

Lime Microsystems announced new programmable dual transceiver

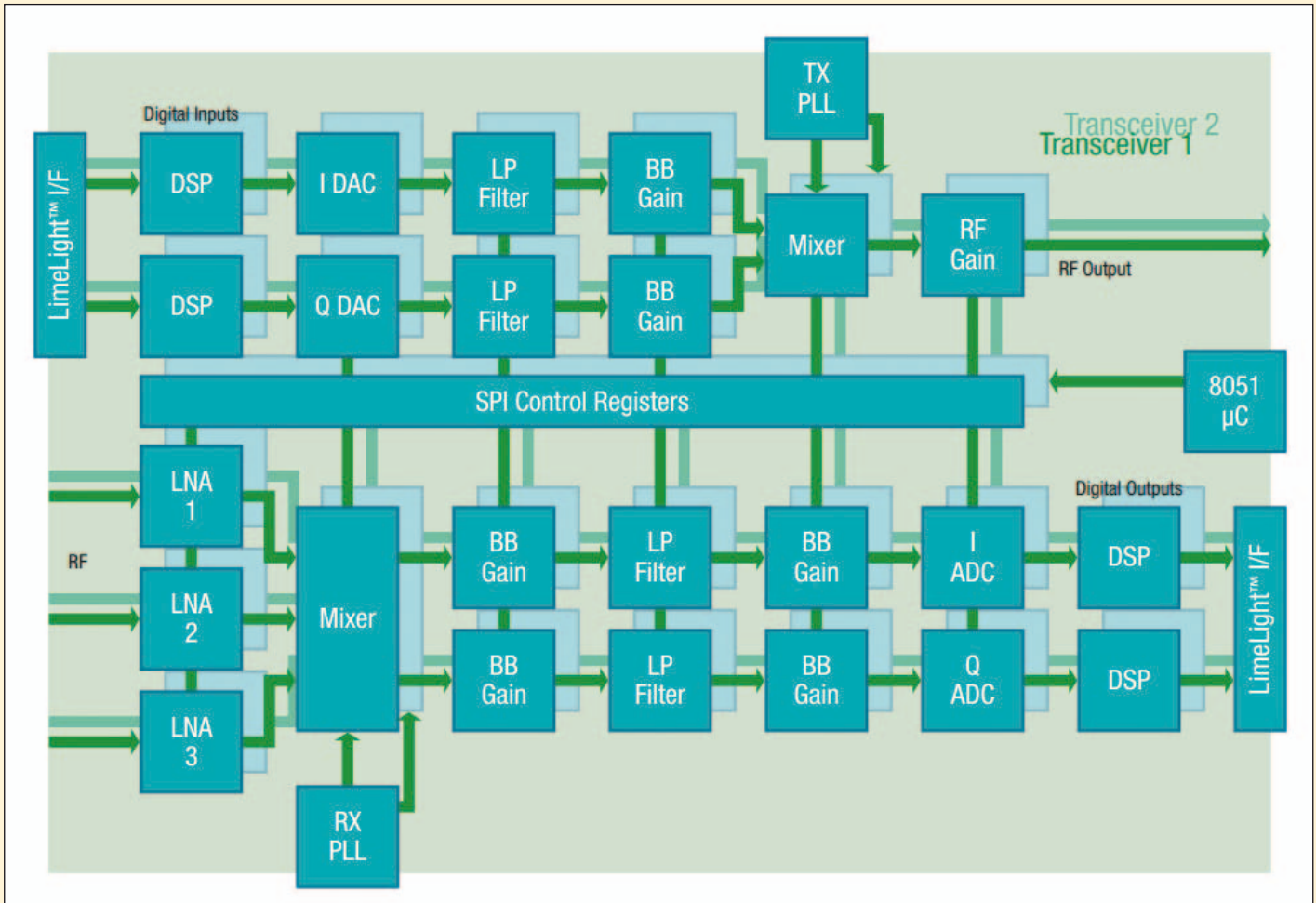


Fig. 1: Simplified block diagram of the LMS7002M

Lime Microsystems, Guildford, UK announces that it has commenced shipping the second generation Field Programmable Radio Frequency (FPRF) devices.

The LMS7002M is 3GPP compliant and supports all cellular standards and frequencies including TDD, FDD and MIMO. The FPRF contains dual transceivers with multiple 12 Bit ADCs and DACs, LNAs, filters and mixers to provide two transmit and receiver paths for continuous coverage over the 50 MHz to 3,8 GHz range. The fully programmable, low power chips cover all the cellular bands used in 2G, 3G and 4G networks, as well as many commercial and military bands. Parameters such as gain and filter bandwidth are also fully in-system programmable, making the device the

most flexible RF solution for a wide range of wireless applications. The LMS7002M is ideal for a wide range of consumer and professional applications, including:

- Small cell communications equipment
- M2M networks
- Open source radio
- Broadband wireless

“We are delighted to be shipping LMS7002M devices”, said Ebrahim Bushehri, Lime CEO. “We have enormous interest from applications spanning small cells, software defined radio

(SDR), industrial networking, medical, test equipment and high end M2M such as asset tracking. We believe that our pricing strategy will stimulate a range of new applications in variety of markets including commercial and military customers.

Universal Wireless Communications Toolkit

The devices are supported by a Universal Wireless Communications Toolkit (UWCT) and will in the future be supplemented with a number of low cost development boards. Customers

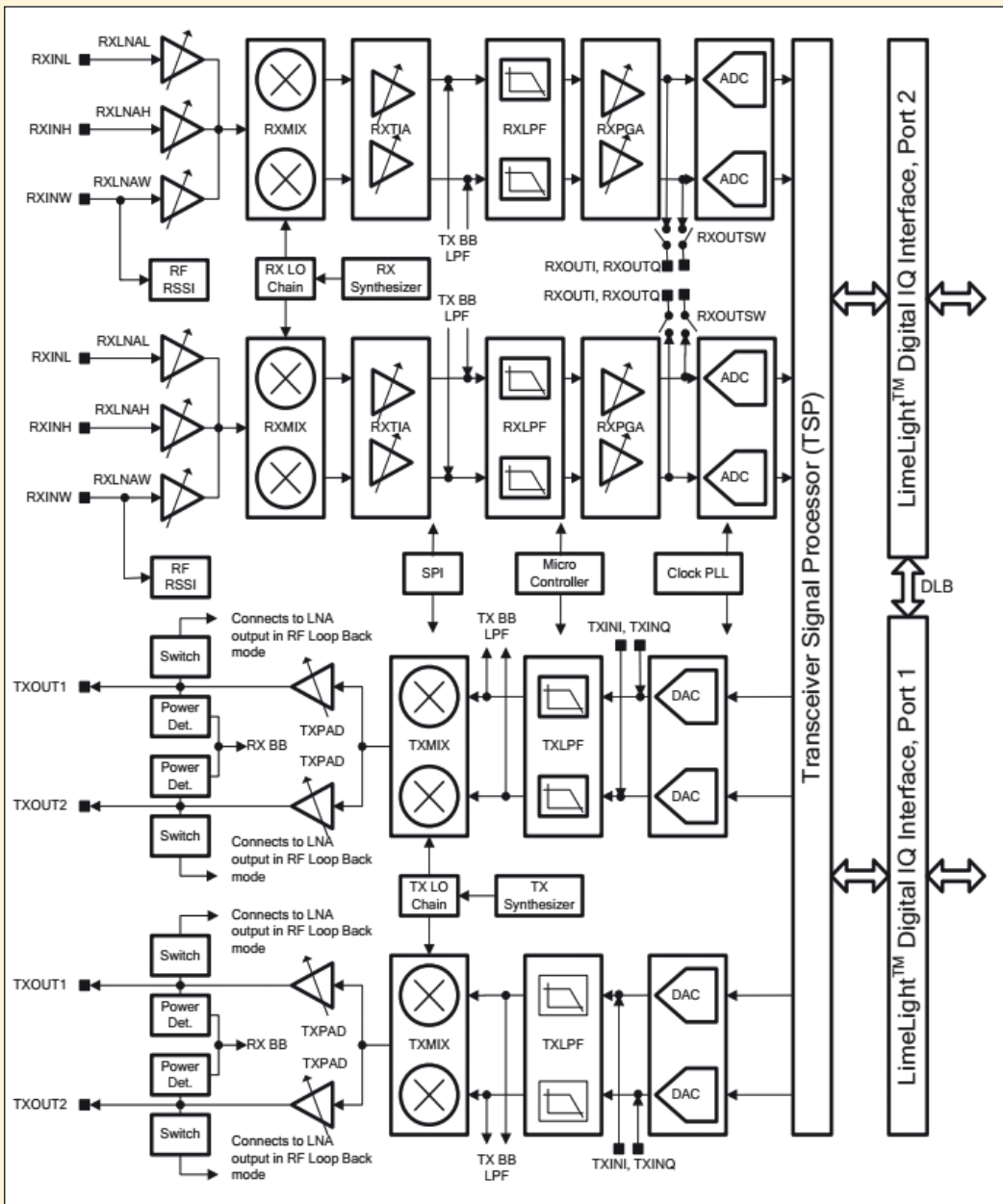


Fig. 2: Functional block diagram

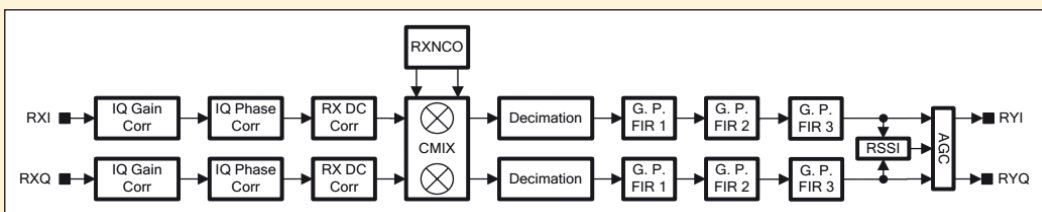
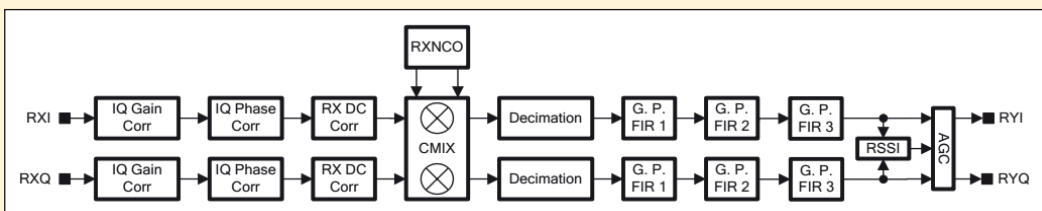


Fig. 3: Structure of the RX Transceiver Signal Processor block (TSP)



purchasing UWCT are provided with hardware, software and direct access to expert applications engineers.

The dual transceivers are ideal for implementing Multiple-In, Multiple-Out (MIMO) systems with a digital bandwidth up to 60 MHz in each channel. The LMS7002M includes user programmable DSP that can equalize the gain and phase of a MIMO system, greatly reduce distortion and non linearities, or enhance the analog filtering to provide a lower power consumption. The low power chip uses a 65 nm CMOS process, and consumes only 550 mW in single-in single-out (SISO) mode or 800 mW when configured for MIMO operation. The device can operate using a single 1.8 V supply rail, and requires an absolute minimum of external components.

The LMS7002M is priced at \$110 in sample quantities, and \$63 for quantities of 5,000 units. Lime simultaneously announced that it is significantly reducing the price of the first generation part, LMS6002D, with samples starting at \$35, and \$15 for quantities of 5,000 units. LMS7002M devices and the UWCT are in stock at Lime distributors such as Digi-Key and Richardson RFPD. Customers can download the free design software, a range of development boards, projects directly from Lime website and an open-source initiative called MyriadRF.

Lime Microsystems is a leading designer and manufacturer of field programmable RF transceivers. The company's software configurable chips can run any mobile standard and any mobile frequency and have been used in a vast array of systems including mobile base stations and small cells, SDR platforms, indoor navigation and machine-to-machine communication systems.

■ Lime Microsystems
www.limemicro.com

Fig 4: Structure of the TXTSP