



# Onvision<sup>®</sup> Needle Tip Tracking

Know where you are in real-time

# Reimagining Regional Anesthesia with Onvision

To optimize patient care while performing regional anesthesia, anesthesiologists want to feel in control and be confident in accurately positioning the needle during the procedure. Constant needle tip visualization is challenging – especially when the nerves are positioned in deep anatomical structures and when steep needle angles are used.

To deal with these challenges, B. Braun and Philips have formed a strategic alliance with the goal to take regional anesthesia to the next level. This is driven by our shared belief that patients should be at the heart of healthcare innovation. Our ambition is to make Peripheral Nerve Blocks (PNBs) more straightforward for healthcare workers, and safer for patients. This goal is now becoming a reality with Onvision, our breakthrough ultrasound guidance system for needle tip tracking. Onvision enables anesthesiologists to work with greater control and confidence while positioning the needle.

Onvision Needle Tip Tracking, enabled by Xperius®, is to help anesthesiologists perform PNBs confidently and safely. In doing so, it reaffirms our commitment to reimagining regional anesthesia.

**B|BRAUN** | **PHILIPS**

Xperius was honored with two prestigious design awards: the iF Design Award Winner 2018 and the Core77 Notable Commercial Equipment Award 2018.



DESIGN  
AWARD  
2018

CORE77  
DESIGN  
AWARDS  
2018 NOTABLE



# Onvision Needle Tip Tracking

Know where you are in real-time

Accurate



Onvision is an Ultrasound based needle tip tracking technology for peripheral nerve blocks which works exclusively with the Xperius Ultrasound System and the dedicated Stimuplex Onvision Needle.

In real-time, Onvision accurately indicates where the needle tip is inside the body, both in and out of plane. It helps users align the needle with the probe in an intuitive and easy to use manner – to improve pain relief and the avoidance of unintended nerve puncture or collateral damage to surrounding tissue or vessel.

### Onvision is an Ultrasound based Technology for reliable needle guidance.

The dedicated Stimuplex Onvision Needle is embedded with a tip sensor, which allows accurate detection of the tip location and display this information in real time on the live ultrasound image. Needle tip tracking can be used in 2D Mode with the Nerve 0-4 cm and the Nerve 4-6 cm preset on the L12-4 transducer and Nerve 6+ cm presets on the C5-2 transducer depending on the anatomical depth of the nerve.

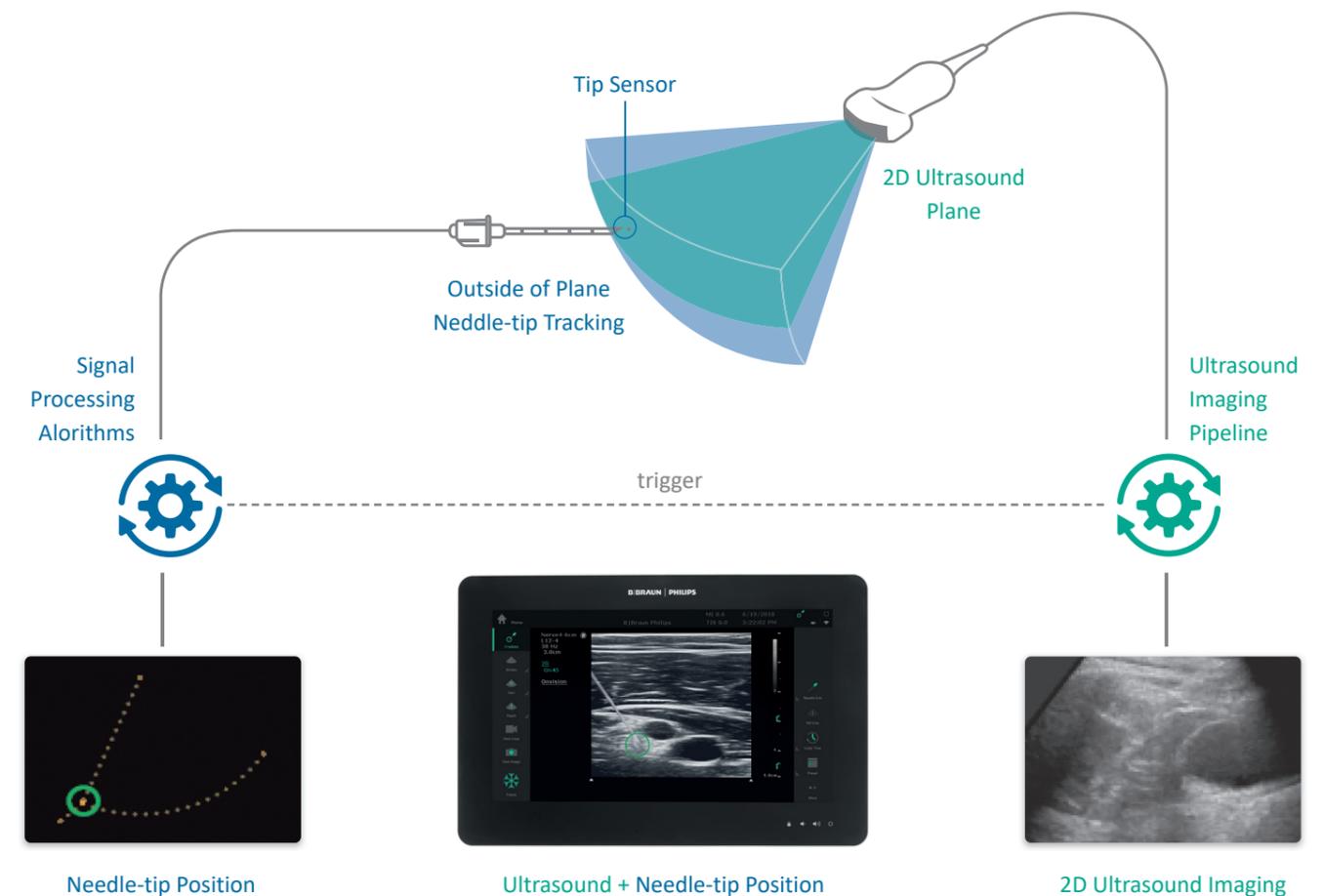
» It feels good to be accurate. With Onvision I feel like I have everything under control even in more complicated blocks – because I know where the Needle Tip is. It works from any angle and at every depth.«

- Tip visualization in both superficial and deeper blocks
- Ultrasound based detection and accuracy
- Can reduce complications during PNB placement
- Designed to prevent unintended overshooting

### Technical working principle

The Onvision technology combines ultrasound image data from the ultrasound system with signals from the needle to accurately locate the position of the sensor on the Onvision Needle.

This projects the position of the sensor by overlaying a circle over it on the ultrasound image in real time.



### Ultrasound based technology to improve accuracy

- Onvision works up to 12 cm depth
- Onvision is shielded against external electromagnetic interferences (EMI)
- Onvision remains accurate even when the needle bends

# Onvision Needle Tip Tracking

Know where you are in real-time

Safe



## Your benefits at a glance



**FIRST-TIME-RIGHT**



**TIME SAVING**



**PROCESS EFFICIENCY**

Onvision allows users to accurately position the needle tip with less insertion attempts, thus reducing the procedure time and making the process more efficient.

» It feels good to be accurate. PNB is per se patient-friendly.«

- Confidently perform local anesthetics injection
- Reduction in overall procedure time
- Fits in to current workflow (no workflow disruption)

## Tip-to-target principle

Onvision provides the freedom to operate the needle from different angles. This means finding the shortest route to the target. Being in-plane is not a restriction anymore.



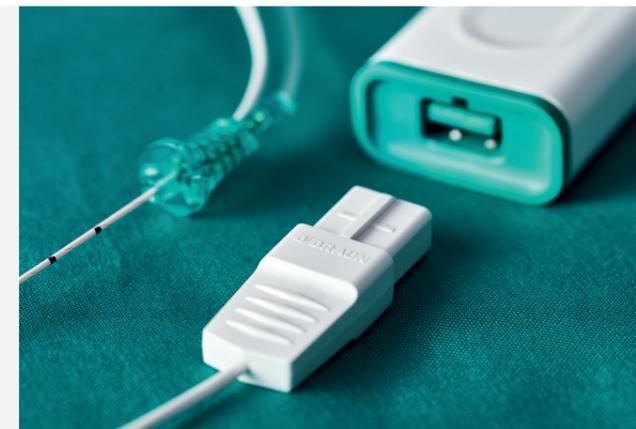
## Point-and-shoot Regional Anesthesia

Onvision does not disrupt the current workflow. It is designed to seamlessly fit your procedure steps – no extra hardware set-up and no calibration is required. The Onvision Needle Tip Tracking is automatically activated when a Stimuplex Onvision needle is connected to the Onvision System cable. Just plug and play.



## Onvision System Components

The Onvision System is composed of a cable, a module which is embedded in your Xperius Ultrasound System. The system cable includes a connection port for Stimuplex Onvision needle and the Stimuplex HNS 12 Nerve Stimulator.



# Onvision Needle Tip Tracking

Know where you are in real-time

## To the point

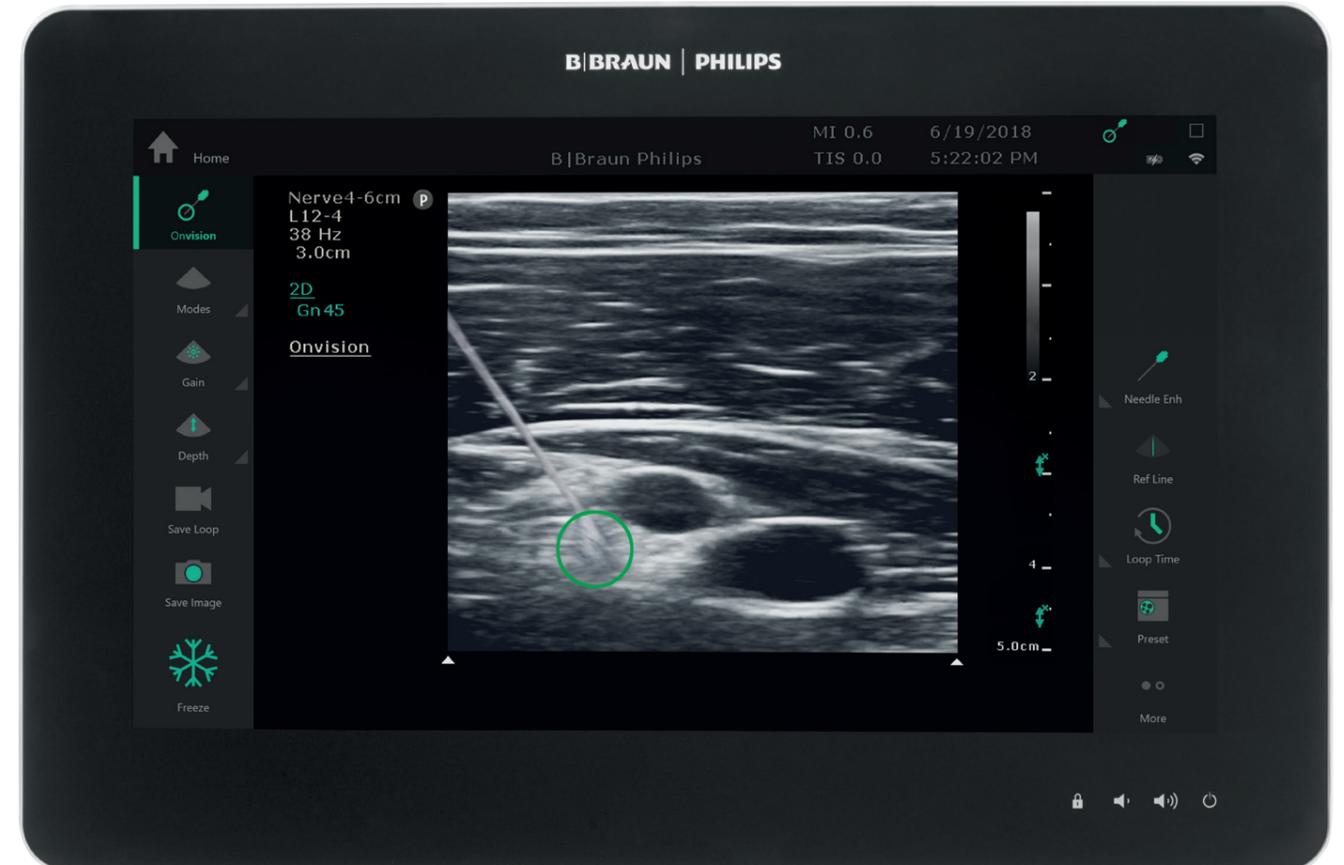


### To the point

Visualizing and identifying the needle tip during both superficial and deeper blocks can be challenging, leading to unwanted risks to the patient. Onvision helps identify the needle tip and supports mastering of needle-beam alignment in an intuitive and easy to use manner. With Onvision, users experience real time guidance to empower them to quickly adopt and integrate PNB into their daily practice.

» *Onvision is a tool which will enable more physicians to be proficient in performing PNB's.* «

- Intuitive User Interface
- Easy to adopt
- Can increase proficiency level



### User Interface – less is more.

With Onvision, identifying the needle tip location becomes less complicated. Spotter graphics (colored circles) superimposed on the ultrasound image, appear automatically when the sensor enters the imaging plane.



Green circle displays the needle tip location. When green, the needle tip is in the ultrasound plane and receives a strong signal.



Inner red circle displays the needle tip location. The needle tip is near the ultrasound plane and receives a signal. As the needle tip moves towards from ultrasound plane, the radius of the blue circle reduces. As the needle tip moves away from ultrasound plane, the radius of blue circle increases.

If no circle is seen, the needle tip is far from the ultrasound plane and the sensor receives no signal.

# Product Information

## Equipment

The Onvision System works exclusively with the Xperius Ultrasound System and the Stimuplex Onvision needles.

Xperius	Description	Units per box	Code no. (REF)
<b>Xperius Cart System with Onvision</b>			
	<ul style="list-style-type: none"> <li>• <b>Type of unit:</b> Ultrasound System with Onvision Technology, fully articulating arm, Linear L12-4</li> <li>• <b>Dimensions:</b> 132.5 cm x 56.0 cm x 66 cm (H/W/D)</li> <li>• <b>Weight:</b> 34.0 kg</li> <li>• <b>Display:</b> 39.6 cm (15.6 in) flat-panel touch-screen</li> <li>• <b>Imaging mode keys:</b> 2D, Color Doppler, Color Power Doppler, M-Mode</li> <li>• <b>Image Processing:</b> AutoSCAN, XRES, Duplex Imaging, 5x Pan/Zoom, Dynamic range up to 170 dB (full time input)</li> <li>• <b>Onvision Needle Tip Tracking Technology</b></li> <li>• <b>Gray shades:</b> 256 (8 bits) in 2D</li> <li>• <b>Needle Visualization Software:</b> Needle Vis</li> <li>• <b>Image enhancement controls:</b> SonoCT, XRES</li> <li>• <b>Patient-specific optimization keys:</b> AutoSCAN, iSCAN</li> <li>• <b>Data:</b> 256 GB Hard Drive, loop length up to 50 seconds, Data Drive Encryption (Patient Data), Cine review</li> <li>• <b>Connectivity:</b> HDMI, Speakers, 5 USB ports on Cart, Ethernet, WiFi, DICOM, MWL Philips Remote Services</li> <li>• <b>Power Supply:</b> Rechargeable lithium ion battery, AC Adapter</li> <li>• <b>Battery operating time:</b> up to 3 hours</li> </ul>	1	NUSM621

Xperius Upgrade Items	Description	Units per box	Code no. (REF)
<b>Single Transducer Linear</b>			
	<b>L12-4 broadband linear array transducer</b> <ul style="list-style-type: none"> <li>• 12 to 4 MHz extended operating frequency range</li> <li>• Aperture size: 34 mm</li> <li>• High resolution imaging for shallow applications</li> <li>• Center line marker</li> <li>• USB transducer with replaceable cable</li> </ul>	1	FUS5716
<b>Single Transducer Curved</b>			
	<b>C5-2 broadband curved array transducer</b> <ul style="list-style-type: none"> <li>• 5 to 2 MHz extended operating frequency range</li> <li>• 50 mm radius of curvature</li> <li>• High resolution imaging for deeper applications</li> <li>• Center line marker</li> <li>• USB transducer with replaceable cable</li> </ul>	1	FUS5712

# Product Information

## Needles

Available needles vary between 50-150 mm length and 20 to 22 Gauge in diameter.

Stimuplex® Onvision® Single Shot Needles	Description	Units per box	Code no. (REF)
<b>Luer Version</b>			
 	Stimuplex Onvision 30°, 22G x 50 mm		4892705-01
	Stimuplex Onvision 30°, 22G x 80 mm		4892708-01
	Stimuplex Onvision 30°, 20G x 100 mm	10	4892710-01
	Stimuplex Onvision 30°, 20G x 120 mm		4892712-01
	Stimuplex Onvision 30°, 20G x 150 mm		4892715-01
<b>NRFit Version</b>			
 	Stimuplex Onvision NRFit 30°, 22G x 50 mm		4892705NR-01
	Stimuplex Onvision NRFit 30°, 22G x 80 mm		4892708NR-01
	Stimuplex Onvision NRFit 30°, 20G x 100 mm	10	4892710NR-01
	Stimuplex Onvision NRFit 30°, 20G x 120 mm		4892712NR-01
	Stimuplex Onvision NRFit 30°, 20G x 150 mm		4892715NR-01

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The Onvision system has CE approval.