



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



COIMBATORE-35

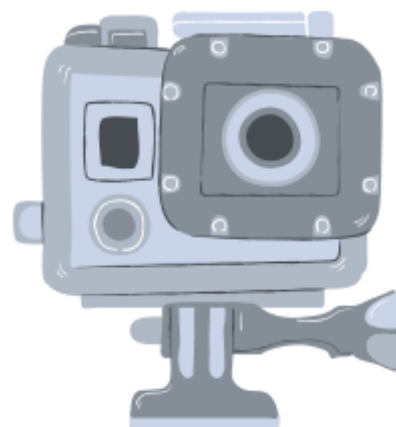
Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

UNIT 2

SMART GRID TECHNOLOGIES – Intelligent Electronic Devices (IED)

19EEE308 – SMART GRIDS
III year / VI Semester



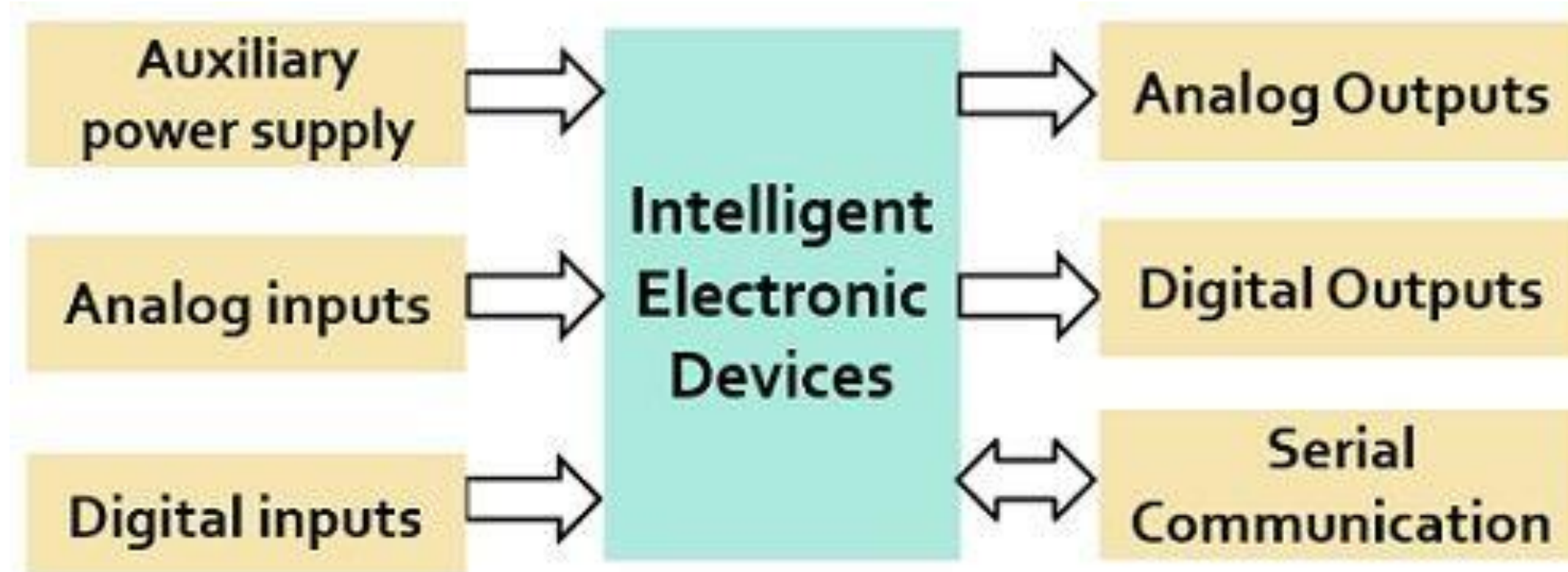


- **Intelligent Electronic Devices** abbreviated as **IED** is defined as devices that have single or multiple microprocessors integrated within it. Its main purpose involves the transmission or reception of data or control signals to or from an external device. The external device in consideration with the whole system can be transducers, relays, control units, etc.





Intelligent Electronic Devices



Block Representation of IED



Intelligent Electronic Devices

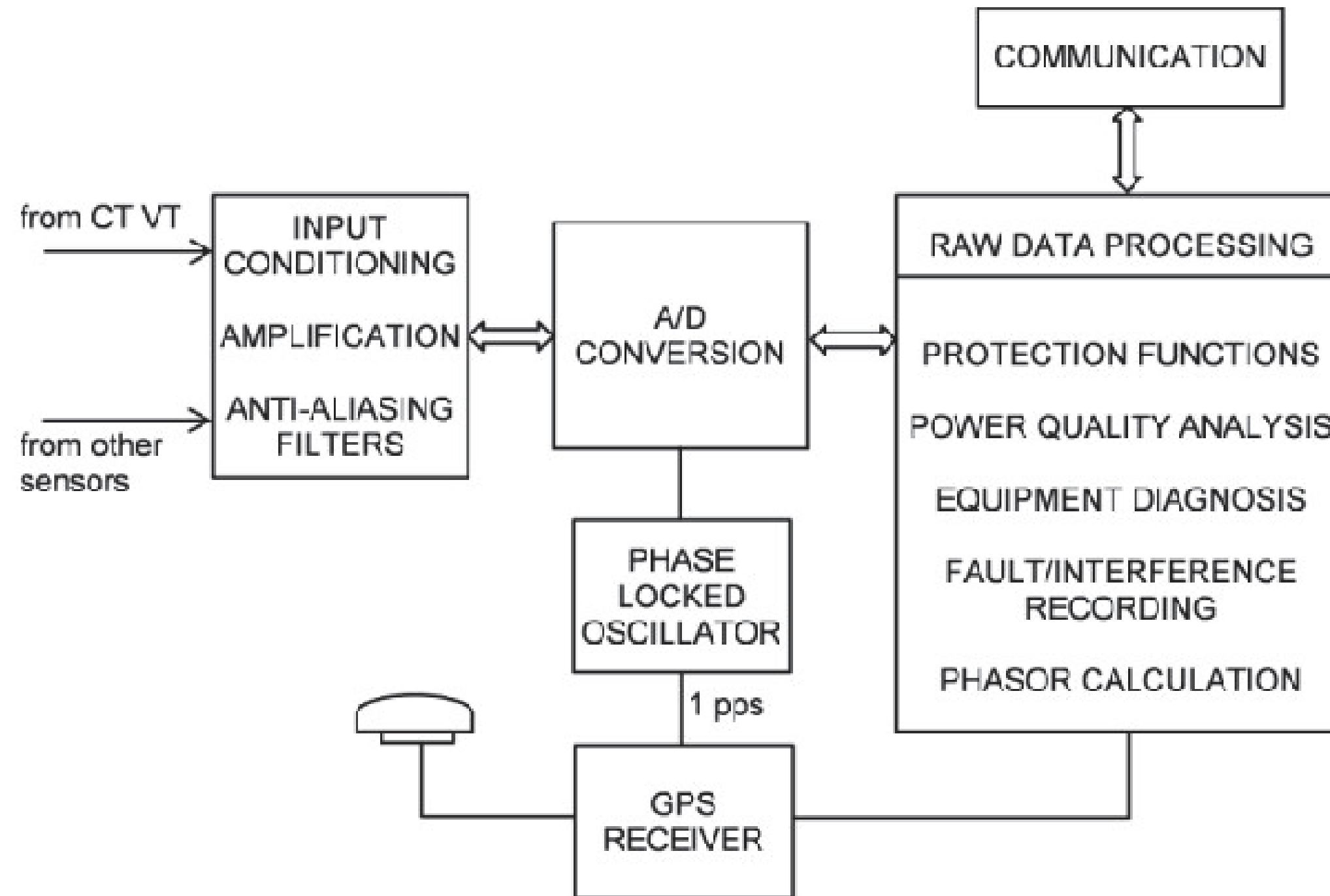


Fig. 2 Architecture of modern many-function IED



Intelligent Electronic Devices - Components

IED configuration consist of

- Analog/Digital Input from Power Equipment and Sensors
- Analog to Digital Converter (ADC)/Digital to Analog Converter (DAC)
- Digital Signal Processing Unit (DSP)
- Flex-logic unit
- Virtual Input/ Output
- Internal RAM/ROM
- Display



Functions of IED



1. Protection function including phasor estimation
2. Programmable logic and breaker control
3. Metering and power quality analysis
4. Self-monitoring and external circuit monitoring
5. Event reporting and fault diagnosis
6. Tools for settings, commissioning, and testing
7. Programmable LCD display



Summary



Activity



**KEEP
LEARNING..
Thank u**

SEE YOU IN NEXT CLASS