

Otava Beamformer IC Evaluation Kit

The Otava Beamformer IC Evaluation Kit allows for the rapid evaluation of the Otava OTBF103, a ground-breaking device for mmW and 5G development, in a lab environment. The kit includes the Otava Beamformer Evaluation Board, a MicroZed SOM based on the Zynq 7010 SoC, supporting hardware and a custom GUI. Using the MicroZed and GUI software, engineers can immediately focus on manipulating the RF signals and evaluating the Beamformer IC. The control interface has been fully implemented and the device can be controlled from a PC using USB or Ethernet.

Evaluate and explore the OTBF103 Otava Beamformer IC

Otava's Beamformer IC (BFIC), the OTBF103, is a mmW wideband time-division-duplexing beamformer. The BFIC consists of eight transmit channels and eight receive channels in the 24 GHz to 40 GHz frequency range, which encompasses numerous worldwide 5G bands.

Each channel has individual phase and gain adjustment controls and an on-board 4K byte memory that allows for fast operational steering between 64 programmable positions. An SPI control interface (LVDS or LVCMOS) is used for programming the 158 registers and memory locations. The BFIC can be evaluated by using the OTBF103-EVAL board from Otava.

Avnet implemented the control interface using a MicroZed 7010 Zynq module and a GUI that runs on a PC. This enables rapid BFIC familiarization without having to first create custom software.

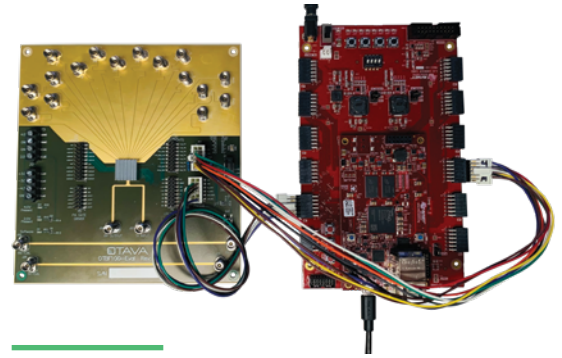
FEATURES

- Register-level Otava Beamformer IC control and evaluation
- Re-programmable MicroZed Zynq 7010 implementation with source
- Save and recall custom configurations

TARGET APPS

- mmW, small cell, 5G development
- Radar, EW
- Satellite communications

To purchase this kit, visit: avnet.me/OtavaBFIC-KIT-BUY



KIT INCLUDES

Otava Beamformer IC Eval Board

- The OTBF103 Beamformer IC
- High-performance 2.4 mm vertical mount connectors for all mmW signals
- Terminal blocks for external power
- PMOD male headers for digital control

MicroZed 7010 Xilinx Zynq system-on-module (SOM)

- Xilinx Zynq 7010 SoC with dual-core ARM[®] Cortex™-A9-based application processor unit (APU)
- 1 GB DDR3 SDRAM, 128 Mb QSPI flash
- 10/100/1000 Ethernet and USB-UART
- 4GB Micro SD card
- Micro USB cable

Modified MicroZed I/O Carrier Card

- 12 PMOD-compatible interfaces for access to 80 MicroZed user I/O
- 5V @ 3A power supply
- Modified from AES-MBCC-IO-G to support 1.2V on VCCIO_34

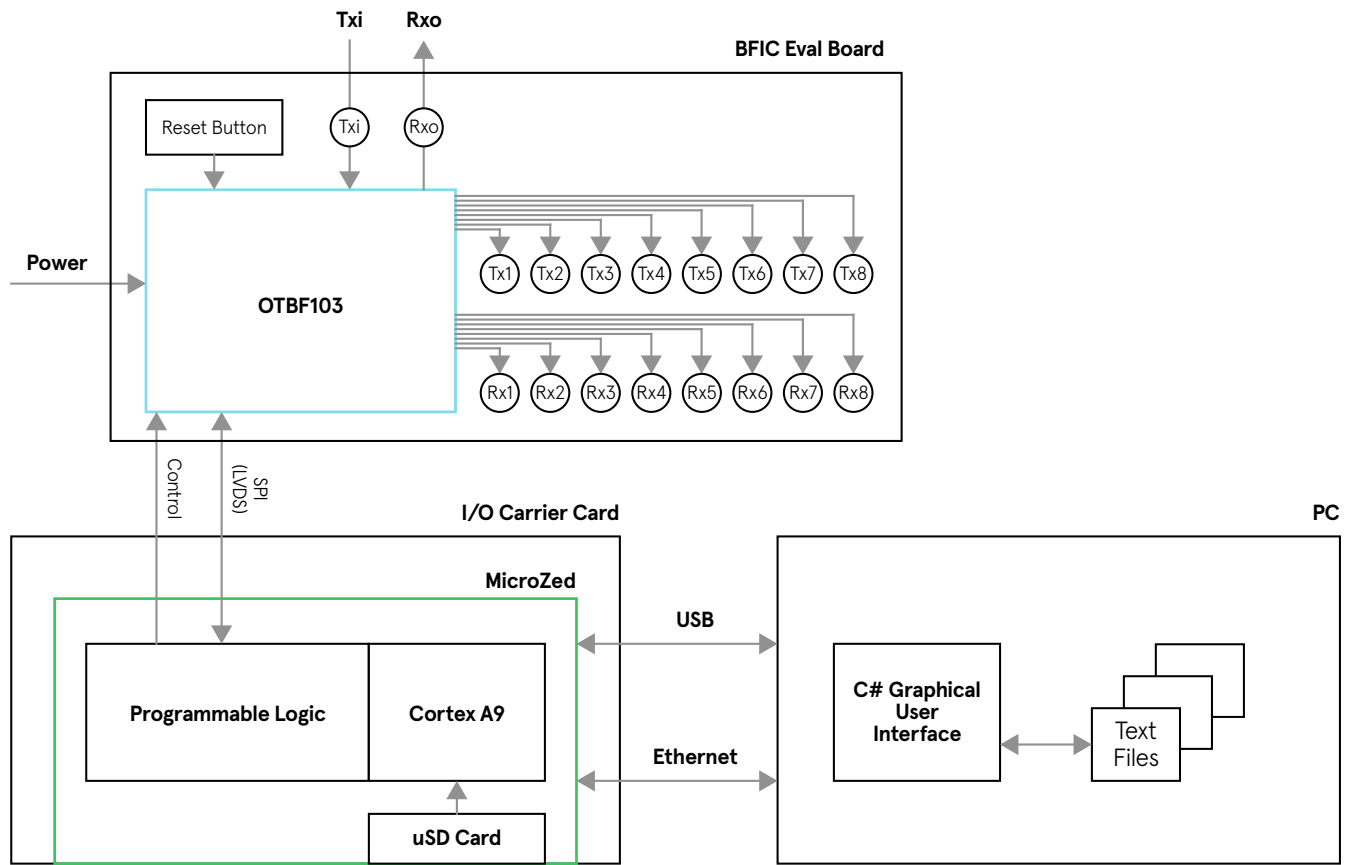
Two custom cable assemblies from Samtec

- Connect digital controls between MicroZed and the BFIC Eval board

C# GUI

- Allows access to all 158 BFIC registers 4kByte SRAM
- Graphing of ADC outputs of temperature sensors and RMS Tx and Rx levels
- Read/write defaults from/to text files
- BFIC diagnostics

BLOCK DIAGRAM



FEATURED MANUFACTURERS



PARTS

Part Number	Description	Resale
AES-Z7MB-OTVBFIC1-SK-G	Otava Beamformer Evaluation Kit	\$7,995 USD

RELATED PARTS

Part Number	Description	Resale
OTBF103	Otava Beamformer IC	TBD
OTBF103-EVAL	Otava Beamformer Evaluation Board	\$7,499 USD

Countries Available for Purchase: Americas, EMEA, Asia, Japan

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