

MRI Console

1 mT - 14 T (40 kHz - 600 MHz)







SEE THE DIFFERENCE.

Applications

Compact electronic design powered by the Cameleon4[™]

A highly configurable, and flexible console for clinical (humans), and preclinical imaging (non-humans).

Cameleon4

Configurations

- 2 Transmitters
- 4 to 16 high-rield Rx channels (5 600 MHz)
- 4 to 8 low field Rx channels (40k 25 MHz)
- Multi-nuclear capability

Event and timing

- Main signal clock: 12.8 ns / 78.125 MHz
- Gradient signal clock: 5.213 us / 191.82 kHz

TX channels

- Amplitude control: [0 100%] 12 bits + 64 steps of 1dB attenuation
- Frequency resolution: 568 uHz
- Frequency offset resolution 0.5821 Hz
- Phase resolution: 16 bits
- Min pulse time : 115.6 ns

RX channels

- Bandwidth (spectral width) range: 149 Hz 2.44 MHz
- Adjustable receiver gain: 0 to 60 dB

Gradient channels

- 24 bits resolution / bipolar +-10 Vmax amplitude control
- Analog output: Sub D15 connector compatible with various amplifiers: PCI, IECO (Enable control)
- Digital optical output to interface PCI D-series amplifier

GPIOs output

• 4 TTL output and 1 input for sequence gating





MRI software

All-in-one software



Sequence development

- Integrated development environment
- Graphical and intuitive sequence editor
- Embedded with Java code layer for pulses calculation
- Advance features for complex trajectory patterns
- Integrated **git-versioning** with graphical comparator

Driver

- Console control from third party software
- Control through sockets compatible with all programing languages
- XML based messages exchanged through three different sockets.
- Access to acquisition library

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MRI-132 (Unit): FA + Use Lock in 2023/12/08		£
MRI-292 (ListNP RG) 2023/12/08	Freq_offset_tx_prep 0Hz Solve all Up Down Remove	🖌 Show Async 🧹



The MRI console is a modular spectrometer with a wide range of applications, including academic, industrial, and medical at various field strengths.

RS²D proposes services and solutions for developing pulse sequences, MRI architecture designs, and complete systems. 2D Spin Echo sequence / Fast Spin Echo sequence

T1, T2, PD weighted Inversion recovery sequence Saturation band Fat saturation Multi-echo T2 map T1 & T2 maps FLAIR, STIR

3 Points Dixon FSE sequence Fast Spin Echo sequence 3D T1, T2 weighted

Diffusion SE EPI Diffusion weighted Diffusion tensor imaging

2D/3D Gradient echo sequence

Spoiled Fully rewound T2* Weighted Saturation band Fat saturation In-and out of phase Flow compensation T2* mapping SWI

GRE EPI

BOLD imaging

Time of flight sequence (TOF 2D / 3D)

TOF 3D multislab Flow compensation Travelling pre-saturation bands

Ultra-short echo time (3D UTE)

SingleVoxel spectroscopy (SVS)

Preclinical cardiac

Cine cardiac black blood (preclinical) Cine cardiac (preclinical)



& DISCOVERY

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