

**Unit -I****INTRODUCTION TO EMBEDDED SYSTEMS****1.4 Electronic instruments, such as industrial process controller**

Electronic smart weight display system, and an industrial moisture recorder cum controller. Digital storage system for a signal wave form or Electric or Water Meter Reading

**Computer networking systems**, -for examples ,router ,front-end processor in a server, switch, bridge ,hub, and gateway

**For Internet appliances**, there are numerous application systems

- (i) Intelligent operation, administration and maintenance router (IOAMR) in a distributed network, and
- (ii) Mail Client card to store e-mail and personal addresses and to smartly connect to a modem or server

**Banking systems**-for examples ,Bank ATM and Credit card transactions

**Signal Tracking Systems** - for examples, an automatic signal tracker and a target tracker.

**Communication systems, for examples, such as for a mobile-communication a SIM card** a numeric pager, a cellular phone, a cable TV terminal, and a FAX transceiver with or without a graphic accelerator. Image Filtering, Games

A system Image Processing, Pattern Recognizer, Speech Processing and Video Processing.

**Entertainment systems**-such as videogame, music system and Video

that connects a pocket PC to the automobile driver mobile phone and a wireless receiver. The system then connects to a remote server for Internet e-mail or to a remote computer at an ASP (application Service Provider). A personal information manager using frame buffers in hand-held devices.

Thin Client to provide the disk-less nodes with the remote boot capability. [Application of thin-clients is access to a data center from a number of nodes; or in an Internet Laboratory access to the Internet leased line through a remote Server]. Embedded Firewall/R

outer using ARM7/multi-

processor with two Ethernet interfaces and interfaces support to for PPP, TCP/IP and UDP protocols.

### *Sophisticated Applications*

- Mobile Smart Phones and Computing systems
- Mobile computer
- Embedded systems for wireless LAN and convergent technology devices
- Embedded systems for Video ,Interactive video, broad band IPv6(Internet Protocol version 6) Internet and other products, real time video and speech or multi media processing systems
- Embedded Interface and Networking systems using high speed (400 MHz plus), and ultra high speed (10 Gbps ) and large bandwidth: Routers, LANs, switches and gateways ,SANs (Storage Area Networks), WANs (Wide Area Networks), Security products and High-speed Network security, Giga bit rate encryption rate products

