

Linwave Ultra-Wideband Digital Front End 2-18GHz

LW12- XXXXX

Features

- 16GHz instantaneous b/w
- 3GHz Sampling Rate
- Programmable Attenuation
- Programmable Clock Rate
- I²C Interface
- BITE function

**Description**

Linwave Direct Digital Front End is an Ultra wide band signal conditioning and sampling subsystem which is ideally suited to front end applications in RF digitising systems such as RF demodulation, Software Defined Radio System, Digital Receivers, Radars, RF Test Systems and High Speed ADCs.

The ultra-wideband RF input accepts signals in excess of 18 GHz. The input can either be buffered and sent directly to the output, or in hold mode sampled with an internally generated clock of up to 3 GHz. The phase locked sampling clock requires an external reference in the range 10-100 MHz. The external clock is scaled by internal programmable multipliers to generate the required sampling clock frequency.

The unit features >30dB of programmable attenuation which can be used to pre-condition the input. Internal temperature reporting is also provided.

Linwave reserves the right to make changes, without notice, in the products, including circuits, standard cells, and/or software, described or contained herein in order to improve design and/or performance.

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Linwave Technology Ltd, Marlin Building, Sadler Road, Lincoln, LN6 3RS

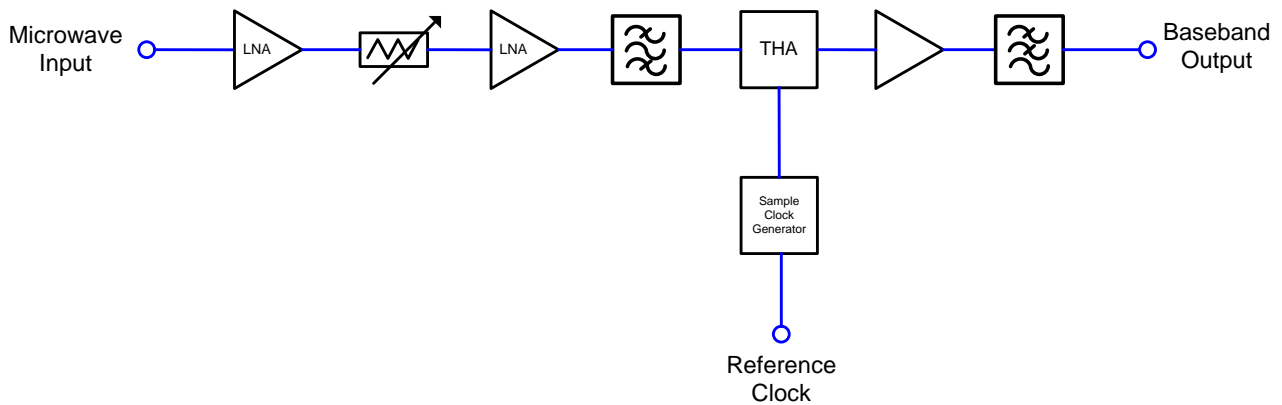
Phone: +44 (0) 1522 681811 Email enquiries@linwave.co.uk Website www.linwave.co.uk
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The unit is housed in a 3U VITA 46 card format and accepts signals in excess of +15dBm whilst having an output P_{1dB} compression point of +10dBm. A self-test BITE function is also available for checking correct circuit operation.

Specification

Parameter	Specification	Notes
Input Frequency Range	2-18 GHz	
Sampling Clock	Up to 3 GHz	Programmable
RF Port Return Loss	< -10 dB	
Acquisition time to 1 mV	150 pS	
Attenuation Range	0-31 dB	1dB step size
Phase Noise @ 1KHz offset	-129 dBc/Hz	
Package	3U VPX	
Operating Temperature	0°C to +55°C	Conduction edge cooled

Block Diagram



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