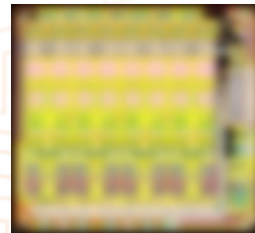
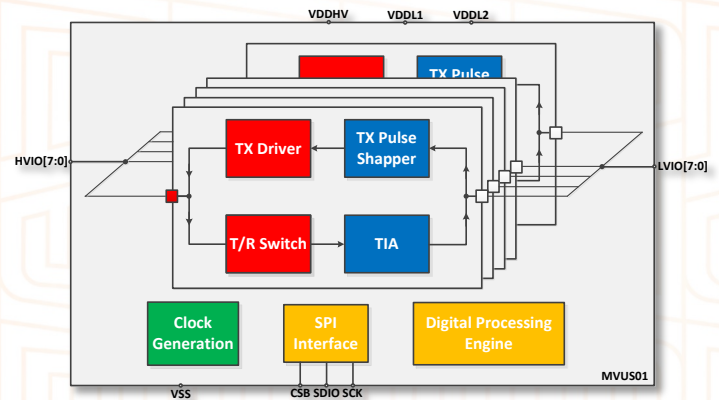


Ultrasound AFE Transceiver Chip for CMUT Transducers

- 8-channel ultrasound transceiver analog front-end
- RX front-end with analog output (T/R switch, TIA)
- High Voltage TX Driver with input pulse shaping. Supports a wide range of transducer capacitances (200pF-520pF)
- Each RX channel is designed to drive 300Ω-6kΩ resistive loads and up to 200pF capacitive loads
- Operating temperature range from 0 to 85°C
- Fully compliant SPI interface, with fast command for T/R switch configuration



Blurred die layout
2.5 x 2.5 mm²



Applications:

- Ultrasound Medical Imaging
- Ultrasound Proximity Sensing
- Non-destructive Testing

*The **Infinite** Possibilities
of the **Infinite** Small™*

Ultrasound AFE Transceiver Chip for CMUT Transducers MVUS01

The MVUS01 ultrasound transducer interface is the first generation of high-voltage (HV) ultrasound ASICs intended for portable medical imaging probes and other markets. The chip supports pulsing ultrasonic transducers, with excitation voltages of up to 50V, and has high gain and low noise receivers, for increased sensitivity to ultrasonic echoes. The chip is programmable to support a wide range of loads, at reasonable current consumption levels.

RX FEATURES

Programmable TIA Gain	78, 68, 63, 58 dBΩ
Input Bandwidth	5MHz
Output Noise	47.3nV/SqrtHz (Max gain)
Current Consumption	11mA typical
Maximum Output THD	-50 dBc

TX FEATURES

Current Consumption	135mA @ 520pF load
(50% Duty Cycle)	55mA at 200pF load
Output Rise/Fall Times	61ns @ 520pF load
	25ns @ 200pF load

* Customization is available. Talk to us!

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ABOUT MEMS VISION

Headquartered in Montreal, Canada, with offices around the world, MEMS VISION INTL. capitalizes on a strong portfolio of patents and intellectual property on MEMS and ASICs (integrated circuits), and a team of highly qualified personnel, to offer hardware and software smart sensing solutions to its customers and partners serving the Consumer, Industrial, Medical, and Automotive markets. Our products include sensors for humidity, temperature, absolute pressure, differential pressure, particulate matter, as well as ultrasonic sensors.

Our expertise in developing and manufacturing smart sensors, based on our proprietary MEMS, ASICs, and calibration technologies, enables us to deliver sensor solutions with very low power consumption, very small form factor, and a world class performance, all at competitive pricing.