

## General Description

The MxL692 is a single-chip, integrated tuner and demodulator receiver that targets digital TV, single/multi-channel STB, USB/WiFi adapter, and WiFi/wired/RF Smart antenna system applications for the *Advanced Television Systems Committee ATSC* standard and cable applications for the global digital cable standards *ITU-T J.83 Annexes (A, B, and C)*.

The MxL692 takes an RF input signal from 44 MHz to 1006 MHz, and outputs an MPEG TS in serial or parallel format. With its high-level of integration, the chip integrates the following to simplify the board-level design:

- Broadband input filter
- Channel filter
- AGC
- LO
- PLL
- Demodulators

The device comes in a small 5 × 5 mm QFN package, enabling a very compact design, reduced BOM cost, and lower power consumption.

The MxL692 is controlled through an I2C interface. The IC supports either single supply operation using 3.3V, or dual supply operation using 3.3V and 1.8V.

## Applications

- Single-channel ATSC zapper
- Dual-channel PVR STB
- Quad-channel PVR STB
- ATSC/QAM gateway
- ATSC to USB/WiFi adapter
- ATSC wired/RF Smart antenna

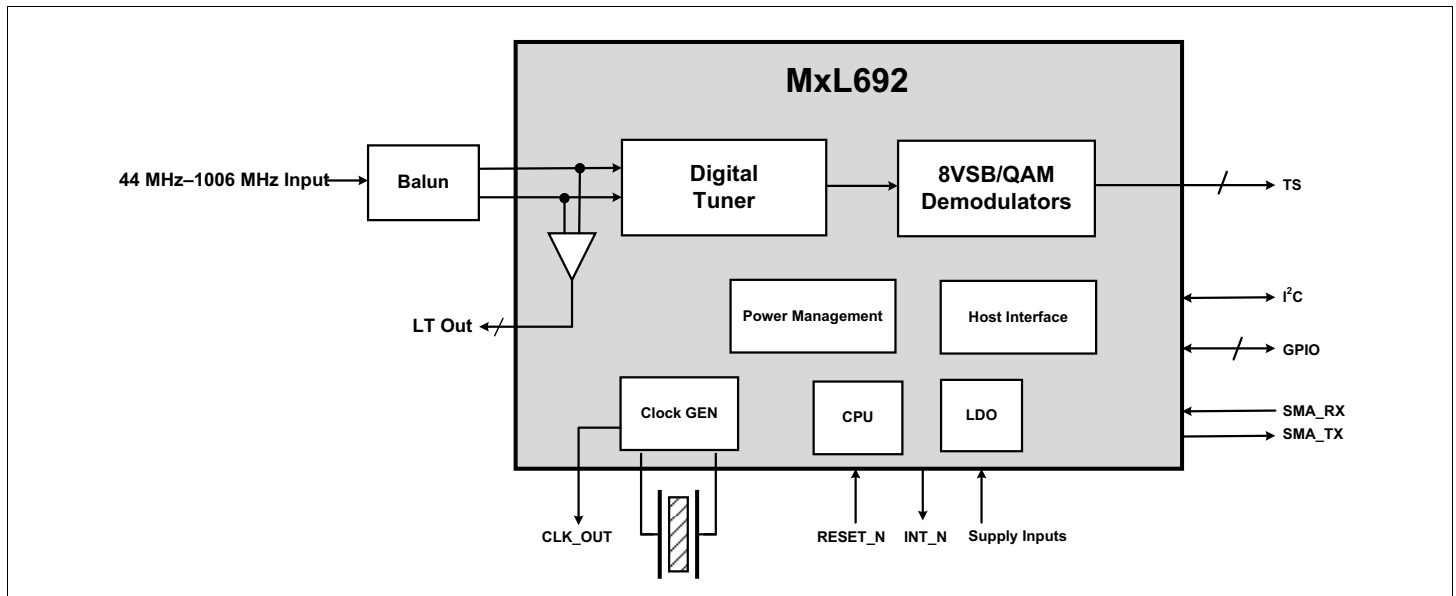
## Features

- Wide tuning range from 44 MHz to 1006 MHz
- Single RF input
- Integrated channel filtering that does not require SAW filters, and has programmable channel bandwidths of either 6 MHz or 8 MHz
- Loop-through (LT) output function
- On-chip voltage regulators enable a single supply operation
- Typical low-power consumption of <550 mW for ATSC and <450 mW for QAM in dual supply operation
- Excellent immunity to LTE and WiFi interference
- Automatic spectral inversion in QAM modes
- Input power reporting
- Serial or parallel TS interface
- *CEA-909* compliant *Smart Antenna Interface Specification* (modes A and B)
- API-based software interface

## Supported Standards

- ATSC A/53
- ITU-T J.83
  - Annex A (DVB-C)
  - Annex B (US Cable)
  - Annex C (Japan)

## Block Diagram



## Ordering Information

| Marketing Part Number | Ordering Part Number | Package | Dimension             | Shipping      |
|-----------------------|----------------------|---------|-----------------------|---------------|
| MxL692                | MxL692-AM-T          | QFN40   | 5 mm × 5 mm × 0.85 mm | Tray          |
| MxL692                | MxL692-AM-R          | QFN40   | 5 mm × 5 mm × 0.85 mm | Tape and Reel |



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