

## Baseband System On-Chip (SoC) for Broadband Wireless Transmission Systems

### OVERVIEW

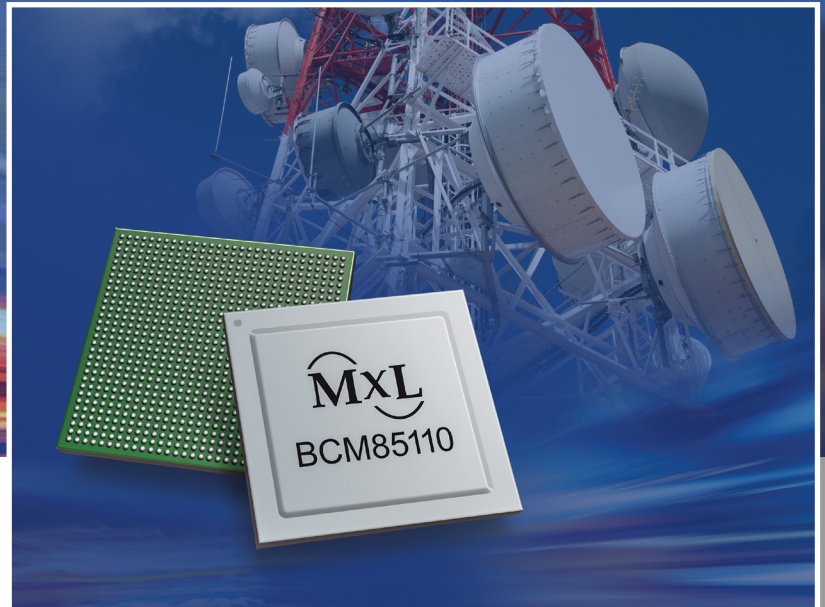
BCM85110	MilliMeterWave Modem
BCM985110	Evaluation Kit

### FEATURES

- 10Gbps link capacity
- Supports:
  - Large CSs Span (50MHz to 2GHz)
  - BPSK to 1024 QAM
  - XPIC
- Configurable Low-Density Parity-Check (LDPC) or RS channel codes
- High link availability with ACMB
- Enhanced impairment correction capabilities and low phase noise support simple/fast HW design and lower RF cost
- Integrated AFE, DACs and ADCs enable glueless connectivity to RF/IF analog circuitry
- Large variety of services
  - XAUI / 1Gbps
  - SGMII / 2.5GbE
  - GPI
- Fixed mode and low latency mode

### APPLICATIONS

- Macro cell backhauling
- Small cell backhauling
- Fiber replacement and extension
- Wireless fronthaul
- Coax virtual fiber



The MaxLinear BCM85110 is a baseband SoC for broadband wireless transmission systems. With its exceptional 20Gbps throughput, the BCM85110 provides a flexible solution that meets the evolving demands of fronthaul and backhaul networks, supporting both all outdoor unit (AODU) and pure IP transport implementations for 4G and 5G cellular networks.

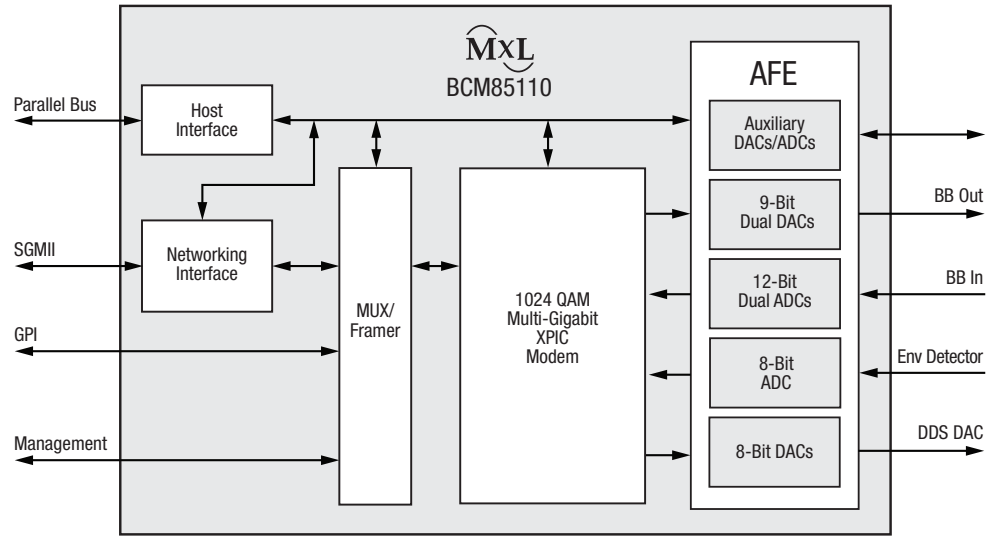
The comprehensive functionality supported by the BCM85110 includes a complete processing chain, from the various user IP interface technologies to analog baseband signals. The BCM85110 supports large channel-spacing spans of between 50MHz and 2GHz, modulation rates from binary phase-shift keying (BPSK) to 1024-QAM, and high spectral efficiency supporting multiple-input and multiple-out (MIMO) transceivers and cross pole interference cancellation (XPIC).

The BCM85110 provides a complete processing chain from the various interface technologies of user's data to analog baseband signals.

# BCM85110 E-Band Networking SoC

## BCM85110 Technical Features

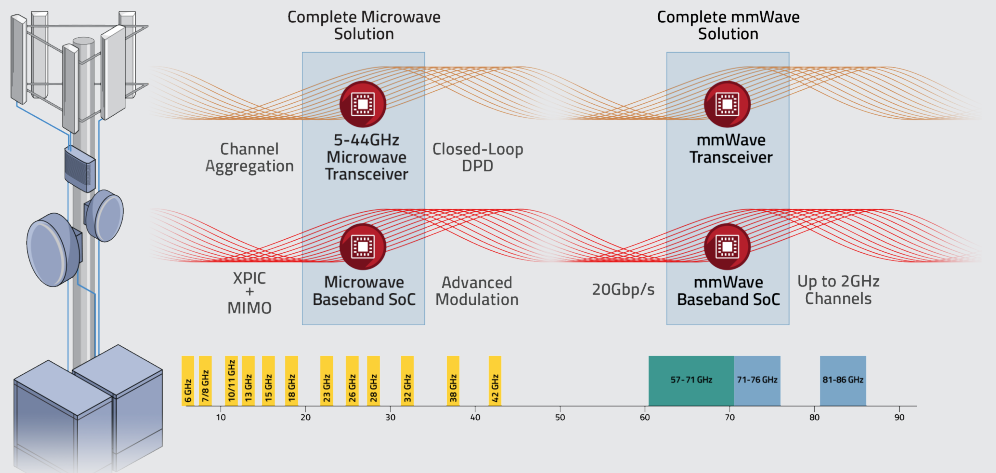
- Glueless connectivity to the RF/IF analog circuitry via integrated AFE DACs and ADCs
- Synchronous Ethernet (SyncE)
- 1588v2, transparent clock (TC) mode
- Full-duplex, single carrier, FDD modem
- XPIC
- Bit rates up to 10Gbps
- Modulation from BPSK to 1024 QAM
- Channels spacing of 50MHz to 2GHz
- Baud rate up to 1600 Mbaud
- Configurable LDPC or RS FEC channel codes
- High phase noise immunity
- Ethernet and GPI interfaces
- In-band management link



BCM85110 Functional Block Diagram

## Microwave & mm-Wave Backhaul and Fronthaul

The BCM85110 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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