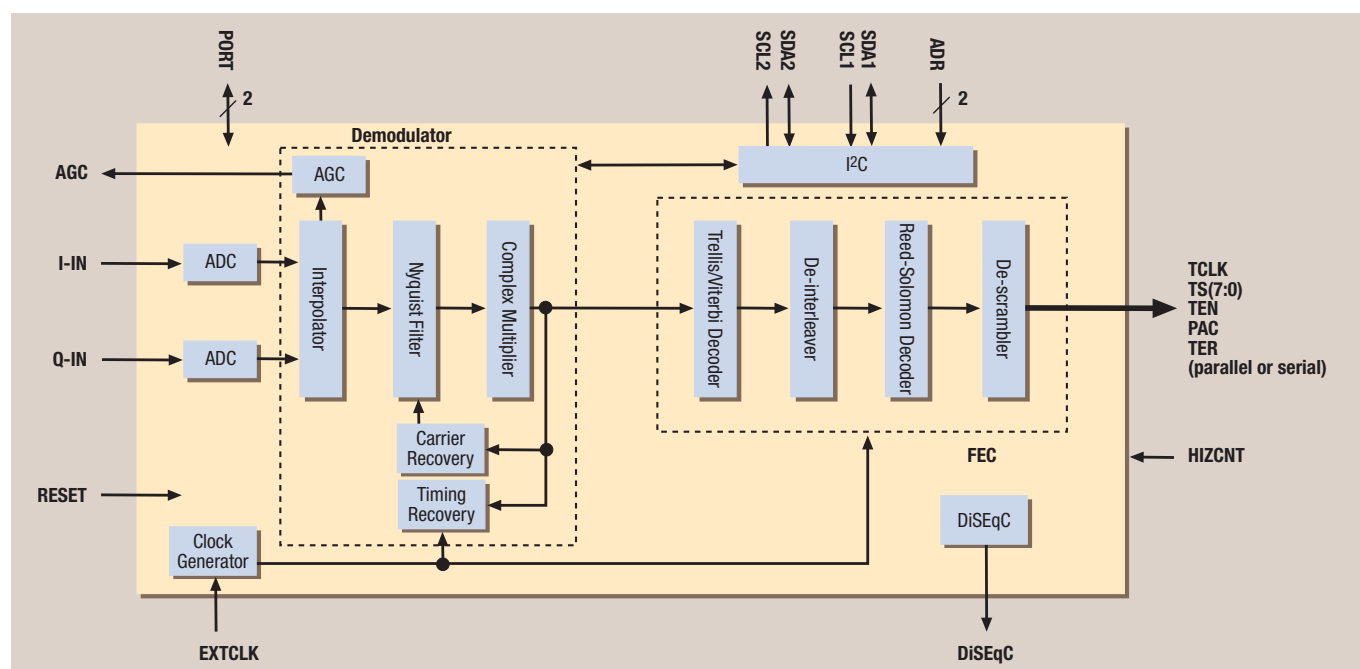


# QPSK DEMODULATOR

for satellite receivers of Digital TV



MB86667 block diagram.

## Description

The MB86667 is a single-chip demodulator for base band signals of digital satellite broadcasting, compatible with DVB-S (Digital Video Broadcast) and DSS (Digital Satellite System). It consists of two A/D converters (for I-channel and Q-channel), a QPSK demodulator, and forward-error correction decoder, which has Viterbi and Reed-Solomon decoders.

The MB86667 is a perfect solution for all satellite applications, because of its low power consumption, small package size (LQFP48) and short bill of material. The NIM-like evaluation board and the drivers make a short design time possible. The software drivers are also included in the digital TV software of the SmartMPEG family, which allows fast implementation of Free-to-Air zapping applications up to complex PVR applications.

## Typical applications

- Satellite set-top boxes
- Personal video recorder for satellite reception
- Head-end equipment for satellite reception
- Network Interface Modules (NIM) for satellite reception

## Features

- DVB-S (SCPC) and DSS compatible
- Operation rate: 1 to 45 Mbaud
- A/D converters for I-channel and Q-channel
- Carrier recovery capture range 1 to 45 Mbaud:  $\pm 5$  MHz (maximum)
- Built-in carrier frequency difference monitor (via I<sup>2</sup>C bus)
- C/N monitoring function (via I<sup>2</sup>C bus)
- IQ automatic detecting function
- Automatic detection of Viterbi code rate ( $R=1/2, 2/3, 3/4, 5/6, 7/8$  (for DVB))
- I<sup>2</sup>C bus interface
- Tuner control pins (via I<sup>2</sup>C bus interface or 3 wires)
- TONE output for LNB control
- DiSEqC v1.x compatible
- Input clock : 4MHz or 16MHz
- +3.3V and +1.8V dual-power operation
- Power consumption: typ 490 mW
- Package: LQFP-48
- Operating temperature range: 0 to +70°C

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