**Introduction**

The DTU is a remote data collection unit, manufactured by Indra that collects the information supplied by a detector, processes it and automatically relays such information to a Center.

It is composed by:
- An ARM-9 based CPU running embedded Linux.
- 2x RS-232 ports, one for service and the other isolated.
- 1x RS-485 isolated and protected port.
- 4x isolated local digital inputs.
- 3x isolated and protected local digital inputs.
- 4x realy based digital outputs.
- 1 x 10/100Mbps Ethernet.
- GSM and Switched Telephone Network modem.
- 1x Simcard holder.
- 1 x micro-SD storage card.
- 1x 5x4 keyboard interface.
- 1x LCD text display interface.
- 1x Clock-Schedule.
- 1x EEPROM.
- 1x Push button and LED service.
- 1x Speaker.
- 1x Protection board.

It has 9V to 36V supply voltage range and its inputs and outputs are built in terminal connector blocks facilitating the field work. It has a DIN rail installation and because of the protocols it integrates can be remotely updated.

Nowadays this DTU is installed in 120 points associated to the Spanish RAR (Radioactivity Alert Network) based on GSM communications.
**CPU**

The Linux based CPU has an ATTEL 180MHz AT91RM9200 processor with MMU and 2.6.x kernel with which gives a great versatility to the system. It supports:

**File System**
- Supports JFFS2, EXT2/EXT3, VFAT/FAT, NFS

**Protocol Stacks**
- IPv4, ICMP, ARP, DHCP, NTP, TCP, UDP, FTP
- Telnet, HTTP, PPP, PPOE, CHAP, PAP
- SMTP, SNMP V1/V2, SSL, SSH 1.0/2.0

**Utilities**
- Bash: Shell Command
- Telnet: Telnet client program
- Busybox: Linux utility collection
- FTP: FTP client program

**Pre-Load Daemons**
- pppd: Dial In/out over serial port and PPOE
- snmpd: SNMP agent program
- telnetd: Telnet server program
- ined: TCP server program
- ftpd: FTP server program
- boa: Web server program
- sshd: secured shell server
- iptables: Firewall service manager

**GSM and STN modems**

The DTU can be equipped with a Cinterion MC35iT GSM modem or/and with a Multitech Socket Modem. We can choose whether we want to work with GSM or STN modem or both at the same time.

**Protection board**

As the radioactivity sensors are usually located on top of a building roof, they are heavily exposed to all kind of electrical disturbances, so, Indra provides a companion protection board designed to protect the supply voltage, the STN line and the RS-485 port. It is meant to be installed on a DIN rail close to the CPU board.

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Indra reserves the right to modify these specifications without prior notice.