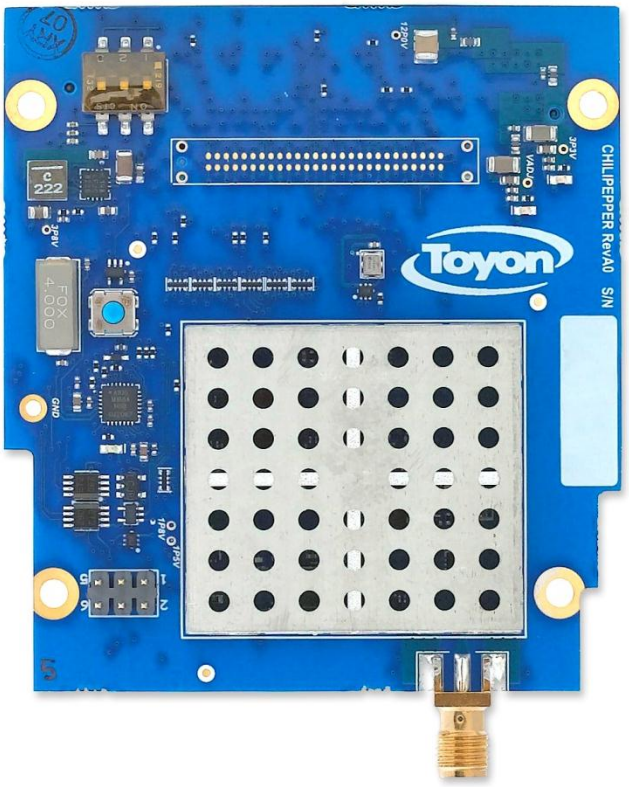
Chilipepper - FMC Radio Board

ISR Algorithms

ABOUT CHILIPEPPER

Chilipepper is an FMC wireless transceiver module for use in development and rapid prototyping of software defined radios

- Onboard microcontroller can be pre-configured into one of three operating modes (radio registers can optionally be manually programmed)
- Allows experimentation with wideband receiving, TDD, and FDD waveform design
- Single antenna connector with all duplexing and Tx/Rx switching handled onboard with configuration via the FPGA interface
- Integrated ADCs/DACs with simple parallel interface to the FPGA
- All schematics and layout files provided allowing users to easily transition from prototype to a custom production design
- MATLAB HDL Coder example designs provided



CONFORMS TO MAJOR PORTIONS OF THE FPGA MEZZANINE CARD (FMC) VITA 57 STANDARD

- Compatible with I/O voltages of 1.8 to 3.3 V
- Conforms to FMC standard form factor in either LPC or HPC configurations

Contact: embedded@toyon.com

6800 CORTONA DRIVE, GOLETA, CA 93117
PH: 805-968-6787 FAX: 805-685-8089 | WWW.TOYON.COM

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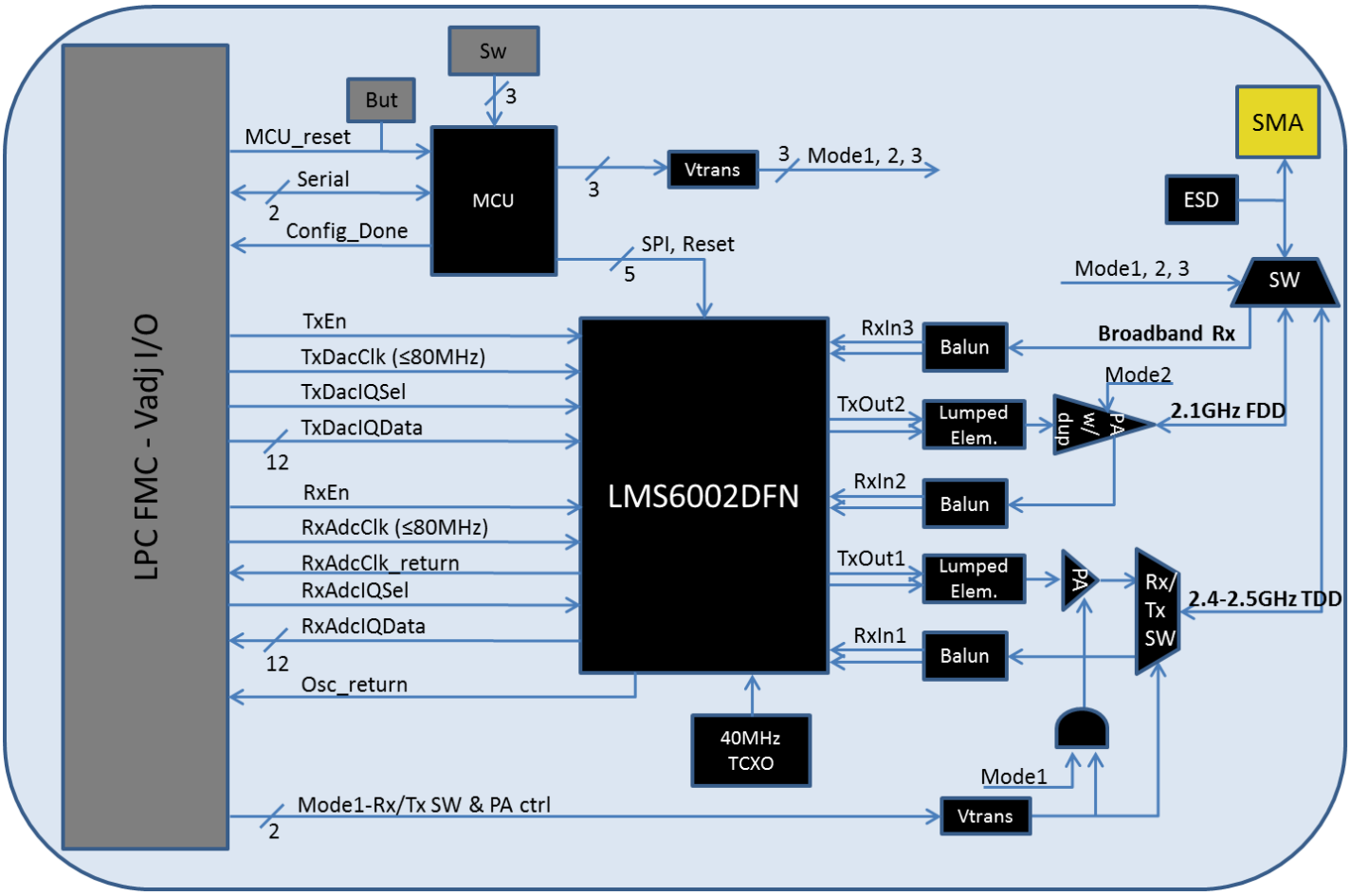

CHILIPEPPER FEATURES

- Centered around the highly integrated Lime Microsystems RF-IC
- Multi-band operation:
  - Full duplex operation around 2.1 GHz
  - Time duplex in the 2.4 GHz band
  - Broadband reception for such waveforms as GPS
  - Design can be modified to accommodate frequencies in a range of UHF, L-band, and S-bands
- Board hosts an onboard MCU in order to configure the Lime Microsystems RF-IC so that the board powers up in a known state
  - This is meant to greatly simplify initial development
- Standard SMA antenna connector