

Clarius C3

Clarius C3 is a 1st generation wireless handheld sonographer from the Canadian company Clarius (<https://clarius.com>).

Info

Basic information:

- Manufacturer's website: The Original Premium Handheld Wireless Ultrasound (<https://clarius.com/scanners/1st-gen/>): C3 Convex, L7 Linear, C7 Microconvex
 - Clarius 1st Gen Scanner Brochure (https://clarius.com/wp-content/uploads/2019/10/Clarius-Brochure_201908.pdf).PDF
 - Clarius 1st Gen Scanner Specifications (https://clarius.com/wp-content/uploads/2019/10/Clarius-Datasheet_201906.pdf).PDF
- Display method: Tablet or smartphone with Android or iOS
- Connection method:
 - Bluetooth – establishing a connection
 - WiFi 2.4 & 5 GHz - signal transmission
- Power supply: Battery
- Clarius UltrasoundScanner User Manual (https://www.medata.cz/_docs/clarius/en_clarius_ultrasound_user_manual.pdf)
- Exclusive distributor for the Czech Republic: Medata (<https://medata.cz/index.php?page=produkty>) – products

Parameters

Model:	C3
Probe shape:	convex
Radius:	45 mm
Radiation angle:	73°
Number of UZ elements:	192
Pitch (element spacing):	300 µm
Frequency:	2 – 6 MHz
Maximum depth:	32 cm
Frame rate:	15-30 FPS

Display Modes

- B-mode (Brightness mode)
- M-mode (Motion mode)
- Color Doppler (High-speed color doppler - purchased for an additional fee)
- Power Doppler

Main area of use

- Emergency medicine
- Telemedicine
- Abdominal cavity
- Emergency cardiology
- Obstetrics
- Lungs
- Bladder
- Superficial (subcutaneous) examinations

Users

Workplaces that use this device and for what:

- Institute of Biophysics 2nd Faculty of Medicine UK (<https://www.lf2.cuni.cz/ustav-biofyziky-2-lf-uk>) – Portal:Biophysics Practice (2nd Faculty of Medicine UK):
 - Ultrasonography (2. LF UK)

Application

Apps for tablets and smartphones are free to download:

- Android: GooglePlay (<https://play.google.com/>): **?id=me.clarius.clarius Clarius Ultrasound App (<https://play.google.com/store/apps/details?id=me.clarius.clarius>)** (Clarius Mobile Health (<https://play.google.com/store/apps/dev?id=6649005701344374184>))
- iOS: App Store (<https://www.apple.com/app-store/>): **clarius-ultrasound-app/id1140165095 Clarius Ultrasound App (<https://apps.apple.com/us/app/id1140165095>)** (Clarius Mobile Health Corp. (<https://apps.apple.com/us/developer/clarius-mobile-health-corp/id1140165094>))

The application is quite large, approx. 140 MB. After starting, it asks us to register (however, we do not have to agree to sending news). It offers the possibility of searching for a lost scanner, for which it requires location permission - we can refuse this. To connect the scanner, it requires bluetooth permission (which initializes the connection, which then runs on WiFi); if we don't want to use the scanner, we can (I think) also decline it.

Then the application searches for a scanner in the vicinity. If it does not find it, it warns us that for teaching and demonstration purposes it is possible to choose "Virtual Scanners" in the settings. Here we have several virtual scanners to choose from, we will choose **C3 Virtual Scanner**. The application then behaves as if we were connected to a real C3 scanner. It simulates various examinations and we can learn to control the relevant scanner.

Related Pages

- Ultrasound
- Ultrasound/Diagnostic applications of ultrasound
- Ultrasound/Catalog of methods in biophysics
- Ultrasound in different environments and tissues
- Ultrasonography (2. LF UK)
- Doppler ultrasonography
- Ultrasound and its use in medicine (Exam question - guide)
- Diagnostic use of ultrasound

Videos

Youtube videos:

- Official manufacturer videos Clarius Mobile Health (<https://www.youtube.com/channel/UC7qwizCNZ56DePgagiXdm3w>):
 - Basic videos - technology:
 - 2016-06-10 01:15 Clarius C3: One handheld wireless ultrasound scanner to view the abdomen, lungs and heart (<https://www.youtube.com/watch?v=cf3Vher3PBk>)
 - 2016-07-19 02:48 Chris Eddy demonstrates vessel access under ultrasound guidance using Clarius (<https://www.youtube.com/watch?v=K--xuNgg7e0>)
 - 2017-06-21 00:54 Clarius Introduces Pocket Ultrasound Tri-Scanner (<https://www.youtube.com/watch?v=F6KYnQmT37k>)
 - 2017-08-04 01:05 Clarius 3.1 Eclipse - Software Release Announcement (<https://www.youtube.com/watch?v=h30WDBUHPYk>)
 - 2017-10-27 03:39 How to use Clarius for a FAST Exam | Clarius Portable Handheld Ultrasound (<https://www.youtube.com/watch?v=8yUtpSSzEBw>)
 - 2018-03-09 03:56 Getting Started with the Clarius App (https://www.youtube.com/watch?v=5U1H0r3_tfo)
 - 2019-04-25 01:17 Clarius Live - Ultrasound Telemedicine Made Simple (<https://www.youtube.com/watch?v=evURFT9cUnA>)
 - 2020-02-27 01:00 Clarius Live - Ultrasound Telemedicine Made Simple (<https://www.youtube.com/watch?v=i9jTjgRZ3KI>)
 - 2020-05-15 01:03 How to Create a Clarius Act One Video (https://www.youtube.com/watch?v=iUn65-Ai4_k)
 - 2020-05-21 06:28 How to Use Clarius Cloud - Handheld Wireless Ultrasound Leveraging Smartphones and Cloud Technology (<https://www.youtube.com/watch?v=mUrZTu0bINw>)
 - Videos by fields (selection):
 - 2018-10-26 03:28 **Kidney Scan by Nathaniel Reisinger | Renal Ultrasonography With Clarius Handheld Ultrasound (<https://www.youtube.com/watch?v=2iGrXEBX54M>)**
 - 2018-10-27 04:19 **Cardiac Scan by Nathaniel Reisinger | Ultrasound Explained | Clarius Portable Ultrasound (https://www.youtube.com/watch?v=lktc7nGI_iM)**
 - 2020-03-25 04:41 Lung Ultrasound Scanning with Dr. Daniel Kim (<https://www.youtube.com/watch?v=1i3ZewcdUsA>)
 - 2020-04-13 04:22 Extended FAST Exam with Dr. Daniel Kim (<https://www.youtube.com/watch?v=ElgaKBKINpo>) extended **F**ocused **A**assessment with **S**onography in **T**rauma (eFAST)
 - Tutorial videos:
 - 2016-08-29 07:14 **Clarius: Fundamentals of Ultrasound 1 (Physics) (<https://www.youtube.com/watch?v=cl7ULKNhVcw>)**
 - 2016-10-14 07:30 **Clarius: Fundamentals of Ultrasound 2 (Equipment & Usage) (<https://www.youtube.com/watch?v=jxGUID2lBaA>)**
 - 2017-06-14 01:37 Pete Tonseth on Ultrasound Education (<https://www.youtube.com/watch?v=Y0CRWnOfA-A>)

- 2020-02-04 27:50 **MSKUS in Physical Therapy - What is it? | Musculoskeletal Ultrasound Guide** (<https://www.youtube.com/watch?v=-nOutHbvR6k>)
- Mohd Jazman Che Rahim (<https://www.youtube.com/channel/UCDF8sT8G8uaYVyFcVbaHZOg>):
 - 2020-05-22 01:57 Getting to know Clarius C3 (1st Gen) ultrasound scanner (<https://www.youtube.com/watch?v=iMSQUelQ9wQ>)
 - 2020-05-22 04:12 **How to scan with Clarius C3** (<https://www.youtube.com/watch?v=Oi02mAUmYf4>)
 - 2020-07-24 04:11 **Basic echo measurements with Clarius C3** (<https://www.youtube.com/watch?v=rzkSz7tVtC0>)
- در واسیم روک (<https://www.youtube.com/channel/UCB4Us7Ro74uxo-1jm9HH20A>):
 - 2017-08-07 07:29 Diagnosing pneumonia using Clarius bedside ultrasound (<https://www.youtube.com/watch?v=M5gF50IWBBE>)
 - 2017-08-19 15:19 See what Clarius can do (<https://www.youtube.com/watch?v=-wEhJp5i7Wc>)
- Other channels:
 - 2017-05-07 07:07 Clarius C3 Initial Impression on. Cruise Ships Medical Center (<https://www.youtube.com/watch?v=GEksVU-RIsU>) (Kamlin Ekambaram (https://www.youtube.com/channel/UCHiwDMaBCMjcDVahW_z8rZA))