

## DIRECT TRANSMISSION SYSTEMS (DTS)



## CLINICAL | DIRECT TRANSMISSION SYSTEM (DTS)



The Clinical Direct Transmission System (Clinical DTS) for EMG and other biomechanical sensors directly transmits data from the electrode or sensor site to a small USB receiver. The DTS system can operate any configuration between 2 and 8 channels. The default system is equipped with EMG preamplifiers but can be upgraded with other biomechanical sensors such as goniometers, inclinometers, footswitches, etc. A synchronization system can be used to accurately synchronize the Clinical DTS System to other biomechanical devices, video, pressure or motion technologies. The Clinical DTS EMG signal is pre-processed using a 100ms RMS filter to provide clinicians with clean, easy-to-read signals.

### [WHAT'S INCLUDED]

- Clinical DTS Wireless EMG Sensors
- Sensor leads - pinch
- Sensor battery charger (8 block)
- USB A to mini B cable
- 16 dual electrodes (sample pack)
- 200 pieces doublesided tape
- myoMUSCLE Clinical software
- Clinical USB receiver

### SYSTEM PACKAGE

PART #	PRODUCT NAME	DESCRIPTION
584-2T	2" Channel CDTs	2 Channel Clinical DTS EMG system with Android biofeedback software
584-2C	2" Channel CDTs	2 Channel Clinical DTS EMG system with myoMUSCLE Clinical software
584-4C	4" Channel CDTs	4 Channel Clinical DTS EMG system with myoMUSCLE Clinical software
584-8C	8" Channel CDTs	8 Channel Clinical DTS EMG system with myoMUSCLE Clinical software

\*Does not include software. Part #044C (Bluetooth module) is included.

### ACCESSORIES

PART #	PRODUCT NAME	DESCRIPTION
044C	DTS Bluetooth Module	Includes Android biofeedback application
542AP	DTS Pinch Lead	Wireless surface EMG pinch lead
542C	DTS Tape	Doublesided tape for DTS sensor (504 units)
543	DTS Charger	8 sensor charger with power supply

\*If you are purchasing your own Android tablet, Noraxon recommends Samsung, Google or Motorola.



Clinical Gait



Clinical Rehabilitation

## MINI | DIRECT TRANSMISSION SYSTEM (DTS)



The Mini Direct Transmission System (Mini DTS) is the newest member of the Noraxon EMG family. It is our entry-level wireless research system that is designed to support EMG and other biomechanical sensors. The DTS system can operate any configuration between 1 and 4 channels. It samples at up to 3,000 Hz for up to 2 channels and at 1,500 Hz for up to 4 channels. The default system is equipped with EMG preamplifiers but can be upgraded with other biomechanical sensors such as goniometers, inclinometers, footswitches, etc. A synchronization system can be used to accurately synchronize the Mini DTS to other biomechanical devices, video, pressure or motion technologies. Now, for the first time, research is affordable and realistic with access to the highest-fidelity biomechanical sensors and all of the raw data.

### [WHAT'S INCLUDED]

- Lossless DTS Wireless EMG Sensors
- Sensor leads - pinch
- Sensor battery charger (8 block)
- USB A to mini B cable
- 16 dual electrodes (sample pack)
- 200 pieces doublesided tape
- myoMUSCLE Master software
- Mini DTS USB receiver

**NEW**

### SYSTEM PACKAGE

PART #	PRODUCT NAME	DESCRIPTION
585-0M	0 Channel MDTs *	0 Channel Mini DTS EMG system with myoMUSCLE Master software
585-2M	2 Channel MDTs	2 Channel Mini DTS EMG system with myoMUSCLE Master software
585-4M	4 Channel MDTs	4 Channel Mini DTS EMG system with myoMUSCLE Master software
585-8M	8 Channel MDTs **	8 Channel Mini DTS EMG system with myoMUSCLE Master software

\* This option is designed for those who do not need EMG but instead need a research-quality receiver to use with other types of biomechanical sensors. Please order the biomechanical sensors by part #. This option does include one sensor charging block.

\*\* The 8 channel configuration requires (2) receivers and a myoSYNC - all of this is included in the price.

### ACCESSORIES

PART #	PRODUCT NAME	DESCRIPTION
542AP	DTS Pinch Lead	Wireless surface EMG pinch lead
542C	DTS Tape	Doublesided tape for DTS sensor (504 units)
543	DTS Charger	8 sensor charger with power supply

### LIMITATIONS:

- 1). The Mini DTS receiver now supports "Lossless" functionality!
- 2). Analog output is not available. Users may export the raw data post hoc if they need this functionality.
- 3). Overall the Mini DTS system has the same functionality and fidelity as the Desktop or TELEmyo™ systems.
- 4). The Mini DTS system is only offered with myoMUSCLE.

## DESKTOP | DIRECT TRANSMISSION SYSTEM (DTS)



The Desktop DTS can operate any configuration between 4 and 16 channels or it can be combined with a second system to operate up to 32 channels. The default system is equipped with EMG preamplifiers but can be upgraded or synchronized with other biomechanical sensors such as goniometers, inclinometers, foot switches, etc. Additionally, the Desktop DTS can operate in stand-alone analog out mode for easy synchronization with motion capture and other peripheral equipment. The perfect solution for any research lab.

### [WHAT'S INCLUDED]

- Research DTS "Lossless" EMG Sensors
- Sensor leads - pinch
- Sensor battery charger (8 block)
- USB A to mini B cable
- 16 dual electrodes (sample pack)
- 200 pieces doublesided tape
- myoMUSCLE Master software
- Desktop USB receiver

### SYSTEM PACKAGE

PART #	PRODUCT NAME	DESCRIPTION
587-4M	4 Channel DDTS	4 Channel Desktop DTS EMG with myoMUSCLE Master software
587-8M	8 Channel DDTS	8 Channel Desktop DTS EMG with myoMUSCLE Master software
587-12M	12 Channel DDTS	12 Channel Desktop DTS EMG with myoMUSCLE Master software
587-16M	16 Channel DDTS	16 Channel Desktop DTS EMG with myoMUSCLE Master software
587-32M	32 Channel DDTS	32 Channel Desktop DTS EMG with myoMUSCLE Master software
586-AO	Analog Outputs	16 Channel analog output DB-25 connector built-in to Desktop DTS

### SOFTWARE OPTIONS (PACKAGE PRICING - Not Sold Separately)

PART #	PRODUCT NAME	DESCRIPTION
433-431	Essential	Downgrade to Essential version ( <i>no multi-device functionality</i> )
Included	Master	Master version - the MOST comprehensive software for EMG

### ACCESSORIES

PART #	PRODUCT NAME	DESCRIPTION
542AP	DTS Pinch Lead	Wireless surface EMG pinch lead
542C	DTS Tape	Doublesided tape for DTS sensor (504 units)
543	DTS Charger	8 sensor charger with power supply
587	Desktop Receiver	Replacement Desktop DTS Receiver



Sports Research



Research Outside The Lab



## TELEmyo | DIRECT TRANSMISSION SYSTEM (DTS)



The TELEmyo™ Direct Transmission System (TELEmyo DTS) for EMG and other biomechanical sensors directly transmits data from the electrode or sensor site to a belt-worn receiver. The DTS can operate any configuration between 4 and 16 channels or it can be combined with a second system to operate up to 32 channels. The default system is equipped with EMG preamplifiers but can be upgraded with other biomechanical sensors like goniometers, inclinometers, foot switches, and accelerometers. A wireless synchronization system can be used to accurately synchronize the TELEmyo DTS to other biomechanical devices.

### [WHAT'S INCLUDED]

- Research DTS "Lossless" EMG Sensors
- Sensor leads - pinch
- Belt receiver holster and belt clip
- PC interface receiver
- Sensor battery charger
- USB A to mini B cable
- DTS belt receiver with WiFi card
- 16 dual electrodes (sample pack)
- 200 pieces doublesided tape
- myoMUSCLE Master software

### SYSTEM PACKAGE

PART #	PRODUCT NAME	DESCRIPTION
580-4M	4 Channel TDTS	4 Channel TELEmyo DTS EMG with myoMUSCLE Master software
580-8M	8 Channel TDTS	8 Channel TELEmyo DTS EMG with myoMUSCLE Master software
580-12M	12 Channel TDTS	12 Channel TELEmyo DTS EMG with myoMUSCLE Master software
580-16M	16 Channel TDTS	16 Channel TELEmyo DTS EMG with myoMUSCLE Master software

### SOFTWARE OPTIONS (PACKAGE PRICING - Not Sold Separately)

PART #	PRODUCT NAME	DESCRIPTION
433-431	Essential	Downgrade to Essential version <i>(no multi-device functionality)</i>
Included	Master	Master version - the MOST comprehensive software for EMG

### RECEIVER OPTIONS (PACKAGE PRICING - Not Sold Separately)

PART #	PRODUCT NAME	DESCRIPTION
581SUB	DTS A/O Module <sup>1</sup>	Analog Output Module <b>IN PLACE</b> of PC Interface Receiver
292SUB	Mini-Receiver <sup>2</sup>	8 Channel Mini-Receiver <b>IN PLACE</b> of PC Interface Receiver
292WSUB	Mini-Rec. w/ Wireless <sup>2</sup>	8 Channel Mini-Receiver w/ wireless sync <b>IN PLACE</b> of PC Interface Receiver
291-16SUB	16 Channel 2400R <sup>3</sup>	16 Channel Analog Output Receiver <b>IN PLACE</b> of PC Interface Receiver

### ACCESSORIES

PART #	PRODUCT NAME	DESCRIPTION
580	Belt Receiver Bundle <sup>4</sup>	Replacement belt receiver, with accessories (belt clip, WiFi card, cables)
580J	Sync Cable	Wired sync cable with inverter switch
580K	DTS Master/Slave Cable	Serial cable to link 2 TELEmyo DTS together for a 32-channel system
290B	WiFi Card	Compact flash WiFi card for telemetric retransmission (100 meter range)

## DTS SENSORS



## SENSORS | DIRECT TRANSMISSION SYSTEM (DTS)

Our extensive array of biomechanical sensors complements the very best EMG has to offer. Our sensor construction guarantees an effective use in a variety of application areas, such as medical research, sports analysis, rehabilitation, ergonomics and robotics.



### DTS EMG Probe

PART #	DESCRIPTION
548	Wireless Research "Lossless" EMG Probes
546	Wireless Clinical EMG Probes
542AP	DTS EMG Pinch-End Lead (3 inches/7.5 cm)
542AX	DTS EMG Pinch-End Lead Long (7 inches/18 cm)
542AY	DTS EMG Pinch-End Lead X-Long (11 inches/28 cm)
542FW	DTS Fine Wire Lead Set
542C	DTS Sticker - doublesided anti-allergenic stickers for DTS probe (504 units)
543	DTS Charger - 8 sensor charging block



### DTS Footswitch Probe with 4 FSR

PART #	DESCRIPTION
500-4	DTS Footswitch probe with 4 FSR sensors for one foot and four quadrants
500-4 (x2)	2 DTS Footswitch probe with 4 FSR sensors (4 quadrants) for each foot
REPLACEMENT PARTS:	
FSR1	1 sq cm sensing area
FSR2	1.5 inch square (upon request)
FSA1	Footswitch sensor assembly with 4 FSRs - one foot (unilateral gait)



### DTS Footswitch Probe with Insoles

PART #	DESCRIPTION
500-IS	DTS footswitch set with two DTS probes and one pair of insoled, for both feet and bilateral gait, provides up to four quadrants per foot
REPLACEMENT PARTS:	

One pair insoles (please specify size)

Part Number	US Size	EU Size	Length (cm)
085F1	Men 7	39	26
085F2	Men 9	43	28
085F3	Men 11	44.5	30
085F4	Women 5	35	24
085F5	Women 7	37.5	26
085F6	Women 9	40	27



### DTS 2D Inclinometer

PART #	DESCRIPTION
514	Single radio module with 2 sub channels Measures tilt level of sensor to ground in degrees

## SENSORS | DIRECT TRANSMISSION SYSTEM (DTS)



### DTS 3D Accelerometer

PART #	DESCRIPTION
517	Single radio module with 3 sub channels. 3D (X, Y, and Z) sensor with a dual operational range of 2g and 6g.
518	Single radio module with 3 sub channels. 3D (X, Y, and Z) sensor with an operational range of 24g.
519	<b>NEW</b> Single radio module with 3 sub channels. 3D (X, Y, and Z) sensor with a dual, operational range of 100g and 400g.



### DTS Electrical Goniometer

PART #	DESCRIPTION
508-2	2-D electrical goniometer; single radio module with 2 sub channels
508-NS	DTS probe WITHOUT electrical goniometer sensor



### DTS Mechanical Goniometer

PART #	DESCRIPTION
504	1D mechanical goniometer with gliding pivot point suitable for knee, elbow and ankle range-of-motion measurement.



### DTS Flexiforce Local Pressure Sensor

PART #	DESCRIPTION
	Measure force/pressure acting on surface. Useful in measuring gripping forces of fingers or pressure changes in small areas.
524-1	1 lb. / 4.45 N
524-25	25 lb. / 111 N
524-100	100 lb. / 445 N
REPLACEMENT SENSORS:	
324B	1 lb. / 4.45 N sensitivity 5V/lb (1.13V/N)
324C	25 lb. / 111 N sensitivity 200mV/lb (45mV/N)
324D	100 lb. / 445 N sensitivity 50mV/lb (1135mV/N)



### DTS Force Sensor

PART #	DESCRIPTION
	Measure dynamic or isometric forces. Attach to weight machine cables, belt, anchored cable or wall/post mounting bracket.
521	100 lb.-F (445 N)
520	500 lb.-F (2200 N)



## SENSORS | DIRECT TRANSMISSION SYSTEM (DTS)



### DTS Scientific Handgrip Dynamometer

PART #	DESCRIPTION
529	Jaymar style handgrip. Measure grip strength with this strain-gauge based isometer sensor. Operational range 0 to 889 N (0 to 200 lbF). Sensitivity 25mV/lbF; uses 1 channel.



### DTS Universal Analog Input Probe

PART #	DESCRIPTION
511	For connection to mobile third-party sensors, operated in the +/- 10 volts signal range. Accepts self-powered analog signals only.



### DTS EOG (Electrooculography - eye tracking sensor)

PART #	DESCRIPTION
553	Modified DTS EMG sensor with 11" leads. Includes 2 sensors to track eye movement based on electrical signals above and below the eyes and on the right/left sides of the eyes.

## DTS RECEIVERS



## RECEIVER OPTIONS | STAND-ALONE OPTIONS

These receivers may be used with the TELEmyo™ 2400T G2 Transmitter and the TELEmyo DTS Belt Receiver.



### TELEmyo 2400R G2

PART #	DESCRIPTION
	Telemetry receiver unit provides up to 32 analog outputs and allows 8 inputs. Isolated serial data port. Includes WiFi radio card (antenna), power supply, USB interface cable and built-in wireless sync.
291-16	16 Channel

#### ACCESSORIES:

2917C	Biodex 3 to 2400R G2 interface cable
291D	Stripped and tinned DB25 output cable



### TELEmyo 2400R G2 USB Mini-Receiver

PART #	DESCRIPTION
292	Accepts 8 Channels of analog input; isolated serial data port. Includes analog input interface cable, USB A to mini B filtered cable, WiFi and radio card.
292-WS	Includes the components above plus internal sync receiver card, wireless sync antenna, manual trigger, inline wireless sync receiver, and wireless sync cable.

#### ACCESSORIES:

2917B	Analog input interface cable
2917D	Biodex to Mini-Receiver interface cable
2917E	Humac Cybex Norm to Mini-Receiver interface cable
2912C	10-foot interface cable for wireless sync (3.5mm to BCN)

## RECEIVER OPTIONS | STAND-ALONE OPTIONS

These receivers may be used with the TELEmyo™ 2400T G2 Transmitter and the TELEmyo DTS Belt Receiver.



### PC Interface Receiver

PART #	DESCRIPTION
293	If analog inputs or wireless sync are not needed, this USB-based receiver provides users more freedom in their choice of computers along with simple installation and setup.



### DTS Analog Output Module

PART #	DESCRIPTION
581	May be used in place of the PC Interface Receiver Card on DTS systems. Can be added to existing Desktop DTS units without analog output capabilities.



### Compact Flash WiFi Radio Card

PART #	DESCRIPTION
290B	Compact Flash WiFi card can be used with the TELEmyo 2400T G2, 2400R G2, Mini-Receiver and the PC Interface Receiver Card.