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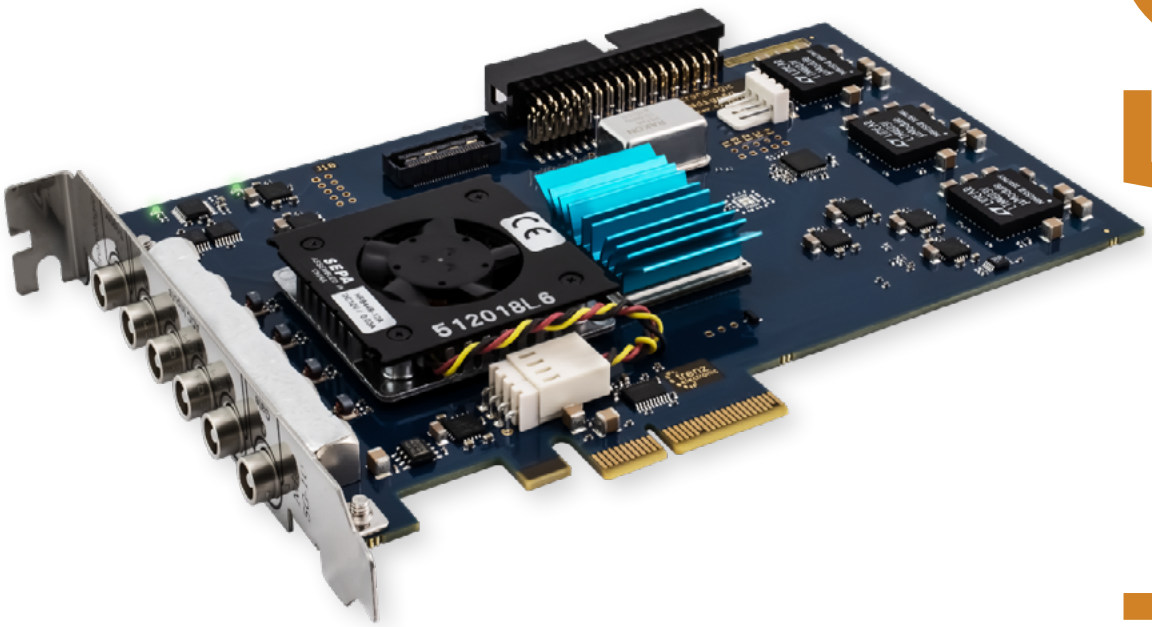
Ndigo5G-10

Ndigo5G-10
Ndigo5G-8
Product Brief



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Introduction

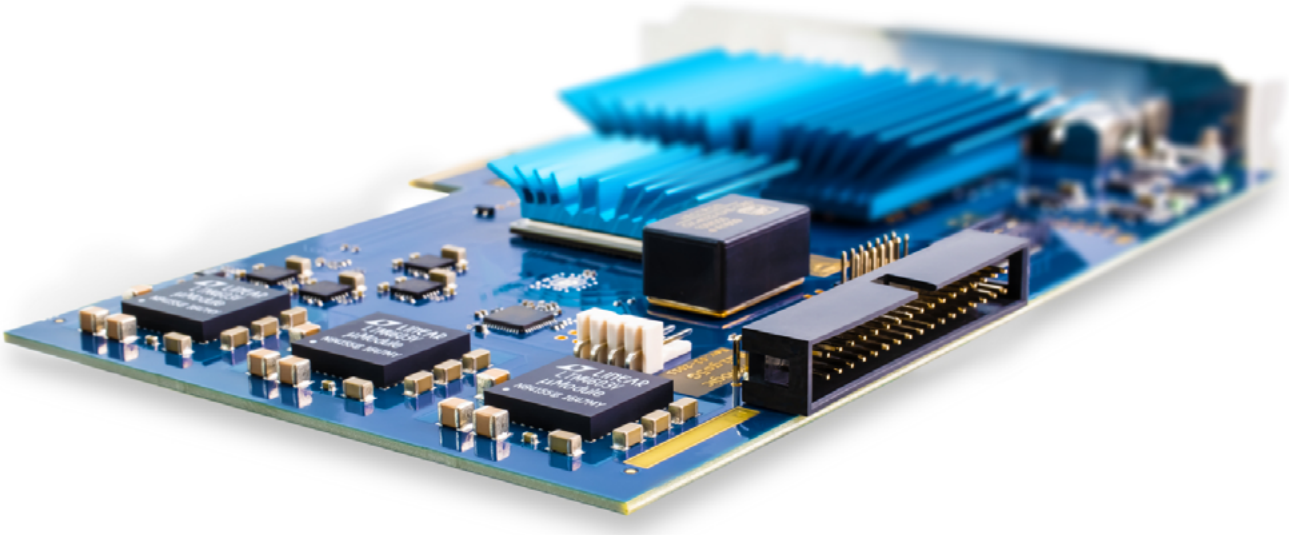
The Ndigo5G is a flash-ADC board for the acquisition of short pulses.

It was specifically designed for time-of-flight applications like LIDAR or TOF mass spectrometry. Pulse arrival times can be measured with an accuracy down to 5 ps together with information on pulse shape such as area or amplitude.

The unit supports onboard zero supression for pulse extraction of the input data stream. Extracted pulse data is streamed directly to the main memory at 800MB/s for the lowest latency and largest buffer size.

Four channels with 1,25 Gsps can be acquired independently or combined to two channels or one channel with a higher dynamic range or up to 5 Gsps sample rate.

The Ndigo5G-10 offers 10 bits of vertical resolution. The Ndigo5G-8 provides a resolution of 8 bits at a lower cost. Analog bandwidth and sample rate are identical to that of the Ndigo5G-10.



Technical Data

Optimized for	TOF applications
ADC channels	4
TDC channels	1
Gating channels	1
Connectors	6x LEMO 00
Sample rate single channel	5,0 Gsps
Sample rate multi channel	1,25 Gsps
ADC channel resolution	10 bits (Ndigo5G-10), 8 bits (Ndigo5G-8)
Double pulse resolution	<1 ns
Maximum bandwith	950 Mhz
TDC bin Size	40 ps
Multihit	unlimited
Dead time between groups	none
TDC Readout rate	20 MHits/s
ADC Readout rate	800 MBytes/s
Range	106 d
Common start / stop	yes / yes
Number of boards that can be event-synchronized	8
Readout interface	PCIe x4
Time base	50 ppb on board or external 10 MHz clock
On-board calibration data storage	✓
Adjustable trigger windows	✓
Overlapping events possible	✓
Easy to use Windows C API	✓
In-system firmware update	✓

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CR-PRODUCTBRIEF-Ndigo5G-19-07-2021-02-eng