



UGC RECOGNIZED

PDEU PANDIT
DEENDAYAL
ENERGY
UNIVERSITY

Formerly Pandit Deendayal Petroleum University (PDPU)



SCHOOL OF ENERGY TECHNOLOGY

Department of Electrical Engineering

Name of Laboratory : Communication and Electronics Engineering Lab

www.pdeu.ac.in

NAME OF EQUIPMENT :

High Voltage Motor Control and PFC Developer's Kit

TECHNICAL SPECIFICATIONS :

- 600V, TI's C2000 DSC, Output for 3-Ph 0.25HP Motor
- Processor: TI C2000 DSC (TMS320F28335)
- Input Voltage: 600V DC Bus
- Output: 3-Phase PWM for 0.25 HP (186W) motor
- Gate Driver: Isolated IGBT gate drive circuits
- ADC Resolution: 12-bit, 16 channels
- PFC Stage: Boost converter, >0.99 PF
- Communication: USB/UART for CCS IDE
- Protection: OCP, OVP, thermal shutdown



NAME OF EQUIPMENT :

Power Supplies

TECHNICAL SPECIFICATIONS :

- 2/3 Ch Variable/Fixed: 5VDC, 0-30V DC, 3 Amp DC, OV-OC Protection
- Type: Bench-top Triple Output DC Power Supply
- Fixed Output: +5V DC / 3A
- Variable Output 1: 0–30V DC / 3A
- Variable Output 2: 0–30V DC / 3A
- Regulation: Load $\pm 0.01\%$ + 2mV; Line $\pm 0.01\%$ + 2mV
- Ripple & Noise: $\leq 1\text{mVrms}$
- Protection: Over-Voltage (OVP) & Over-Current (OCP)
- Display: 4-digit LED Voltmeter & Ammeter per channel



NAME OF EQUIPMENT :

Signal Analyser / Spectrum Analyser

TECHNICAL SPECIFICATIONS :

- Frequency: 9kHz - 3GHz Maximum Analysis Bandwidth: 25 MHz Overall Amplitude Accuracy: +/-0.5 dB Maximum Dynamic Range 3rd Order @ 1 GHz: 111 dB Standard Attenuator Range: 50 dB Standard Attenuator Step: 10 dB
- Frequency Range: 9 kHz – 3 GHz
- Analysis Bandwidth: 25 MHz
- Amplitude Accuracy: ± 0.5 dB
- Dynamic Range (3rd Order @ 1GHz): 111 dB
- Attenuator Range: 0 – 50 dB (10 dB steps)
- Phase Noise: -98 dBc/Hz @ 10 kHz offset (1 GHz)
- RBW: 1 Hz – 3 MHz
- Connectivity: USB, LAN, GPIB



NAME OF EQUIPMENT :

Mixed Signal Oscilloscope

TECHNICAL SPECIFICATIONS :

- 100MHz, 5 GSa/S, 2 Ch Analog and 16 Ch Digital
- Bandwidth: 100 MHz
- Sample Rate: 5 GSa/s (single channel)
- Analog Channels: 2 (50 Ω / 1M Ω input)
- Digital Channels: 16 (MSO capability)
- Memory Depth: 1 Mpts per channel
- Vertical Resolution: 8-bit ADC
- Trigger Types: Edge, Pulse, Pattern, Serial
- Protocols: I2C, SPI, UART, CAN decode
- Display: 8.5" WVGA colour LCD



NAME OF EQUIPMENT :

Digital Storage Oscilloscope

TECHNICAL SPECIFICATIONS :

- 70MHz, 2 GSa/S, 2 Ch Analog with 20MHz FG
- Bandwidth: 70 MHz
- Sample Rate: 2 GSa/s
- Channels: 2 Analog
- Memory Depth: 500 kpts per channel
- Built-in Function Generator: 20 MHz, waveform output
- Waveforms: Sine, Square, Ramp, Pulse, Noise
- Vertical Sensitivity: 1 mV/div – 10 V/div
- Trigger: Edge, Video, Pulse Width, Slope
- Display: 7" TFT LCD

