



## miniDTS

RESEARCH GRADE EMG FOR SMALL LABS AND PROJECTS

# miniDTS

## PRODUCT DATA SHEET

Release date: July 2015

### Small On Size, BIG On Power

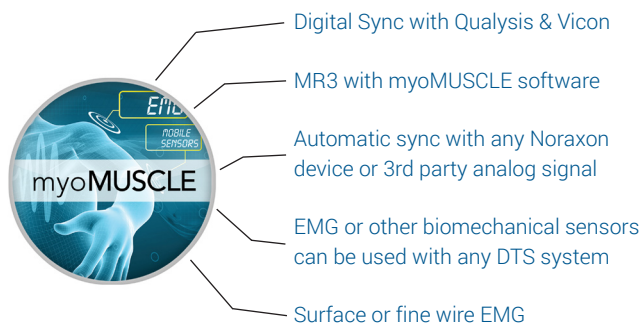
The miniDTS was created as a direct result of a multitude of requests from the research community. They wanted something that was small, lightweight, powerful and with just as much fidelity as the big systems. The problem was their budget. Sometimes a research project or small teaching lab only needs 4 channels of EMG or just 2 accelerometers. The miniDTS is the solution to this conundrum as it offers all of these features at almost half the price of traditional research grade EMG systems.

The miniDTS utilizes the same high fidelity sensors as the bigger research systems and we have made it easy and cost effective to upgrade to a larger system in the future. This means you can accomplish your research goals today and have a clear path to future projects that require systems that can handle up to 32 channels. Both systems use the same EMG and other biomechanical sensors, which means that you only have to upgrade your receiver as your needs change.

### Overview

The Mini Direct Transmission System (DTS) for EMG and other biomechanical sensors directly transmits data from the electrode or sensor site to a small USB receiver. MR3 myoMUSCLE, Noraxon's biomechanical analysis software, comes standard as well as the option to use the miniDTS with Noraxon's multi-device concept.

The default system is equipped with EMG preamplifiers but can be upgraded with other biomechanical sensors like accelerometers, goniometers, inclinometers, hand dynamometers, foot switches, etc. The synchronization system can be used to accurately synchronize the miniDTS System with myoMOTION, myoPRESSURE, myoVIDEO and/or with other biomechanical devices.



### TECHNICAL DATA

#### POWER AND SYNCHRONIZATION

- USB connection to PC
- TTL 5V sync input
- Powered by USB or optional wall plug

#### OUTPUT & TRANSMISSION FREQUENCY

- up to 2.5mW
- 20 meter sensor transmission range
- DSSS 2403-2472 MHz on up to 6 selectable radio channels
- Analog outputs are not available
- Output signal is the raw EMG data

#### EMG SENSOR DATA ACQUISITION

- 16 bit resolution
- Selectable low-pass cutoff at 500/1000/1500 Hz
- Selectable sample rate of 1500 or 3000 Hz
- Maximum of 2 channels at 3000 Hz
- Maximum of 4 channels at 1500 Hz

#### EMG PREAMPLIFIER

- No notch (50/60 Hz) filters
- 1st order high-pass filters set to 10 Hz +/- 10% cutoff
- Baseline noise: <1uV RMS
- CMR: > 100dB
- Input impedance: > 100 Mohm Range: +/- 6.3 mV
- Base gain: 200 Final Gain: 500

#### EMG PROBE DIMENSIONS

- 3.4cm (L) x 2.4cm (W) x 1.4cm (H)
- Weight: <14 grams

#### miniDTS RECEIVER DIMENSIONS

- 7.66cm (L) x 10.18cm (W) x 3.55cm (H)
- Weight: <120 grams