
RESEARCH GROUP

POWER ELECTRONICS AND
ENERGY CONSERVATION



ANGGOTA GROUP



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DESKRIPSI

Research Group Power Electronics and Energy Conservation adalah group penelitian yang berfokus pada pengembangan teknologi pada konverter daya (AC to AC Voltage Controller, DC to DC Converter, AC to DC Rectifier, dan DC to AC Inverter) yang diterapkan pada berbagai aplikasi teknologi dan konversi energi seperti Electrical Grid, Renewable Energy, dan Electric Device

FRAMEWORK

Research Group Power Electronics and Energy Conservation

Implementation

Electrical Grid

Renewable Energy

Electric Device

Technology

Power Electronic
Converter
Characteristic

Design Component
Magnetic

Algorithm for Power
Electronics

Applying Energy
Conservation

KEGIATAN PENELITIAN YANG SUDAH DILAKUKAN 2020-2022

- **PENLOK: MPPT-PARALLELED FULL-BRIDGE CONVERTER UNTUK MENCAPAI PERFORMANSI SUPLAI TERBAIK PADA SOLAR PUMP INVERTER (2020)**
- **PENLOK: MPPT FUZZY TYPE-2 FULL BRIDGE DC-DC CONVERTER UNTUK SUPLAI INVERTER SEBAGAI PENGGERAK MOTOR POMPA AIR (2021)**
- **PENLOK: MPPT FLYBACK CONVERTER MENGGUNAKAN METODE MODIFIED HUMAN PSYCHOLOGY OPTIMIZATION (MHPO) PADA KONDISI PARTIAL SHADING (2022)**

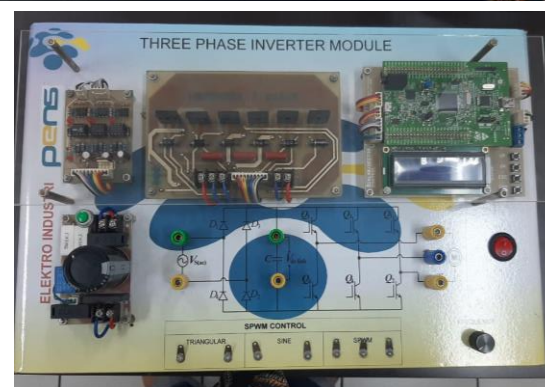
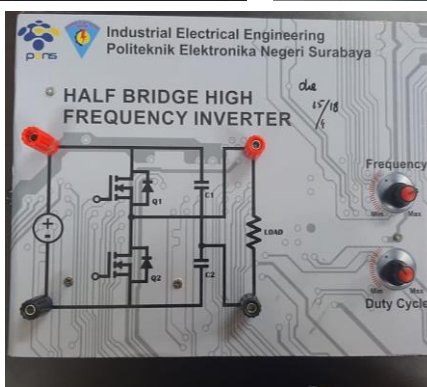
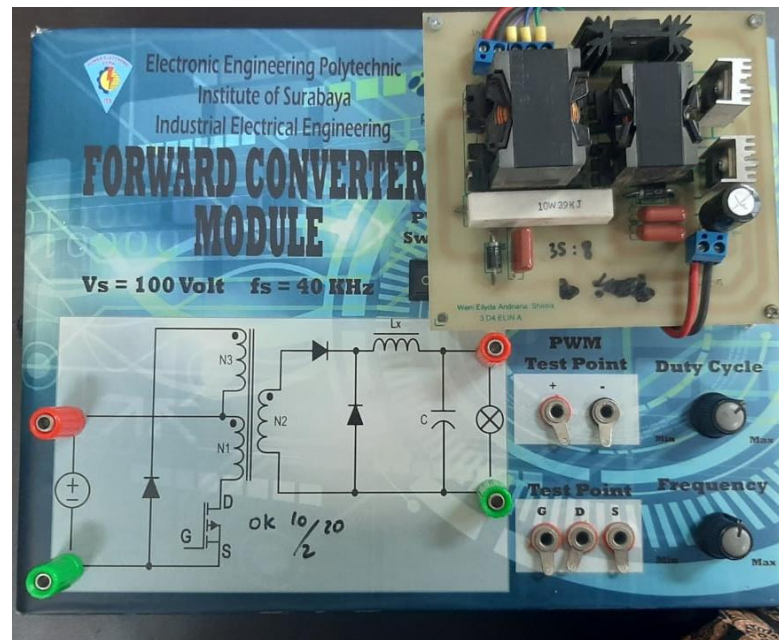
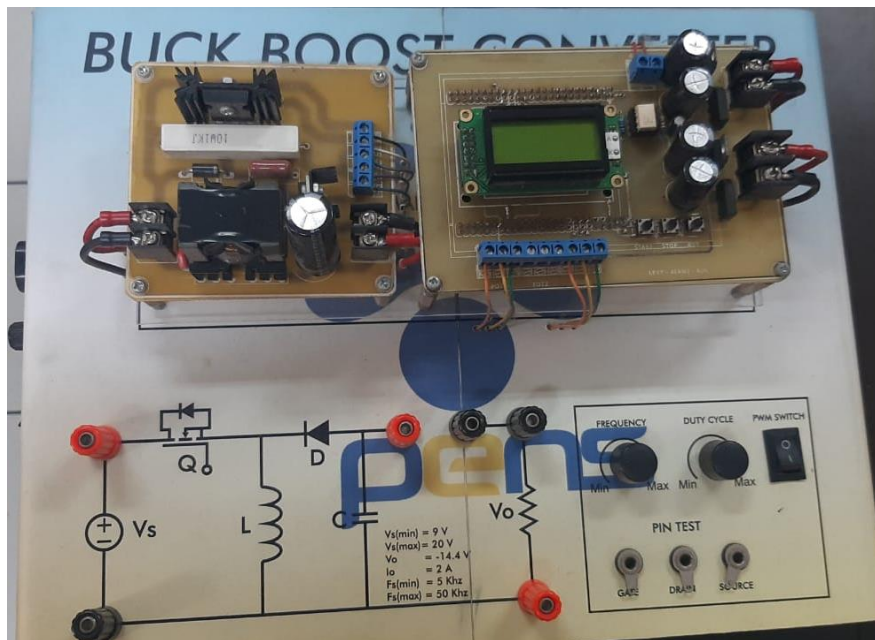
LUARAN PUBLIKASI 2020-2022

- Power factor improvement on LED lamp driver using BIFRED converter ,TELKOMNIKA, 8 (1), 2020
- CUK Converter for Power Factor Correction Using Moth Flame Optimization-PI Controller,IOP Conference Series: Materials Science and Engineering 982 (1), 012020, 2020
- MPPT Full Bridge Converter using Fuzzy Type-2, Journal on Advanced Research in Electrical Engineering, 5 (2), 2021
- Paralel Flyback Converter sebagai PFC pada Lampu LED menggunakan Fuzzy Type-2, Jurnal ELKOMIKA, 2021
- An Enhancement of Power Factor Utilizing Combination of Converters, Monograph, 2022
- Maximum Power Point Tracking dengan Metode Modified Human Psychology Optimization pada Kondisi Partial Shading, Jurnal ELKOMIKA, 10 (4) 2022

LUARAN PUBLIKASI 2020-2022

- Constant Power Generation Using Modified MPPT P&O to Overcome Overvoltage on Solar Power Plants, International Conference, 2020
- A maximum power point tracking technique using modified hill climbing (MHC) method in DC microgrid application, International Conference, 2020
- Perbaikan MPPT Incremental Conductance Menggunakan ANN pada Berbayang Sebagian dengan Hubungan Paralel, ELKOMIKA, 2020
- Maximum Power Point Tracking Menggunakan Algoritma Artificial Neural Network Berbasis Arus Hubung Singkat Panel Surya, JRE (Jurnal Rekayasa Elektrika), 2020
- Penerapan Sistem Elektronika Daya: AC Regulator, DC Chopper, dan Inverter, Monograph, 2022
- Konsep Dasar Elektronika Daya, Monograph, 2022

PROJECT MODULE



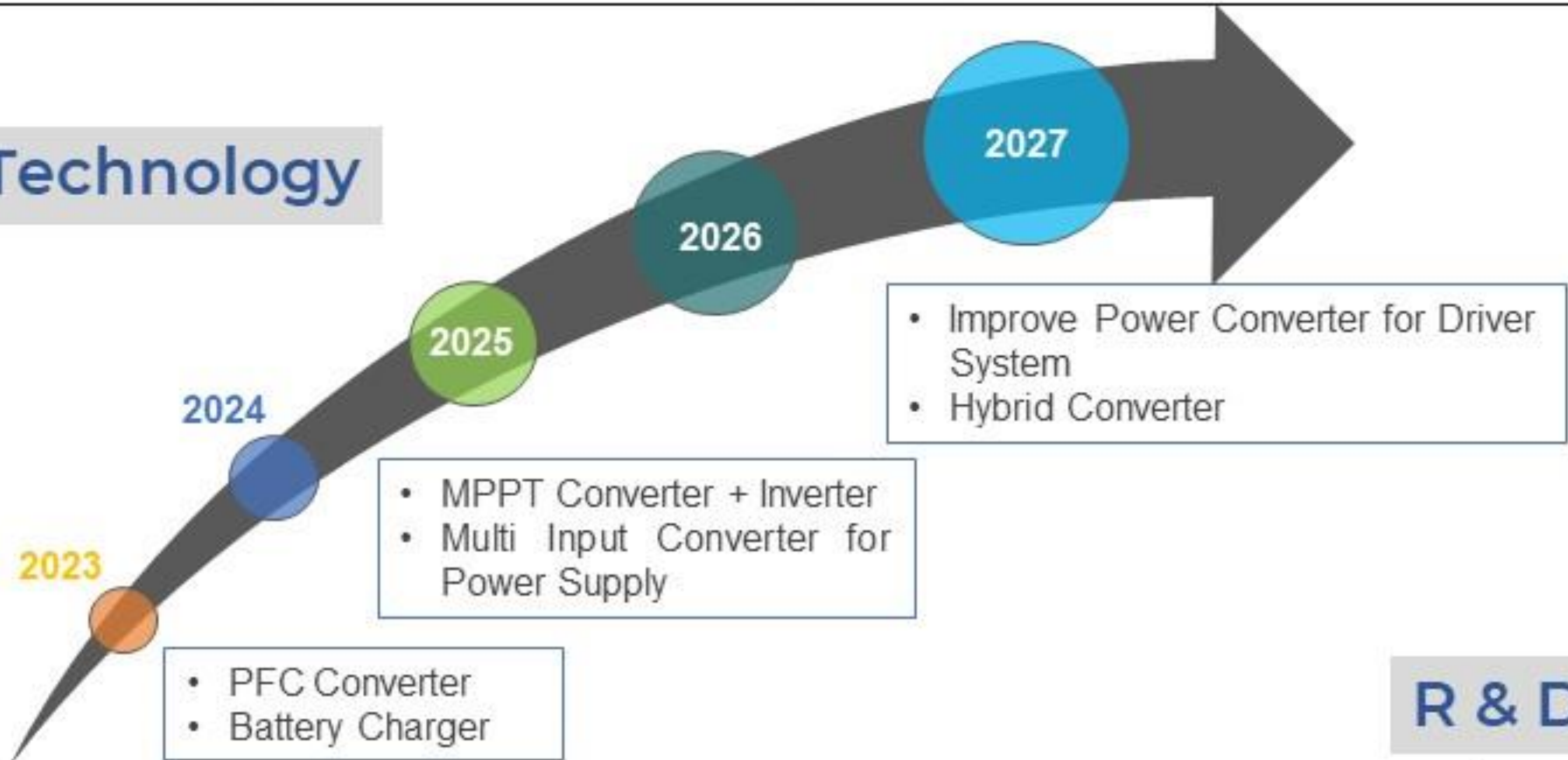
Roadmap 2023-2027

Power Electronics for Energy Conversion

Product

Power Electronic Converter
For Implementation Power Electronics and Application Technology
(Electrical Grid / Renewable Energy / Electric Device)

Technology



R & D

Power Electronic Device Characteristic, Power Electronic Driver Switching & Control, Design Component Magnetic

RENCANA KEGIATAN TAHUN 2023-2027:

- Pengajuan Jurnal Nasional SINTA 3 - I
- Pengajuan Jurnal International Scopus Q4 – Q3
- Pengajuan International Conference
- Pengajuan Hak Cipta
- Pengajuan Paten

RENCANA KEGIATAN TAHUN 2023-2027:

- Pengajuan Proposal Penelitian Nasional dengan topik: Hybrid Converter
- Pengajuan Proposal Penelitian Lokal dengan topik:
 1. Solar Inverter (MPPT Converter + Inverter)
 2. PFC Converter for Battery Charger
 3. Multi Input Converter for Power Supply
 4. Power Converter for Driver System



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 спасибо
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