



General Description

The MxL862 is a low-power, single-chip Full-Spectrum Capture[®] (FSC[®]) satellite digital ODU IC that features two wide band inputs for LNBF applications. The MxL862, with an external splitter, can be used in MDU applications as well. In both configurations, the MxL862 supports up to 32 stacked output channels in a static configuration, and up to 24 stacked output channels in a dynamic configuration. The MxL862 integrates a host CPU microcontroller, FSK, and DiSEqC modems, and power management controllers. In each configuration, the MxL862 supports 950 MHz–2150 MHz IF output with flexible channel grid and bandwidth configurations.

All major supporting analog functions are incorporated into the MxL862, such as broadband input and output filters, RF gain blocks, channel filters, PLLs, and AGC functionality. With its high level of integration and low power consumption, the MxL862 enables a true single-chip satellite ODU solution for modern LNBFs and MDU switches that require compact board design and low cost.

The MxL862 uses 1.8V and 1.1V dual supplies. The MxL862 is available in a small 10 mm x 10 mm footprint, 88-pin QFN package.

Applications

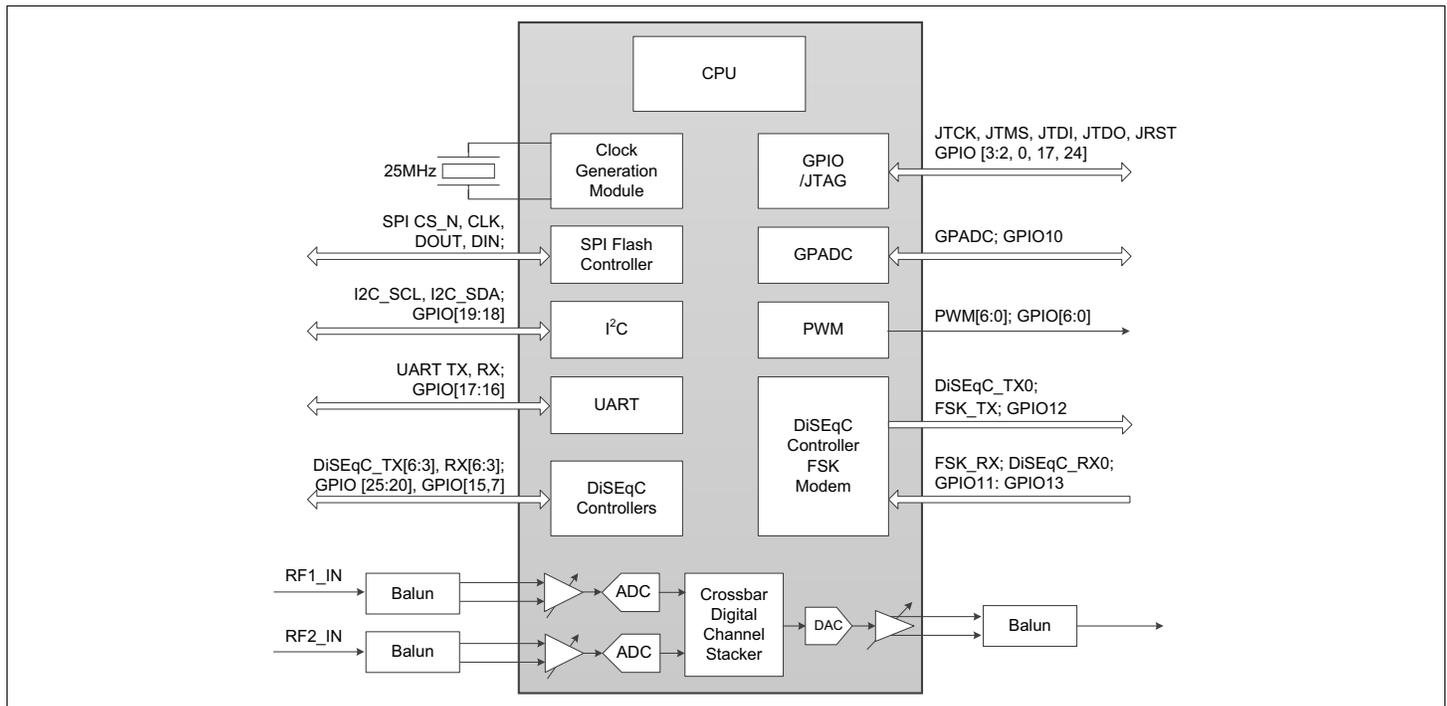
Channel-stacking:

- LNBF
- MDU

Features

- Low power:
 - Less than 3W typical case, with two RF inputs and an active IF output
 - Power scales with the number of active inputs and outputs
- Fully-integrated host 32-bit CPU microcontroller with Watchdog timers, FSK, and DiSEqC 2.x controllers:
 - Five DiSEqC interface controllers
 - One FSK modem
- Architecture:
 - FSC[®] digital crossbar
 - Two differential RF inputs and an IF output
 - Output tilt compensation
- Programmable channel grid and channel bandwidth
- Ability to provide channel spectrum analysis data through the FSK/DiSEqC
- Built-in temperature sensor
- Access to all on-chip functions using a standard API
- JESS/EN50494/EN50607 compliant
- Built-in memories:
 - IRAM
 - DRAM
 - ROM
- Peripheral interfaces:
 - SPI
 - I²C
 - GPIO
 - PWM
 - JTAG
 - UART

Block Diagram



Ordering Information

Marketing Part Number	Ordering Part Number	Package	Dimensions	Shipping
MxL862	MxL862-AL-T	SAWN QFN88	10 x 10 x 0.85 mm ³	Tray
MxL862	MxL862-AL-R	SAWN QFN88	10 x 10 x 0.85 mm ³	Reel



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