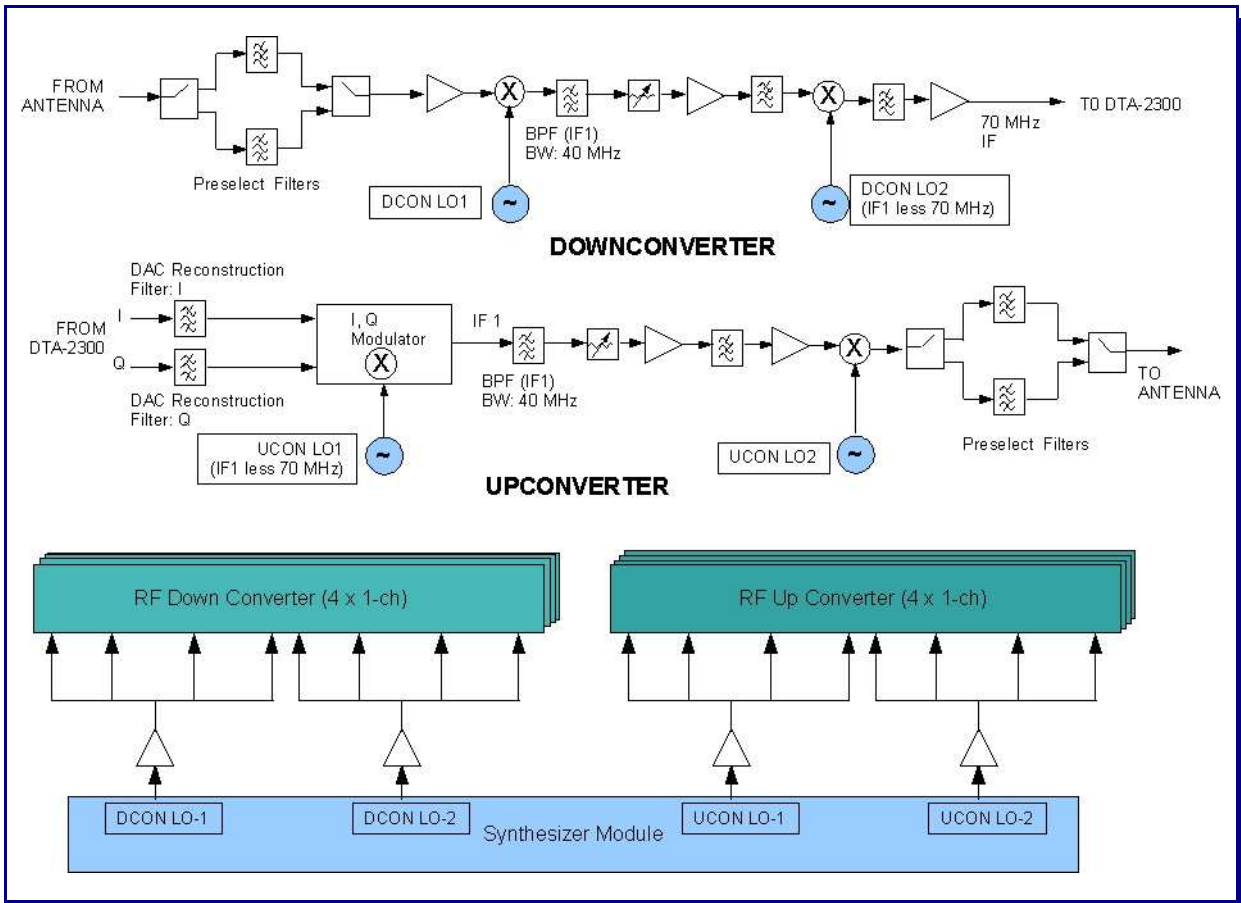
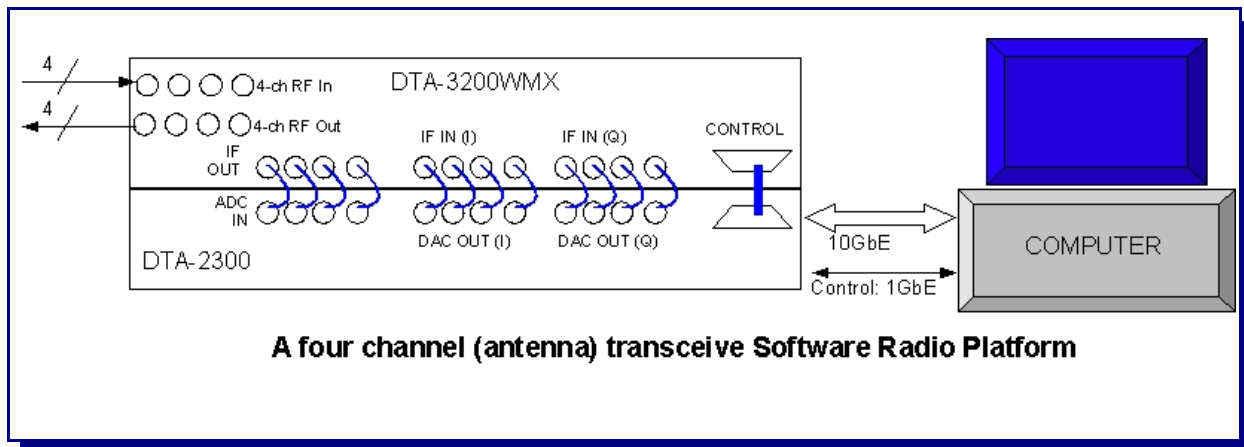


DTA-3200WMX: Multi Channel Tunable RF Transceiver for 2.3 to 2.5 GHz and 5.1 to 5.8 GHz

The DTA-3200WMX is a four channel frequency and phase synchronized low cost RF up and down converter ideally suited for WIMAX, MIMO, direction finding applications in the 2.3 to 2.5 and 5.1 to 5.8 GHz bands. It offers an instantaneous bandwidth of 40 MHz and operates seamlessly with the DTA-2300 Digital IF transceiver products. The DTA-3200WMX is available as a 3U high 19" rackmountable system.





DTA-3200WMX is a multi channel tunable RF transceiver operating from a single synthesizer module to enable the most accurate phase and frequency synchronization needed for WiMAX, MIMO, phased array radar, direction finding applications. The synthesizer module generates all the local oscillators needed for the up and down conversion module and is designed to directly drive four identical up and down conversion channels. DTA-3200WMX can be configured to handle up to sixteen channels in a single unit. The RF coverage is 2.3 to 2.5 and 5.1 to 5.8 GHz. Other bands are available as options. Please contact factory for more details.

The down converter chain provides a final IF of 70 MHz with an instantaneous bandwidth of 40 MHz (other bandwidths and IF s are available as options). The 70 MHz IF can be digitized by the DTA-2300 multi-channel Digital IF processor. The DTA-2300 provides for up to 16 channels of ADC & DAC channels with 16-bit precision. The DTA-2300 also implements a clock delay functionality for adjusting the sample clock of each individual ADC channel in 10ps steps.

The up converter accepts a complex (I, Q) signal at an IF of 70 MHz with up to 40 MHz of instantaneous bandwidth (other bandwidths and IF s are available as options) and up converts the signal to RF. The IF signal may be very easily generated from the DTA-2300 DAC channels. The imaginary portion (Q) of the IF input may be terminated and only the real input may be used if a real IF signal has been created. The DTA-2300 DACs can be operated as a complex DAC and generate complex IF at 70 MHz. The DTA-2300 DACs also include digital up conversion functionality that allows the user to supply complex base band input and use the in-built digital up converter to create the complex IF. Please refer to “Getting to know the DTA-2300”, available from www.d-ta.com for more information.

The DTA-3200WMX uses a modular design and is based on extensive design reuse with other members of the DTA-3200 product family.

The DTA-3200WMX can be controlled via an SPI bus. A full source code C API and demo code is available that is integrated with the DTA-2300 API. The DTA-2300 includes logic that enables control of the DTA-3200WMX via the SPI bus.

Features:

Receive (Down Conversion):

- Coverage: 2.3 to 2.5 and 5.1 to 5.8 GHz (other bands available as options)
- 4-channel (16-channel optional) frequency & phase synchronized
- Instantaneous BW: 40 MHz (Other BWs optional)
- Tuning step: 500 kHz
- Phase Noise: -98 dBc/Hz @ 1kHz
- Image Reject: 60 dB
- IF Out: 70 MHz (other IFs optional)
- Noise Figure: 10 dB
- Spurious: <-60 dBc
- Gain Control: 30 dB in 1dB steps
- IP3 (Min Gain): +5 dBm
- Input power (no damage): +20 dBm
- Input power (no saturation): -20 dBm
- Custom preselect filters available as option

Transmit (Up Conversion):

- Coverage: 2.3 to 2.5 and 5.1 to 5.8 GHz (other bands available as options)

- 4-channel (16-channel optional) frequency & phase synchronized
- Instantaneous BW: 40 MHz (Other BWs optional)
- Tuning step: 500 kHz
- Phase Noise: -95 dBc/Hz @ 1kHz
- Image Reject: 60 dB
- IF Out: 70 MHz (other IFs optional)
- Complex (I,Q) IF in
- Harmonics: <-60 dBc
- Output level: -10 dBm
- Custom output filters available as option

Other:

- Tuning speed: < 3 ms (excluding application software delays)
- Control Interface: SPI
- Directly connects to the DTA-2300 for Network interface
- C code API and example code available for control
- 19" enclosure, 1U high, 18.5" deep
- AC 110V/220V

Customized Solution

DTA-3290WMX can be easily customized for other bandwidth options, IF options, transmit power, preselect filters, output filters, etc. D-TA Systems offers custom RF design services. Please contact factory (sales@d-ta.com) to discuss your specific requirements.

Ordering Information

DTA-3200WMX-00070-04-04

API-3200WMX: Software API for DTA-3200WMX

CBL-3200WMX-2300: Control cable to connect DTA-3200WMX to DTA-2300

Contact factory for customization options and custom RF design services.

Contact Information

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