



PHILIPS

Ultrasound

Tele-ultrasound

Philips tele-ultrasound

Now ultrasound systems can do more than scan



Easily reach the people who need you

Ultrasound experts are looking to technology to solve the challenge of providing care access to diverse populations, while also managing staff shortages and variable levels of expertise that contribute to inefficiency and a higher rate of repeat exams.

Collaboration Live delivers real-world value

A tele-ultrasound solution available on select cart-based, portable and handheld Philips ultrasound systems, Collaboration Live is designed to improve access to care, bringing remote decision support to the primary care outpatient clinics, emergency first responders, hospital inpatient imaging departments and many other locations so you can improve workflow inefficiencies, enhance patient and staff satisfaction and drive better outcomes.

Collaboration Live allows you to securely share images directly from the ultrasound system to mobile devices or computers so teams can view images simultaneously, regardless of location. Clinicians can even give control of system functions, allowing remote experts to guide the exam. (See capabilities per platform on page 6)

Extend your team without expanding it

Extend access to care

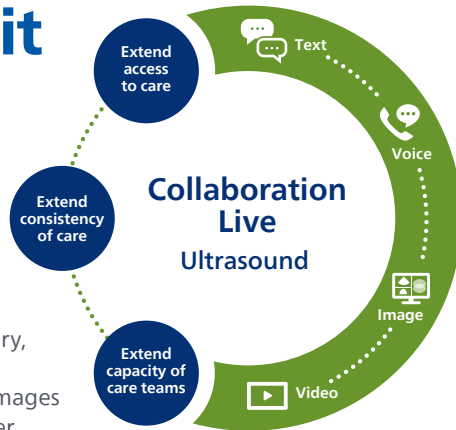
All patients deserve a high level of care, regardless of location or care setting. Collaboration Live supports new paths of care delivery, extending access to quality care. With real-time access to patient images on a mobile device or web browser, and the ability to meet via text or video, physicians can consult with both sonographers and patients in the exam room.

Extend consistency of care

Collaboration Live helps you achieve the same standard of care throughout your organization. Clinicians can use Collaboration Live to connect with colleagues for real-time guidance, decision support on complex exams and training on care protocols.

Extend the capacity of care teams

Deploy the right expertise when and where you need it to elevate care while also conquering staffing challenges. Remote guidance and decision support allow you to eliminate time wasted in switching physical locations, as well as limit exposure to infectious patients, while increasing productivity and improving the experience for your care teams and patients.



Reduced healthcare costs, improved access to care and increased revenue

Recent studies determined that the use of Collaboration Live

Increased revenue by 44%¹



Reduced exam time by 57%²

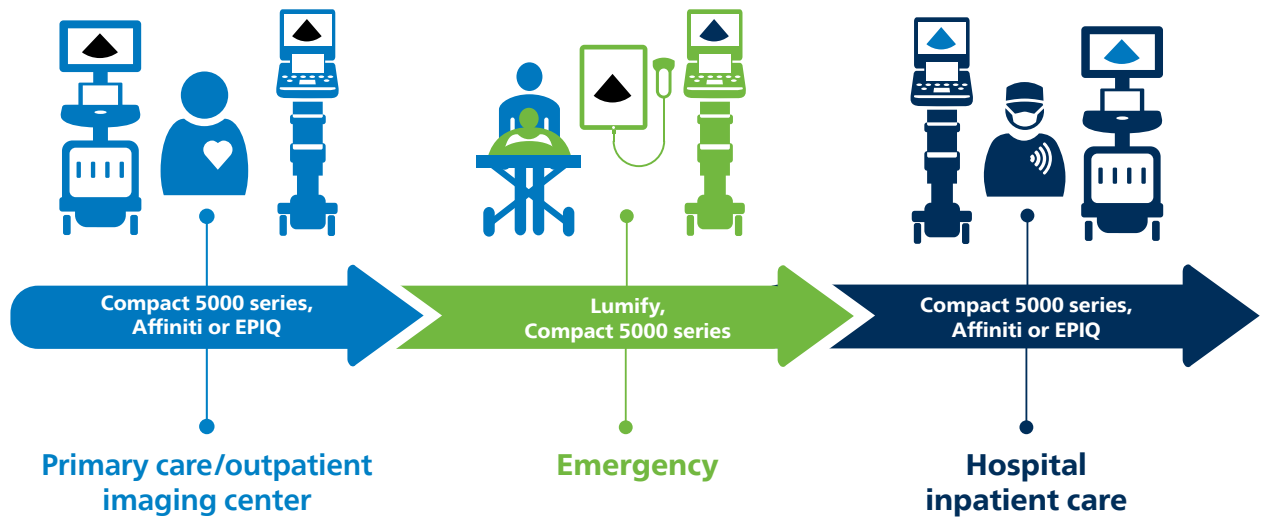


Resulted in **100% of patients** reporting that they had better access to healthcare delivered through Collaboration Live³



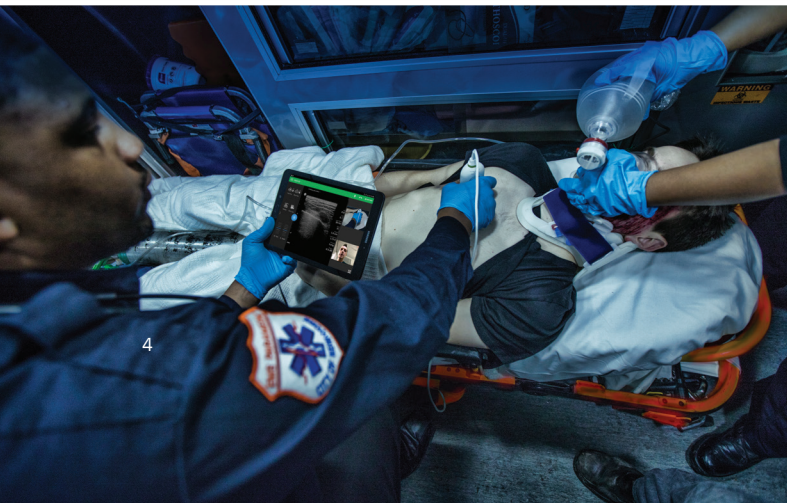
Easily stay connected throughout the patient journey

At every stage in the patient journey, Collaboration Live helps your team coordinate care.



Give patients access to your team's full expertise, regardless of location

- Your point-of-care team can share critical images and information from the ambulance, before they reach the hospital
- Sonographers have on-demand access to experts who can virtually "look over the shoulder" and guide exams
- Physicians can guide ultrasound during surgery – without entering the surgical suite
- Experts on-the-go can connect directly to ultrasound systems from their mobile devices for peer-to-peer consultations
- You can enhance the patient and staff experience while ensuring the standardization of care

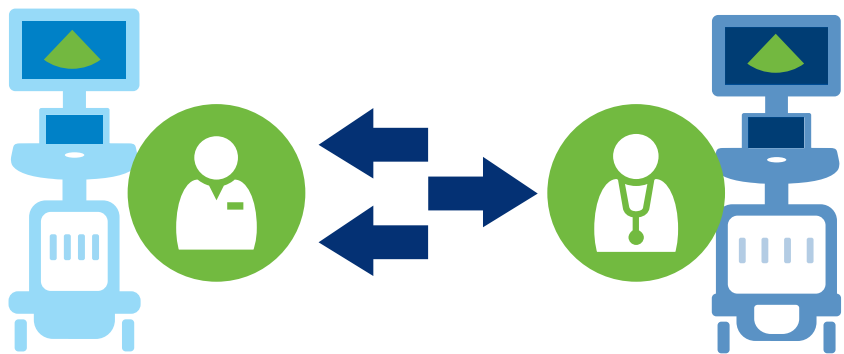


Connect with colleagues



Collaboration Live with multi-party* lets you connect up to six participants on a call. You can even connect system to system so you can give and get support from your colleagues during an ultrasound exam.

A quick look can provide guidance and reassurance during the exam, enhancing the imaging experience for clinicians and patients.



*Requires release 7.0.5 or higher. Diagnostic use and remote access via mobile device or browser requires release 9.0 or higher. Multi-party and system-to-system connect require release 10.0 or higher.

Tele-ultrasound capabilities evolving to meet imaging needs

Tele-ultrasound is now available on your EPIQ, Affiniti, Compact 5000 series and Lumify systems, opening a door to a world of remote applications.* With tele-ultrasound growing across our portfolio, you can institute new ways of working that enhance patient care and efficient workflow. No matter where you use Collaboration Live, you can be assured of Philips quality imaging and ease-of-use.



Lumify**



Compact 5000 series



Affiniti



EPIQ

Talk	•	•	•	•
Text		•	•	•
Screen share	•	•	•	•
Remote control *†		•	•	•
Remote diagnostic quality*			•	•
Asset sharing†		•	•	•
Multi-party*			•	•
System-to-system connection*			•	•
Remote user operating system				
– Windows (via Application, Chrome and Edge browsers)	•	•	•	•
– Mac OS with Chrome and Edge browsers*	•		•	•
– iOS*	•		•	•
– Android*	•		•	•

* Requires release 7.0.5 or higher. Diagnostic use and remote access via mobile device or browser requires release 9.0 or higher.

Multi-party and system-to-system connect require release 10.0 or higher.

** Lumify used with Android device.

† Available with Windows application only.





Compatibility, security and connectivity

Ultrasound system peripheral support

Collaboration Live supports the use of a USB headset and USB webcam. These peripherals are not required but can be used to enhance the overall experience. A universal USB driver supports connectivity of these devices and, while Philips does not guarantee support for all USB-based headsets and webcams, it is expected that most USB headsets and webcams will work with Collaboration Live.

Collaboration Live remote device requirements

These requirements must be met in order to successfully install and use the Collaboration Live remote application (Reacts) on the following operating systems.

Windows

- Windows 10 or higher
- Processor base frequency of 1.8 GHz or higher
- Minimal 4 GB RAM
- Minimal 75 MB of available disk space
- Minimal screen resolution 1366 X 768 pixels
- Camera and microphone (USB or built-in)

Web Browsers (Mac OS & Microsoft Windows)

- Google Chrome
- Microsoft Edge

iOS (iPhone & iPad)

- iOS 13 or higher

Android (Mobile phone or tablet)

- Android 9 or higher

Security

Data in transit

Audio/video communications are established via WebRTC and utilize the DTLS-SRTP security context to encrypt and decrypt streams from end to end. The DTLS-SRTP allows secure end-to-end protected sessions over either UDP or TCP. The signaling channels are TLS 1.2 secured and separated from the media transport. The certificate fingerprints are sent through this secure connection, reducing the possibility of MITM attacks. Every connection and session use unique keys. Chat messages are always transmitted via the signaling service and are thus secured with TLS 1.2.

Data at rest

The database and database backups are encrypted at rest using "Transparent Data Encryption" (TDE) with AES 256 encryption. Data input from users is encrypted using AES 256 encryption. The symmetrical keys used to decrypt the data are stored separately in the database server. These keys are never exposed to human users and are only made available to the services that provide access to these files as per the authorized owner requests. Each file is encrypted using its own key and different initialization vectors (e.g., two files belonging to the same user are encrypted using two different keys). Data streams (audio and video) for real-time communication are not stored.



References

- 1 Ruma MS. Revenue generation analysis of telemedicine tool in perinatology. *J Ultrasound Med.* 2022. 41(suppl1):S163.
- 2 Kelly NP, Scherer E, Johnson K, et al. Findings from implementation of a remote collaboration solution to perform echocardiograms during the COVID-19 pandemic. *JASE.* 2021 doi.org/10.1016/j.echo.2021.10.001.
- 3 Ruma MS, et al. Prospective study of 30 subjects undergoing routine obstetric ultrasound imaging, New Mexico, USA. The use of a novel telemedicine tool in perinatology [abstract]. 30th ISUOG World Congress, 2020.