

Single-Chip Broadband Microwave Transceivers Support Entire Frequency Spectrum from 5GHz to 44GHz

OVERVIEW

Single Carrier Microwave Transceivers

MXL1105L	Low Frequency (5GHz to 21GHz)
MXL1105H	High Frequency (21GHz to 44GHz)

Dual Carrier Microwave Transceivers

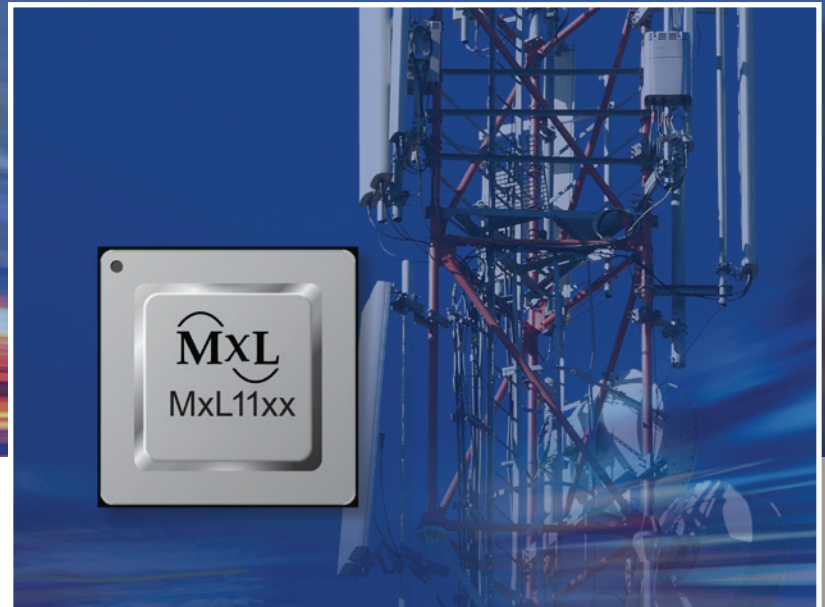
MXL1108L	Low Frequency (5GHz to 21GHz)
MXL1108H	High Frequency (21GHz to 44GHz)

Evaluation Kits

MXL91105L	Low Frequency (single carrier)
MXL91105H	High Frequency (single carrier)
MXL91108L	Low Frequency (dual carrier)
MXL91108H	High Frequency (dual carrier)

FEATURES

- FSC technology allows for up to two simultaneous channels within 500MHz bands
- Supports:
 - Up to 4096 QAM
 - Channel aggregation mode
 - ACM
- Closed-loop adaptive digital pre-distortion for optimal PA performance
- Ultra low power
- Programmable IF frequency for flexibility
- Transmit:
 - ATPC
 - ALC through the Tx feedback path
- Rx RSSI for monitoring the RSL
- On-chip:
 - Spectrum analyzer
 - Temperature sensor
- Data logging
- GPIO, GP-ADC, and GP-DAC to control off-chip



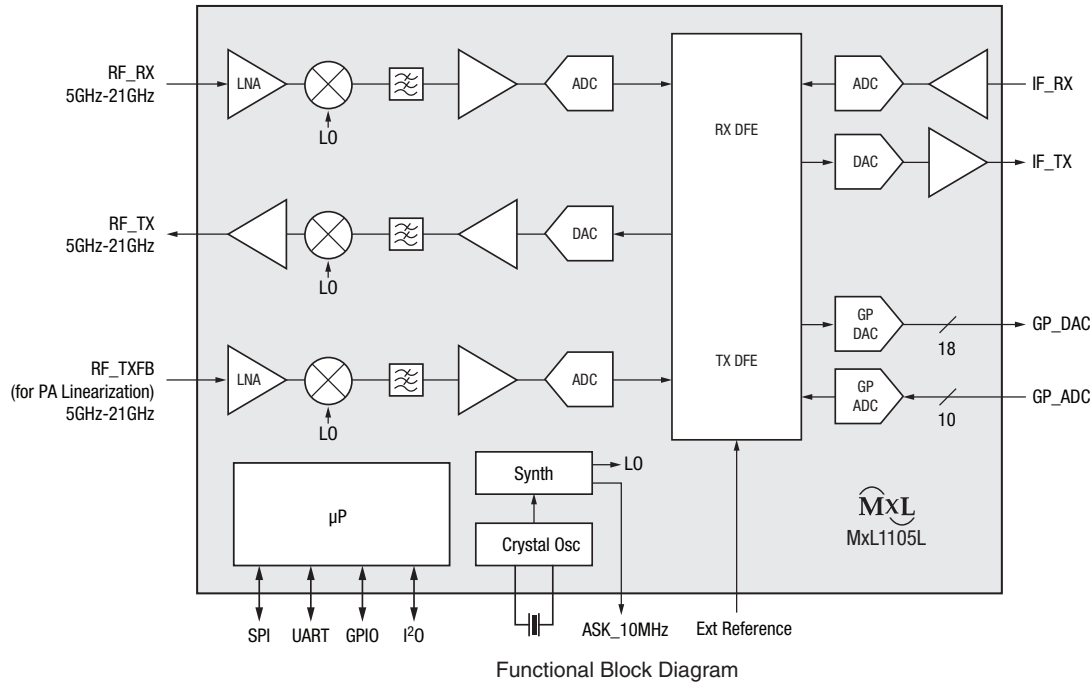
The MaxLinear MxL11xx is an all-CMOS, single-chip broadband microwave transceiver product family that can support operation of all licensed and unlicensed bands from 5GHz to 44GHz, including all ETSI-defined channel spacing options from 5MHz to 112MHz. Single- or dual-channel operational modes are available.

The comprehensive frequency support of the MxL11xx greatly reduces the number of product configurations that customers must develop. The high level of integration also greatly minimizes external bill of material content, while supporting advanced features like digital pre-distortion, and channel aggregation and calibration. The channel aggregation feature is ideal for 5G backhaul applications, doubling the available capacity on a single backhaul link.

The MxL11xx features built-in Full Spectrum Capture™ (FSC™) technology and supports channel aggregation mode, enabling a second channel with any channel spacing to be processed within the same IC.

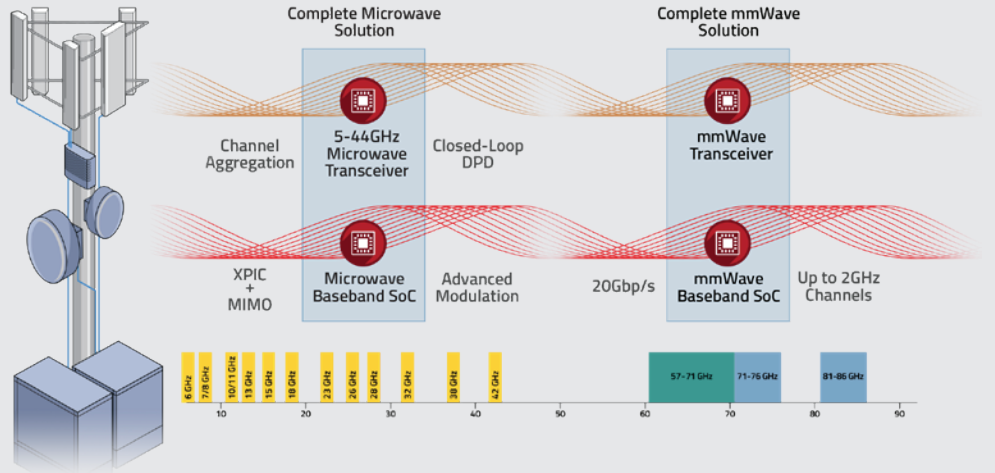
The MxL11xx incorporates a full receive, transmit, feedback path, and all synthesizer components on a single chip, and can support code rates up to 4096 QAM. The closed-loop and open loop digital pre-distortion provides power amplifier (PA) linearization for a wide variety of PAs.

MxL11xx MicroWave Transceivers



Microwave & mm-Wave Backhaul and Fronthaul

The MxL1105 is part of a complete portfolio of multi-gigabit wireless backhaul and fronthaul solutions. MaxLinear's microwave and millimeter wave transceivers (mm-Wave) and broadband modems support multi-gigabit-per-second data speeds. These complete microwave and mm-Wave solutions enable up to 10Gbps throughput over existing coax. The single-chip, microwave backhaul RF transceivers can receive signals over the entire microwave backhaul frequency spectrum of 5GHz to 44GHz.



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