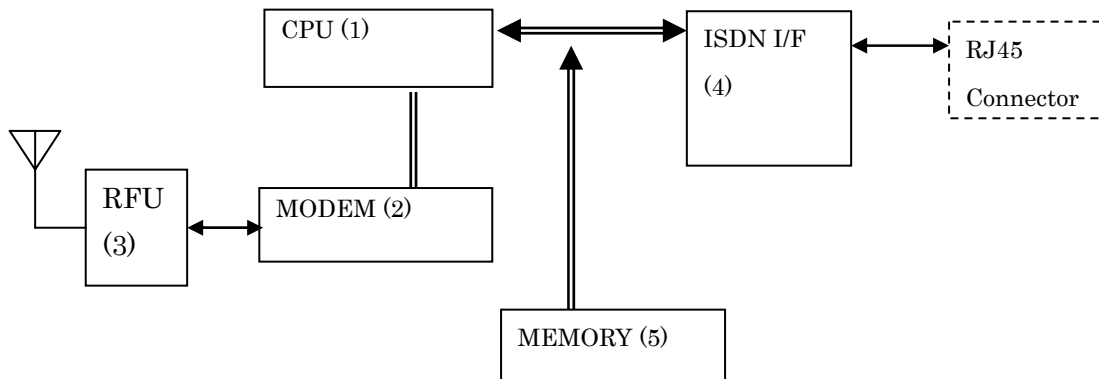


Theory of Operation



SN8158CSEV is a unlicensed 1.9GHz band PCS base station which provides a PCS wireless interface for NEC's PBX system. The device consists of five functional circuits as described below.

(1) CPU

CPU provides a central control of the device, management interface to a main PBX system and data frame handlings within the device.

(2) MODEM

MODEM block modulates and demodulates data frames received from both CPU and ISDN I/F for PCS frame transmission.

(3) RFU

RFU is a RF Unit Module realised by RF4510N (Manufacturer: Murata). Block diagram of RF4510N is shown below.

The module connects directly to a diversity antenna of the device and provides TDMA-TDD, QPSK modulated transmissions of data frames processed by MODEM.

(4) ISDN I/F

ISDN Interface provides ISDN-U interface functionality of the device that connects to the main PBX system. It also allows the device to obtain phantom power feed from this interface. This module directly connects to a RJ45 connector for 2-wire ISDN-U interface.

(5) MEMORY

Memory consists of SRAM and Flash ROM, used to store firmware program that runs on CPU as well as used as a CPU working memory area.

BLOCK DIAGRAM OF RF4510N

