

General Description

The MxL608 is a highly integrated, low power silicon tuner IC that targets low-cost digital terrestrial and digital cable Set-Top Box (STB) applications.

The MxL608 supports an input tuning range from 44 MHz to 1002 MHz. A single-ended 75Ω RF input signal is filtered and converted to a programmable IF output up to 44 MHz. The AGC, LO generation, channel selection, and Loop-Through (LT) output functions are completely integrated on the chip, which simplifies board-level design. All functions of the IC can be controlled via an I²C interface. Driver integration is made easy through the use of simple software APIs.

The high level of integration enables a very compact, cost-effective design with few external components, low BOM costs, and low power consumption.

The MxL608 is available in a 4 mm x 4 mm x 0.85 mm³ 24-pin QFN package.

Applications

- Digital terrestrial STBs
- Digital cable STBs

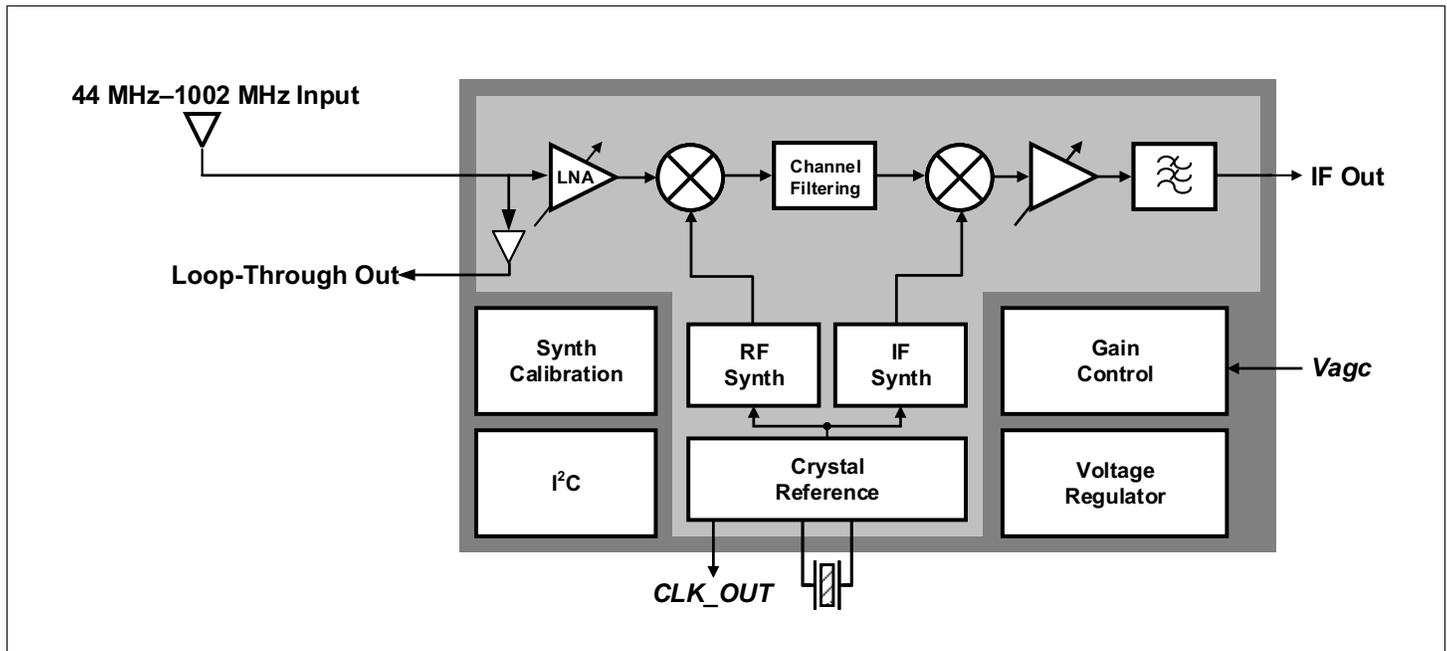
Features

- Tuning range from 44 MHz to 1002 MHz
- Integrated channel filtering requiring no external SAW filter
- Programmable channel bandwidths supporting 1.7 MHz, 5 MHz, 6 MHz, 7 MHz, and 8 MHz bandwidth applications
- Low power consumption with 3.3V and 1.8V dual-supply operation
- On-chip voltage regulator for 3.3V operation with single supply
- Programmable IF frequency and IF spectrum inversion
- Reference clock output available for re-use by demodulators and additional tuners in multichannel applications
- On-chip RF LT
- High accuracy RSSI
- General purpose open-drain output GPO available for controlling off-chip circuitry
- Integrated on-chip programmable loading capacitors for the reference crystal
- I²C-compatible digital control interface
- RoHS compliant

Supported Standards

- ITU-T J.38
 - Annex A (DVB-C)
 - Annex B (US Cable)
 - Annex C (Japan)
- DVB-C2 (ETSI EN 302 769)
- DVB-T and DVB-T2 (Nordig 2.6, DTG D-Book V10.0)
- ATSC A/74:2010, ATSC 3.0
- ISDB-T 13-Segment
- SBTVD-T (Brazil)
- DTMB (China)

Block Diagram



Ordering Information

Marketing Part Number	Ordering Part Number	Package	Dimension	Shipping
MxL608	MxL608-AG-T	SAWN QFN24	4 mm x 4 mm x 0.85 mm ³	Tray
MxL608	MxL608-AG-R	SAWN QFN24	4 mm x 4 mm x 0.85 mm ³	Tape and Reel



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