog Input Card.

- **30 isolated analog input channels having fail safe pull ups interface with 16 bit - 250KSPS ADC - LTC1606ACG using fault protected analog multiplexer switches - ADG438FBRZ and instrumentation amplifiers - PGA205BU**
- **On board Power Supply Monitoring circuitry - MAX8216ESD**
- **1KV isolated ADC interface with the FPGA using Digital Isolators- ADuM7640ARQZ**
- **ADC voltage references are being generated using ULTRAHIGH PREC BANDGAP - AD780ARZ along with precision amplifiers - ADA4638-1ARZ**
- **Additional Front Panel PCB for DOT MATRIX DISPLAY MODULE 5 X 7 RED 7-BIT ASCII - HDLO1414**
- **Standard cPCI Hot-Swap Controller based Design.**
- **Standard 66MHz cPCI Interface between FPGA and cPCI connector.**
- **65 ohm and 50 ohm impedance controlled board design**
- **Complicated power supply planning.**
- **PCB - SI, PI, Thermal Analysis done.**

RTU CARD



This is the Remote Terminal Unit Card [Industrial grade, 6U, 4HP, 80mm width] which provides over voltage protected analog voltage inputs for all the 30 input channels of the Analog Input Card.

It consists of +/- 60V surge suppressors for an analog input protection and other additional circuitry for protecting analog inputs.

BOARD TESTER CARD

This board acts as tester card for testing the RTU interface card as well as the ANALOG IO Card. It consists of the followings:-

- **ULTRA PRECISION OPERATION AL AMPLIFIER, LOW SUPPLY CURRENT 2.0mA - OP177FPZ for acting as buffer output for potential divider based voltage output.**
- **±15V DC/DC CONVERTER WIDE 2:1 INPUT VOLTAGE RANGE WITH I/O ISOLATION 1500 VDC -TMR 1-2423SM. This provides isolated power supply for potentiometers and OPAMPs of board tester circuit.**

THIS HAS BEEN DEVELOPED FOR IGCAR, KALPAKKAM FOR PROCESS INSTRUMENTATION APPLICATION