MAIN ANNUAL PROJECTS for ALL UNIVERSITIES:

- Industrial computers projects will be annually done in all universities with high standards and will be developed by next students.
- These projects aim to let the students gain the necessary knowledge in hardware R & D field, electronics, circuit design, PCB design, etc.
- These computers will be the basis for many PMM software projects as they are operating using Windows or Linux systems.

Purpose	Project Description	Status
X86 CPU Board with BIOS	1. PMM0107-X86 BASED EMBEDDED INDUSTRIAL COMPUTER BASED ON Intel® Atom™ x5-Z8350	AVAILABLE
ARM Based CPU Board With BIOS	2. PMM0102-COMPACT ARM BASED EMBEDDED INDUSTRIAL COMPUTERS BASED ON Allwinner H3, Quad-core Cortex-A7 CPU	AVAILABLE

LIST of HARDWARE PROJECTS:

- These products are used in many industrial applications such as factories, power plants, and solar power plants.
- Usually, the product's principle of work depends on a microcontroller that is connected with electronic circuits to perform the required function. Each of these devices has parts that enable it to communicate with other devices and with the outside world through them. As these devices support WIFI, RS485, Ethernet, and much more.

Purpose	Project description	Status
Communication	1. PMM0610 - MODBUS TCP – RTU	TAKEN
	2. PMM0611 - RS485 to RS485 10MBIT BusLink	TAKEN
	3. PMM0612 - F.O (1x9) to RSxxx BusLink	TAKEN
Energy Meter	4. PMM0640 - 1PH ENERGY METER	TAKEN
	5. PMM0641 - 3PH ENERGY METER	TAKEN
Temperature and Humidity	6. PMM0650-Temperature and humidity Controller	TAKEN
	7. PMM0651-Fan Speed Controller	TAKEN
Pressure and Flow	8. PMM0660-Pressure Controller	AVAILABLE
	9. PMM0661-flow Controller	AVAILABLE
Motion and CNC	10. PMM0670-Single Axis Controller	AVAILABLE
	11. PMM0671-Flying Shear Controller	TAKEN
	12. PMM0672-Two Axis Controller	AVAILABLE
	13. PMM0673-Three Axis Controller	AVAILABLE
	14. PMM0674-Six Axis Controller	AVAILABLE
	15. PMM0675-optical encoder interface	AVAILABLE

LIST of SOFTWARE PROJECTS:

Purpose	Project description	Status
Automation	1. Real-time Open PLC	AVAILABLE
IOT Industrial four	2. HTTPS WEB API Bridge	AVAILABLE
	3. WEB Real-time monitoring	AVAILABLE
	4. Virtual ethernet switch (L3)	AVAILABLE
MODBUS Protocol Converter	5. IEC60870-101/104 -MODBUS	TAKEN
	6. DNP3-MODBUS	AVAILABLE
	7. IEC61850-MODBUS	AVAILABLE
	8. Profinet-Modbus	AVAILABLE
	9. Profibus-Modbus	AVAILABLE
OPC Server	10. MODBUS OPC	TAKEN
	11. MySQL database OPC	AVAILABLE
	12. SQL lite OPC	AVAILABLE
	13. IEC101 OPC	AVAILABLE
	14. IE104 OPC	AVAILABLE
	15. DNP3 OPC	AVAILABLE
	16. DLMS OPC	AVAILABLE