

Qualisys Clinical System

The Qualisys Clinical System is our solution for clinical gait labs, where efficiency, ease of use and reliability are critical. The core of the system is the Clinical Gait Module for the Project Automation Framework (PAF), which provides data management, data collection and reporting, all in one interface within Qualisys Track Manager (QTM) software.

Clinical gait analysis requires stringent protocols and regulatory compliance. This is why the Qualisys Clinical System is a Class 1m Medical Device¹ and cleared by the FDA for clinical use. The system may also be extended by compatible external hardware such as force plates and EMG systems.

RESEARCH OR CLINICAL - WHICH GAIT MODULE SHOULD I USE?

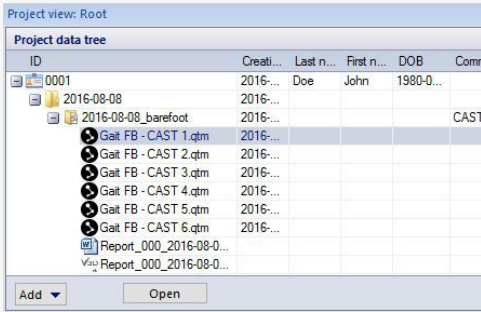
If you are measuring patients for the purpose of diagnosis, treatment assessments, or general monitoring, the Qualisys Clinical System is the right choice for you (Art. No. 150401). If you are a research user, our research modules are more suitable, see qualisys.com/applications/gait-rehab.

FEATURES

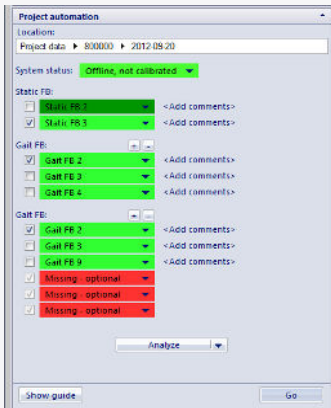
- Ease of use – specifically streamlined for clinical gait analysis
- Class 1m medical device, including software and compatible external hardware
- Interactive HTML 5 report
- Not limited to a single marker set
- Seamless integration with Visual3D
- Scalable solution - from 8 to 16 or more cameras.

INCLUDED MARKER SETS

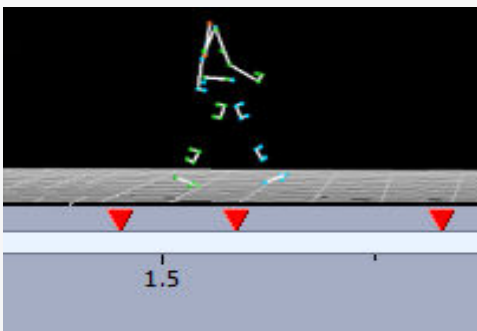
- CAST/6DOF (Cappozzo et al. 1995²)
- IOR (Leardini et al. 2007³)
- CGM2 (Leboeuf 2019⁴)
- Oxford Foot Model (Stebbins et al. 2006⁵)
- Rizzoli Foot Model (Leardini et al. 2007⁶)



The Project view provides quick access to all files of a patient. Right-click any item to edit its properties.



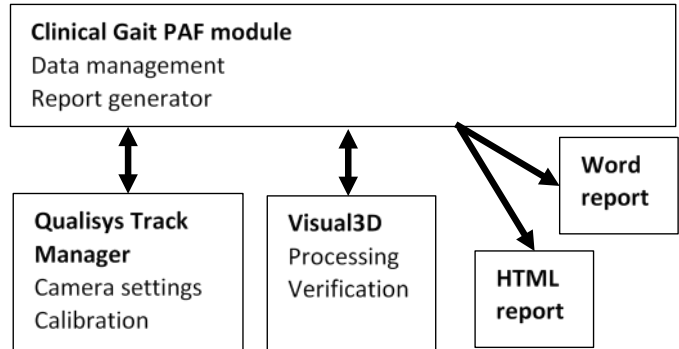
Color coded buttons make it easy to track the progress of a session. When the required trials are captured, analysis is as simple as clicking the Analyze button.



The Clinical Gait PAF module supports adding events through different event modes including manual, one force plate and multiple force plates. The automatic events are created in the analysis step using Visual3D's event creation algorithm.

OVERVIEW

The Clinical Gait PAF Module appears as an add-in to the Qualisys Track Manager (QTM) software. QTM is used to change camera settings, to calibrate the system and to capture gait trials.



DATA COLLECTION

During data collection, we want you to be able to focus on the patient instead of the technology or repetitive tasks like file naming. That is why our Clinical Gait PAF module offers you a list of pre-defined measurement names, using an intuitive system of red and green buttons.

Markers may be labeled automatically using our Automatic Identification of Markers (AIM) method. These AIM include all marker names and colors, ready for your first data collection.

DATA MANAGEMENT

Patient data, such as height, body mass and birth date, is entered directly in QTM. This data is stored in the motion capture files, so there is no need to keep and maintain external databases.

DATA ANALYSIS

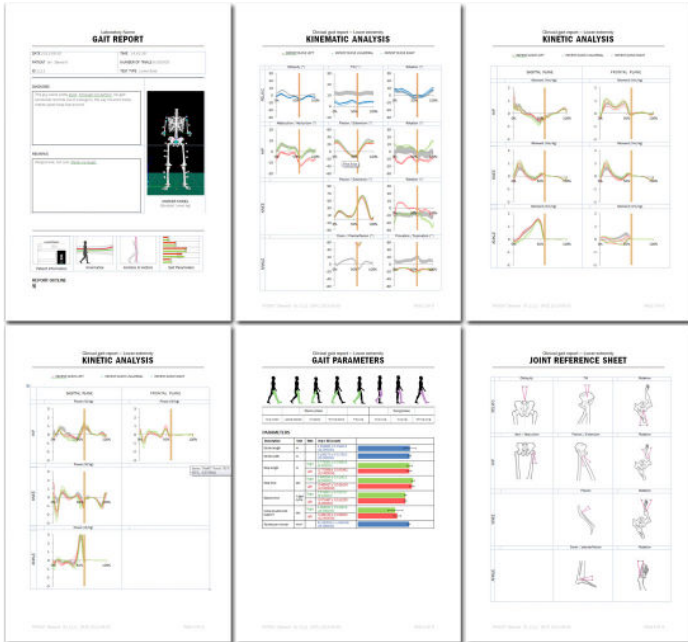
Simply click the "Start Processing" button, and QTM exports the files, runs a script in Visual3D to process them, and imports the results into the report template. Patient data is transferred directly into reports, avoiding mistakes and speeding up the report generation.

MARKER SETS

We understand that there is not a single marker set that fits the specific needs and preferences of all gait labs. That is why the Clinical Gait PAF Module includes three different marker sets, all of which have a proven record of being used in well-established gait labs.

REPORTS

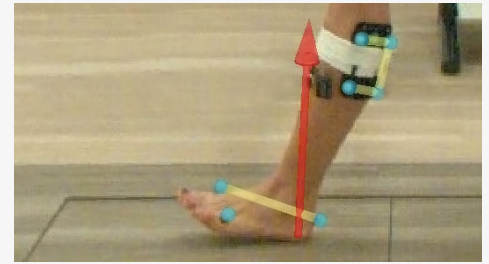
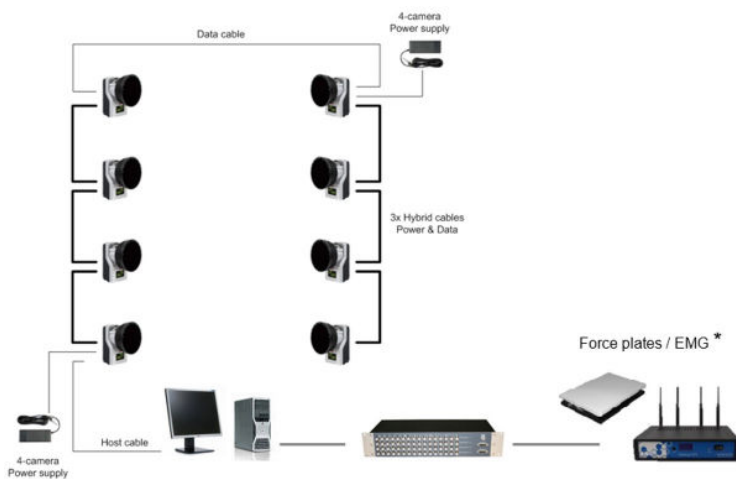
The Qualisys Clinical System includes a Word and an interactive HTML 5 report. The report is based on a template prepared by Baker, McGinley and Thomason for the workshop Impairment focused interpretation at the JEGM meeting, Miami, 2010.



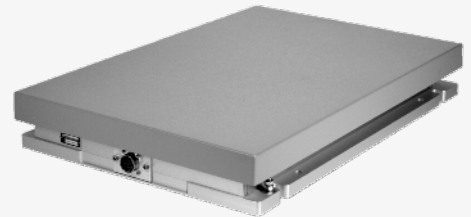
Example of a Word report, populated with kinematic & kinetic results

HARDWARE

The system may be extended by compatible external hardware such as force plates and EMG systems, acting together like a single system that you can safely use in a clinical environment.



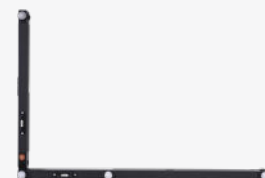
Video overlay is ideal to visualize force vectors and verify marker positions.



Compatible force plates include models from AMTI and Bertec. Force plates are ideal to automate the event detection, and reports will show joint moments and power when force plates are present.



The Qualisys Clinical System can be extended with selected Noraxon, Delsys, Myon or Cometa EMG systems. EMG data is recorded and processed together with the motion capture data, and all results are contained within a single report.



Our calibration frame includes height adjustment, spirit levels and alignment aids so that it can be placed accurately on top of a force plate.

COMPATIBLE HARDWARE

The Qualisys Clinical System is compatible with the following hardware:

Component	Supplier	Item	Article number	Interface
Motion capture cameras	Qualisys	5+ series	5005xx+	
		6+ series	5006xx+	
		7+ series	5007xx+	
	Qualisys	Miquis M1	400100x	
		Miquis M3	400300x	
		Miquis M5	400500x	
Video cameras	Qualisys	Miquis Colour	400200VCX	
		Miquis Monochrome	400200VMX	
Force Plates	AMTI	OPT400600	230156	Optima Signal Conditioner
		OPT464508	230155	Optima Signal Conditioner
	Bertec	FP4060-...		AM650x + USB-2533/USB-1608G[5]
EMG	Noraxon	Desktop DTS		Trigger port on receiver
		Ultium		
	Delsys	Trigno	230081 (8ch)	Delsys trigger module
		Trigno Avanti	230082 (16ch)	
	Myon	Aktos		Myon trigger module
Cometa	Wave Plus		Cometa trigger module	

RECOMMENDED ACCESSORIES

Accessory	Item	Article		
		10pc	50pc	100pc
Markers	Standard: 14 mm with M4 base.	160340	160341	160342
	Children/feet: 9.5 mm with M3 base	160320	160321	160322
Tape	Tape to attach markers (11mm x 19mm)	160183		
Clusters	Marker clusters (2 clusters)	160145		
Calibration	Carbon calibration kit, L-frame, 300 & 600 mm wand	130456		
	Small carbon calibration kit 300 mm wand	130460		
	Caltester for force plate verification	150206		

REFERENCES

- [1] According to Annex V of the directive 93/42/EEC on medical devices.
 [2] Cappozzo et al. (1995). Clinical Biomechanics, 10, 171-178
 [3] Leardini et al. (2007). Gait & Posture, 26, 560-571.
 [4] Leboeuf et al. (2019). Gait Posture, 69, 126-129.
 [5] Stebbins et al. (2006) Gait & Posture. 2006 Jun;23(4):401-10.
 [6] Leardini et al. (2007) Gait & Posture 25, 453-462.

PRODUCT AVAILABILITY

Due to language requirements, the Qualisys Clinical System is currently only available in the United States of America and the following European countries:

Austria, Belgium, Finland, France, Germany, Ireland, Luxembourg, Spain, Sweden, Switzerland, United Kingdom. Please contact Qualisys if your country is not listed.

QUALISYS



qualisys.com

sales@qualisys.com

Qualisys Europe

Gothenburg, Sweden

Qualisys Americas

Chicago, USA

Qualisys Asia Pacific

Shanghai, China