



## EMG MADE EASY

- WIRELESS TRANSMISSION - NO WIRES OR BACKPACKS
- REAL TIME - CONSTANT, ULTRA LOW LATENCY
- MEASURE ALL DAY - RECHARGE AT NIGHT
- ATTACH AND GO - EVERYTHING IS PLUG-AND-PLAY
- THE RESULTS YOU NEED, FAST - POWERFUL, INTEGRATED HARDWARE AND SOFTWARE

THE MYON 320 SYSTEM - WIRELESS ACQUISITION OF EMG AND OTHER BIOPHYSICAL SIGNALS

# MYON 320

THE NEW MYON 320 CARRIES FORWARD ALL BENEFITS OF THE PREVIOUS GENERATION WHILST IMPROVING USABILITY, DESIGN AND SIGNAL QUALITY



## WIRELESS

The myon 320 system wirelessly transmits the EMG signals from up to 32 muscles to a receiver unit, which has a range of up to 30 metres. The EMG electrodes are placed on the muscle, and a short cable leads to the small, lightweight transmitter placed a few centimetres away. The cable allows the transmitter to be positioned where it does not interfere with the subject's motion, and also avoids unnecessary inertia causing movement artefacts. The signal is amplified and digitized before it is transmitted, ensuring that no artefacts or noise are added to the signal. To put it simply, the myon system delivers maximum subject comfort both in terms of sensor attachment and freedom of movement whilst measuring highest quality signals.

## REAL TIME

The myon system uses a proprietary wireless transmission protocol designed to ensure a constant, very low latency of just 16ms. This is impossible to achieve using standard protocols such as WLAN or Bluetooth commonly used by other systems, because these have unpredictable or longer latencies. With myon, you can conduct real time experiments such as biofeedback tests, knowing that the signals are available only 16ms after they were generated. Furthermore, since the latency is always constant, you can easily synchronise with motion capture equipment, force plates, or other devices with which you measure simultaneously.

## MEASURE ALL DAY

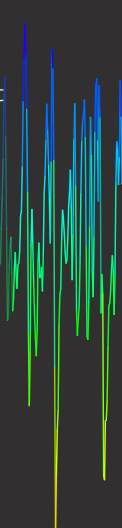
With up to 10 hours of continuous measurement between each recharge, you can take the myon 320 transmitters out of the charging cradle in the morning and not worry about the battery until you go home in the evening. There's no need to turn the transmitters off when they are not in use, and they will never go to a standby mode forcing you to manually turn them back on. What's more, the charging times are low. Therefore, should you happen to forget to charge one day, you can place the transmitters in the charging cradle for only 10 minutes, and you will have enough power to measure for about two hours. It may seem like a small detail, but it could mean the difference between getting the measurements you need today and having to postpone to another day.

## ATTACH AND GO

The myon system is designed to let you start your measurements as quickly as possible. Where many systems on the market require you to press buttons, adjust settings or perhaps configure network addresses before you can get going, with myon you simply attach the small and lightweight transmitters to the subject and start measuring immediately. Everything is automatic – the transmitter starts sending data as soon as it has been removed from the charging cradle, the receiver then picks up the signal and passes it onto the PC, the PC recognises the myon system and displays the signal in real time. All you need to remember is to turn on the PC!

## THE RESULTS YOU NEED, FAST

myon is much more than just raw EMG data measurements. The transmitters support other devices such as accelerometers, foot switches and goniometers, and the complete system is easily integrated with 3D motion capture systems, force plates, foot pressure mats and many more. Furthermore, using the specially designed software packages proEMG and proActive, you can visualize, record, process and export data. Better still, these software packages have been designed with the same emphasis on ease-of-use as the myon system itself. In summary, the myon system lets you obtain the results you need as quickly and effortlessly as possible, leaving you with more time to concentrate on the results.



# PROEMG AND PROACTIVE

## USER-FRIENDLY, YET POWERFUL SOFTWARE THAT SIMPLIFY YOUR CLINICAL OR RESEARCH WORK

### PROEMG

proEMG makes processing EMG signals as easy as possible without sacrificing flexibility and functionality. To this end, ProEMG includes two separate interfaces: One is very flexible and powerful, letting you set up processing protocols with parameters and settings to suit your specific needs. The other is extremely easy to use, and is designed for routine processing. Here, you use a pre-defined workflow to process data efficiently with a minimum of mouse clicks, reviewing the data to ensure validity before automatically generating reports and data files containing the results.

### EXTENSIVE PROCESSING OPTIONS

- High-pass, low-pass, band-pass and notch filters.
- Signal rectification and smoothing.
- Frequency-based analysis based on Fourier Transform.
- Automatic identification of key muscle events.
- Time normalisation based on kinematic events.
- Generation of intra-trial and inter-trial averages.
- Automatic calculation of parameters based on the data.
- Automatic generation of reports in Microsoft Word.
- Export of all data to Microsoft Excel for further analysis.
- Full read/write support for C3D files.

### TWO VERSIONS TO SUIT YOUR NEEDS

ProEMG is available in two versions: stand-alone, and as a plug-in to the Vicon Nexus and Workstation software used to capture and process data acquired with Vicon systems.

The stand-alone version includes data recording, real time visualisation and data management in addition to the processing capabilities already mentioned.

The plug-in version lets you acquire the myon data synchronously with the 3D motion data, and then use proEMG to process without having to use a separate software package. proEMG is the only software solution on the market where advanced EMG processing is fully integrated with 3D motion capture, making it easy to create data files and reports which contain results from both.

### PROACTIVE BIOFEEDBACK

The proActive software lets you use EMG or signals from other measurement devices to generate a real-time biofeedback training protocol where a subject tries to replicate a pre-measured or pre-defined signal pattern. The software includes functionality to register subject, record or manually specify signal pattern templates, normalize signals and then use the templates to do repeated training sessions. The subject's progress is tracked over time, and progress is clearly documented.

ProActive can be used to define experiments designed to improve and document a person's coordination, balance or movement response by displaying one or more biofeedback signals in real time, making it a valuable tool in many different scenarios, from stroke rehabilitation to coordination training for athletes.

ProActive is designed to be extremely easy to set up and use, exposing a very user-friendly and straightforward interface that requires practically no time to learn.

# APPLICATIONS

THE MYON 320 SYSTEM WITH SOFTWARE IS THE IDEAL SOLUTION FOR DATA ACQUISITION AND PROCESSING IN MANY APPLICATIONS

**Clinical:** gait analysis, rehabilitation, physiotherapy.

**Ergonomics:** workplace evaluation, product design, injury prevention.

**Sports:** monitoring, training optimization, injury prevention, rehabilitation.

**Research:** kinesiology, neuromuscular disorders, biomechanics.



## COMPANY INFORMATION

### MYON AG

myon AG was founded in 2009 to develop the myon hardware based on more than 10 years' experience with EMG and wireless transmission technology. Together, myon and prophysics launched the EMG system and proEMG software in 2009, and we have since sold to more than a dozen countries worldwide. We pride ourselves on being customer-driven and flexible, and are therefore pleased to launch the next generation of the myon hardware as well as new versions of the proEMG and proActive software packages – all developed as a direct result of feedback obtained from customers.