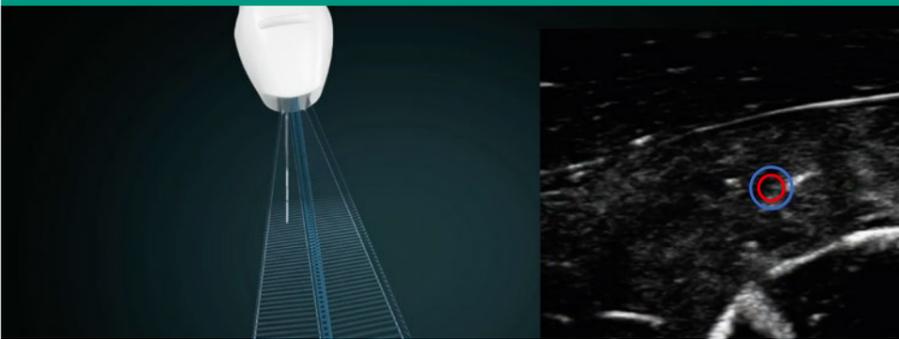


Onvision® Needle Tip Tracking User Guide

What do the colored circles indicate?

In-plane



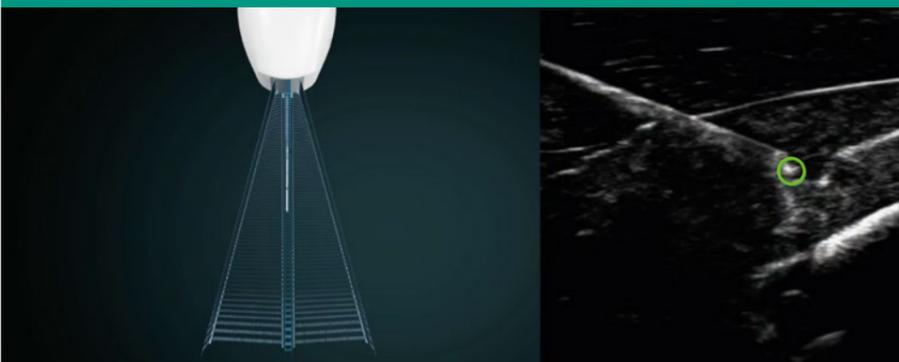
Out-of-plane



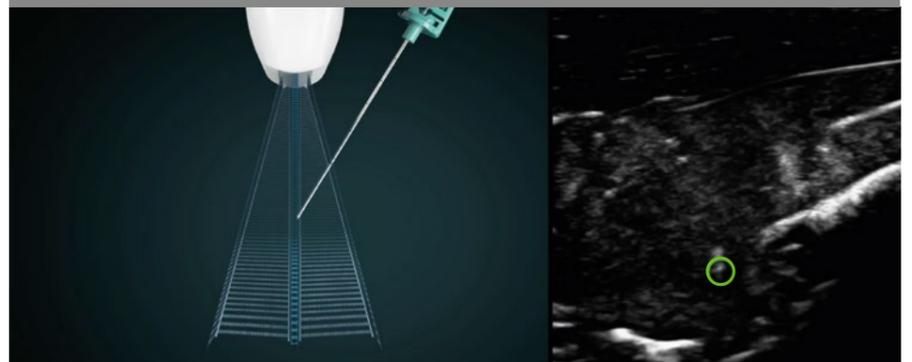
Red Circle: sensor near the ultrasound plane - showing needle tip position

Blue Circle: indicating relative distance to the ultrasound plane

In-plane



Out-of-plane



Green Circle: displays needle tip position – sensor is in the ultrasound plane and receives strong signal

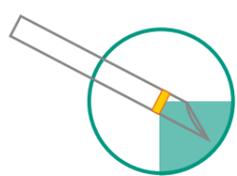
Where is the needle tip in the circle?



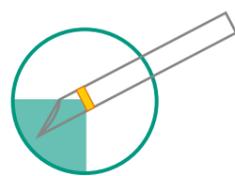
IP: tip is close to or on the circle edge

- Depending on the insertion side and angle, you can determine the exact location
- In this example, the needle tip is located in the left lower quarter of the circle, between 7 and 8 o'clock

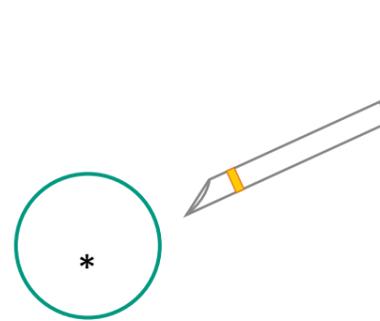
OoP: is more towards the center of the tip circle, still in the lower half



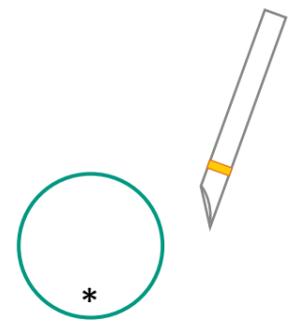
3-6 o'clock



6-9 o'clock



Example superficial



Example deep/steep

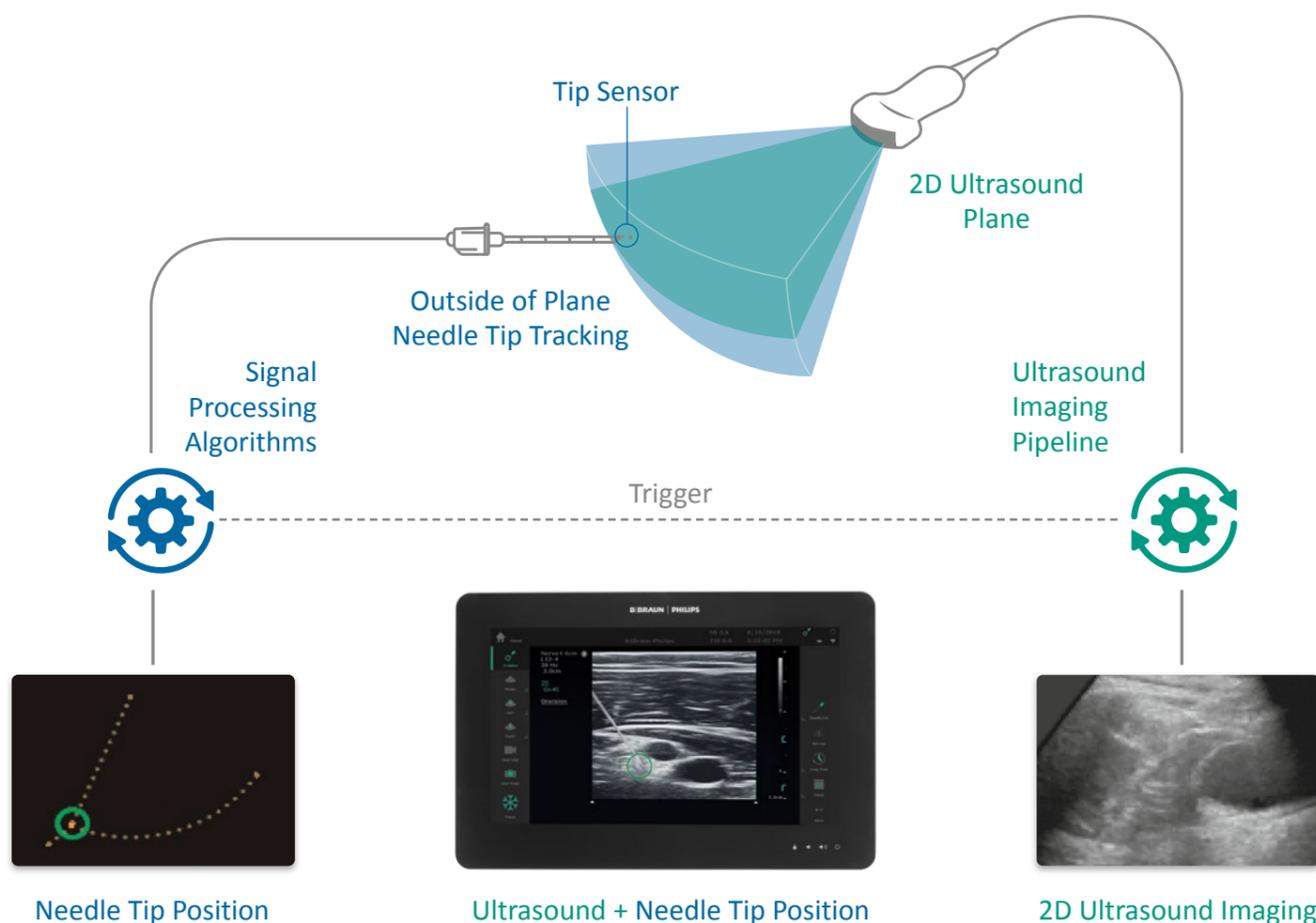
Onvision® Needle Tip Tracking User Guide

What are the steps to use Onvision?

1. Start the Xperius Ultrasound System for the procedure
 - Disconnect the Stimuplex® Onvision needle from the Onvision system cable connector before starting the Xperius® system.
2. On the Home display, select Nerve 0-4 cm (L12-4), Nerve 4-6 cm (L12-4), or Nerve 6+ cm (C5-2).
3. Connect the cable of a sterile Stimuplex Onvision needle to the non-sterile Onvision system cable.
4. To avoid unexpected movement of the Onvision system cable, use the Onvision system cable clip to anchor the Onvision system cable to the table or drape.
5. If you are using nerve stimulation, connect the Stimuplex® HNS 12 Nerve Stimulator to the Onvision system cable.
6. Start the procedure. The circles appear automatically when the tip of the Stimuplex® Onvision needle enters the ultrasound imaging plane.
7. During the procedure, to stop and restart Onvision Needle Tip Tracking, touch (Onvision system control).
8. After the nerve is located, disconnect the Stimuplex® HNS 12 Nerve Stimulator cable and grounding clamp.
9. To stop Onvision Needle Tip Tracking after the procedure is complete, do one of the following:
 - a. Disconnect the Stimuplex® Onvision needle.
 - b. Touch (Onvision system control).
10. Dispose of the Stimuplex® Onvision needle according to local regulations.



How does the technology work?



- Just like the ultrasound probe, the needle contains a ultrasound sensor close to the needle tip
- This sensor acts as a microphone to the US waves
- Combined with the Onvision box, the location of the sensor can be calculated
- The location of the needle tip is shown on the US image