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# High-speed E-Field probe for pulsed field measurements

EMV 2023  
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# RadiSense - RSS3000U

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# General description

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## RadiSense RSS3000U series – General description

### **RSS3018U:**

- First ultra high-speed probe model
- Frequency range up to 18 GHz
- Wide dynamic range
- Stand-alone operation
  - (no post-processing by PC required)



## Design optimizations

### High speed ADC's

- Three axes continuously sampling at 2.1 Msps

### Single range, logarithmic amplifiers for each axis

- High-speed signal path for pulsed field measurements
- Wide dynamic range and high sensitivity

### New custom-made BIDI circuit

- Ultra high-speed optical data transfer

### New, high efficiency optical power converter

- Low power design to achieve high laser safety

The Raditeq logo is located in the top-left corner of the slide. It consists of a white circular icon with a stylized 'Q' shape inside, positioned above the word 'raditeq' in a white, lowercase, sans-serif font. The logo is set against a dark blue hexagonal background. The overall slide design features a pattern of overlapping hexagons in various shades of blue and purple.

## New plug-in card platform

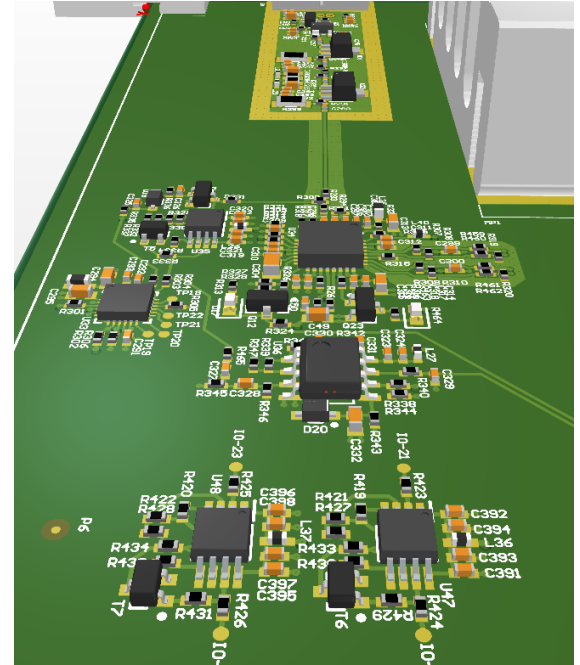
Support for new product developments requiring high data speed and/or complex post processing

Based on Analog Devices DSP containing:

- ARM core, 2 DSP cores
- FFT hardware accelerator
- FIR and IIR hardware accelerators
- LAN/USB/RS232 interfaces
- 4 Gbit RAM
- 128 Mbyte SPI FLASH
- 4 Gbit FLASH e-MMC memory



# Ultra series plug-in card







# Applications

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## RadiSense 3000 series - Applications

- Field measurements in reverberation chambers
- Fast chamber calibrations (16-point verification)
- Multiprobe testing in automotive and military applications
- Measurement of pulsed fields (radar pulses)

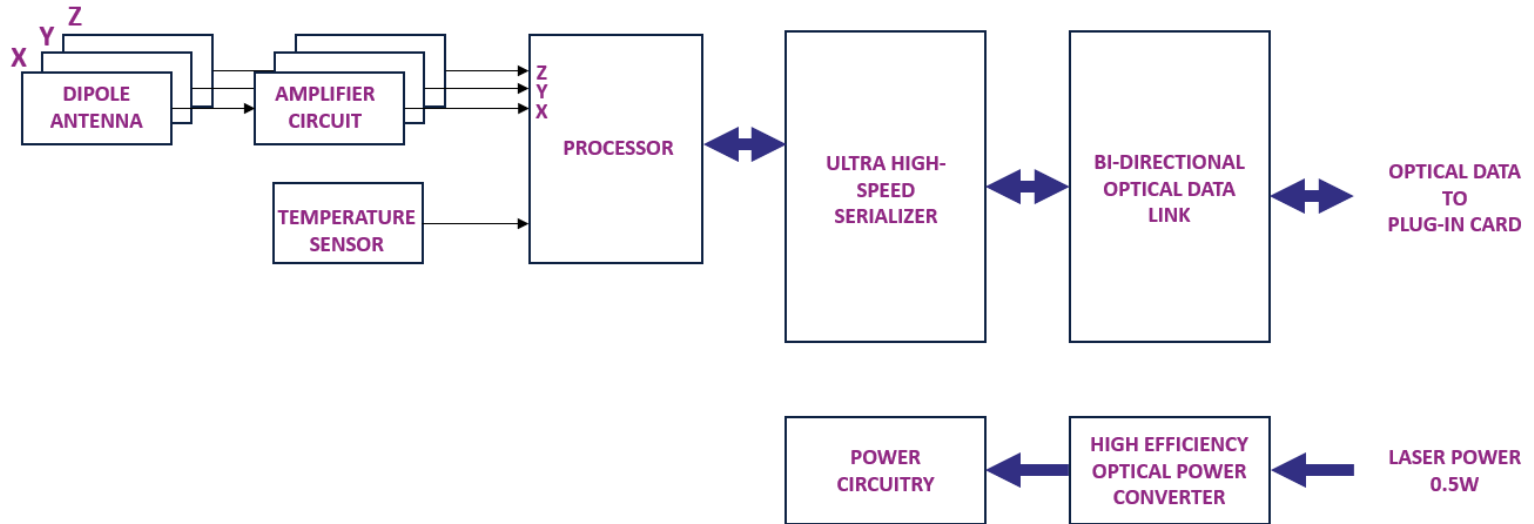


# Simplified block diagram

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# RadiSense 3000 series – High Level Design





# Specifications

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# RadiSense 3000 series – Specifications



Model	RSS3018F
Field measurement range	1 to 1000 V/m
Max input before damage	1500 V/m
Frequency range	20 MHz – 18 GHz
Resolution	0.01 V/m
<b>Accuracy</b>	
Frequency response	-4 dB to + 1.5 dB
Isotropic response <sup>(1)</sup>	± 1 dB ± 0.5 V/m
Measurement speed (X,Y and Z simultaneously)	2.000.000 Measurements per second
Linearity	± 1 dB ± 0.5 V/m
Calibration <sup>(2)</sup>	ISO17025 calibration (optional)
<b>Dimensions</b>	
Shape	Stalk probe
Electric measuring volume	1 cm <sup>3</sup>



# Housing

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# RadiSense 3000U series – Housing





**Any questions or more information?**



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