



General Description

The MxL584 is a low-power single-chip satellite receiver IC, featuring four L-band Full-Spectrum Capture[®] (FSC[®]) tuners and four demodulators that are compliant with DVB-S and DVB-S2.

The MxL584 receives signals from the four independent differential L-band RF inputs, each from 950 MHz to 2150 MHz, and demodulates eight satellite channels to produce eight independent serial TS outputs. All eight TS outputs support two-wire or three-wire modes.

The MxL584 communicates with satellite LNBs through on-chip DiSEqC and FSK modems.

All major functions are incorporated onto the device, including LNAs, channel filters, AGC, adaptive equalizers, PLLs, crystal load capacitors, and demodulators. The MxL584 enables simple, compact board designs with low-power consumption and reduced BOM costs.

The MxL584 is controlled via an I²C interface, and operates using 1.8V and 1.1V core supplies and an I/O supply of 3.3V. The MxL584 is available in a small 10 mm x 10 mm footprint 72-pin QFN package.

Applications

- STBs
- Residential gateways
- SAT>IP multi-switch
- IP-LNB

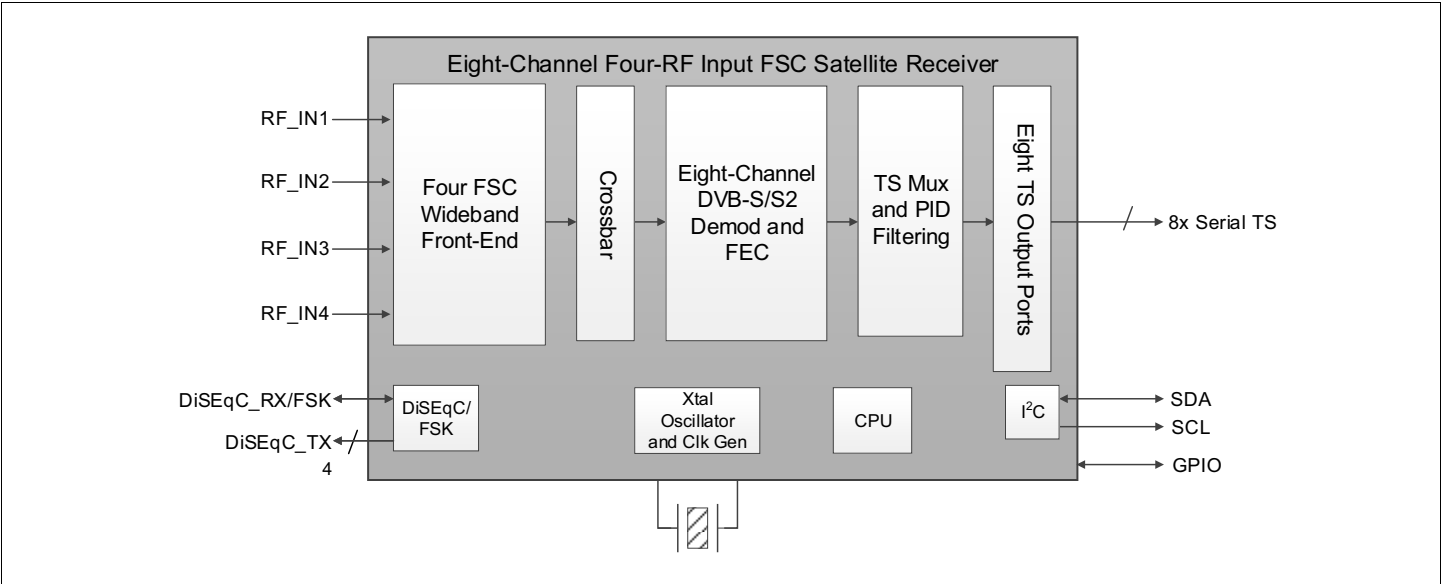
Features

- Ultra low power
- Symbol rates of 1 MSps to 45 MSps in DVB-S and DVB-S2 modes
- Broadcast wake-up
- Single-channel mode
- Integrated LNAs
- Differential RF inputs
- Channel spectrum analysis data available through I²C
- On-chip programmable crystal load capacitors to reduce external components
- Coexistence with MoCA, LTE, and WiFi when using an external low-cost filter
- Automatic channel acquisition
- Auto-detection and auto-correction of spectral inversion
- Eight serial TS output ports, configurable in two-wire or three-wire modes and parallel TS output port
- PID filtering and output TS multiplexing with two, four, or up to eight TS output ports
- Four DiSEqC LNB control interfaces and an FSK modem
- *EN50494:2007* and *EN50607:2013* standards, and SWM single-cable LNB distribution
- I²C compatible interface

Supported Standards

- DVB-S
- DVB-S2

Block Diagram



Ordering Information

Marketing Part Number	Ordering Part Number	Package	Dimensions	Shipping
MxL584	MxL584-AK-T	SAWN QFN72	10mm x 10mm x 0.85mm	Tray
MxL584	MxL584-AK-R	SAWN QFN72	10mm x 10mm x 0.85mm	Tape and Reel



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