

Synergy Vision™ Imaging System

Revolutionizing Surgical Imaging



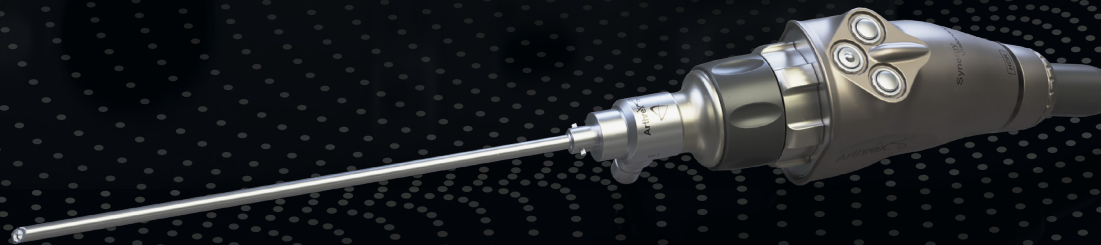
Arthrex® 





Contents

- 05** The Future of Surgical Imaging Is Here
- 07** Pano™ Scope
- 09** Nano Vision™ Functionality
- 10** Synergy Vision Connect™ Console
- 11** High Dynamic Range
- 13** Fluorescence Imaging
- 13** Synergy Vision™ Tablet
- 15** Camera Heads
- 17** Additional System Features and Benefits



The Future of Surgical Imaging Is Here

Experience the Synergy Vision™ imaging system, an all-in-one option featuring high dynamic range 4K visualization with wide-view imaging and fluorescence while supporting the NanoNeedle Scope and video integration.

Key Features and Benefits

The Synergy Vision imaging system was designed with the latest technology to deliver optimal and revolutionary results.

Pano™ Scope

Quickly and easily switch between traditional scope views and an ultrawide view (encompassing most of 30° and 70° views) at the touch of a button, which allows surgeons to visualize more anatomy on a single screen while minimizing the need for additional portals or scopes.

Nano Vision™ Functionality

The NanoNeedle Scope integrates directly to the Synergy Vision console as either a primary or secondary view and offers a simultaneous 4K and Nano visualization on the same screen.

Synergy Vision Connect™ Console

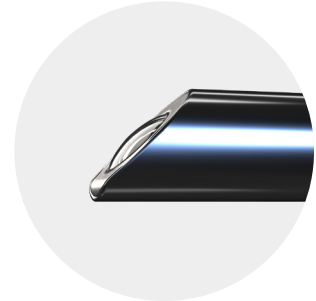
Allowing for 6 inputs and 4 outputs, the Synergy Vision Connect system offers built-in OR integration capabilities for in-room switching and routing.

High Dynamic Range

The Synergy Vision imaging system offers high dynamic range (HDR), allowing for enhanced contrast of surgical anatomy and ideal visualization.

Fluorescence Imaging

Switch to fluorescence 4K imaging with the touch of a button.



Pano scope

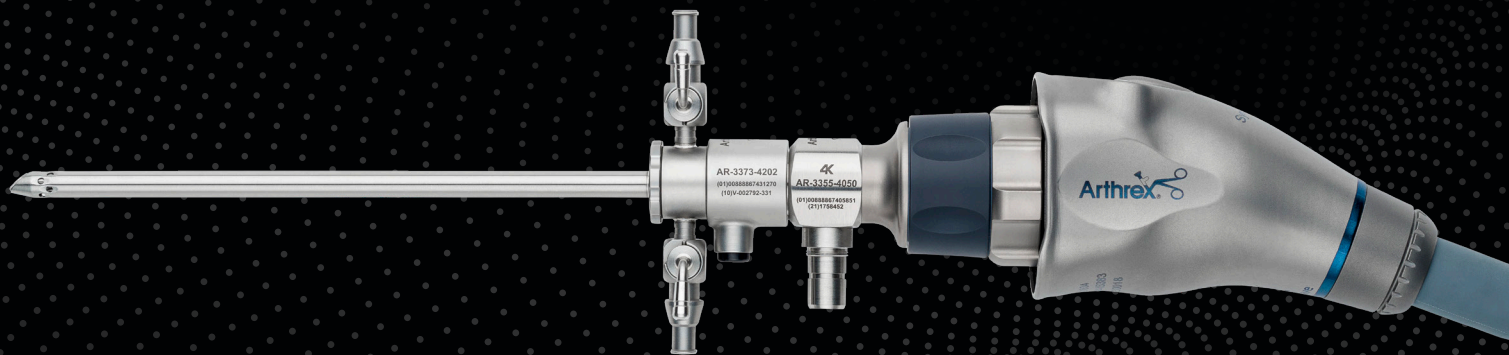


Fluorescence imaging



Nano Vision port

Product Description	Item Number
Synergy Vision console	AR-3200-0026



AR-3373-4202
©F19000898 10/12/10
10UV-202762-351

AK
AR-3355-4050
©F19000898 10/09/11
©F17786462

Arthrex

Pano™ Scope

Visualize anatomy like never before with the state-of-the-art Pano scope. Experience endless clinical benefits, from potential portal negation to visualizing pathology in fewer movements, made possible by the ability to change directions of view with the push of a button.

Key Features and Benefits

The Pano scope is an integral part of the Synergy Vision™ platform. When combined, surgeons can toggle between a 30°, 70°, and 45° ultrawide view, ultimately giving the surgeon an unprecedented field-of-view.

With a length of 161 mm, the Pano scope optimally facilitates shoulder, knee, and hip applications. Given its unique length, dedicated hardware and accessories, including sheaths, cannulas, and bridges, were created and offer the following benefits:

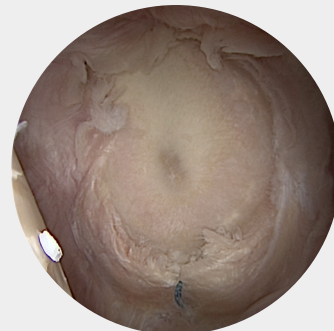
- Potentially decreased risk of iatrogenic trauma due to switching scopes and portals
- Possible portal negation
- Enhanced clinical decision-making ability
- Increased visualization variety of anatomical features



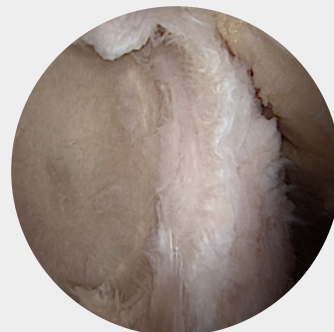
Product Description	Item Number
Pano scope	AR-3355-4050



30°



Ultrawide view



70°



WO

CMV

USB-A

USB-C

2 NanoVision

1 4K ULTRA HD

WB

Arthro

Synergy Vision

Nano Vision™ Functionality

The Synergy Vision™ imaging system, via a built-in port to connect a NanoNeedle Scope, supports Nano Vision functionality, which features simultaneous use of 4K and Nano visualization, giving surgeons access to additional views and allowing them to see more of the anatomy than with a traditional single-camera view.

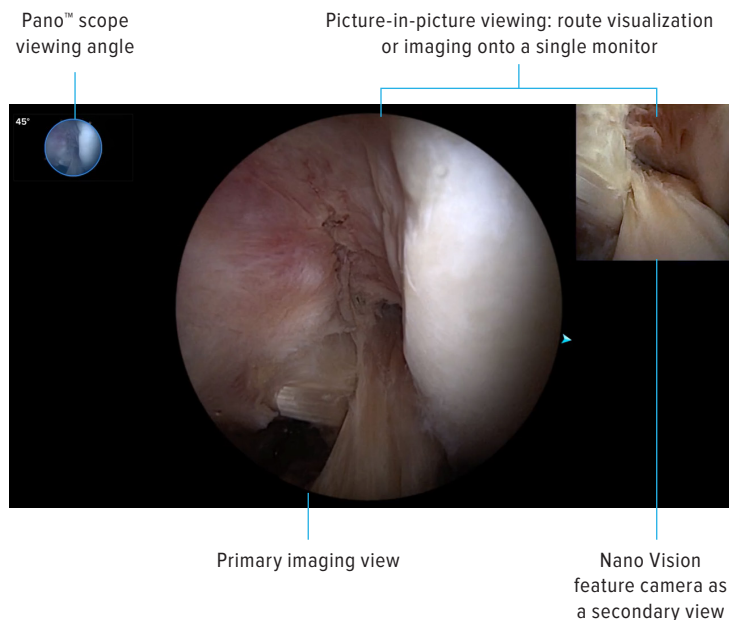
Key Features and Benefits

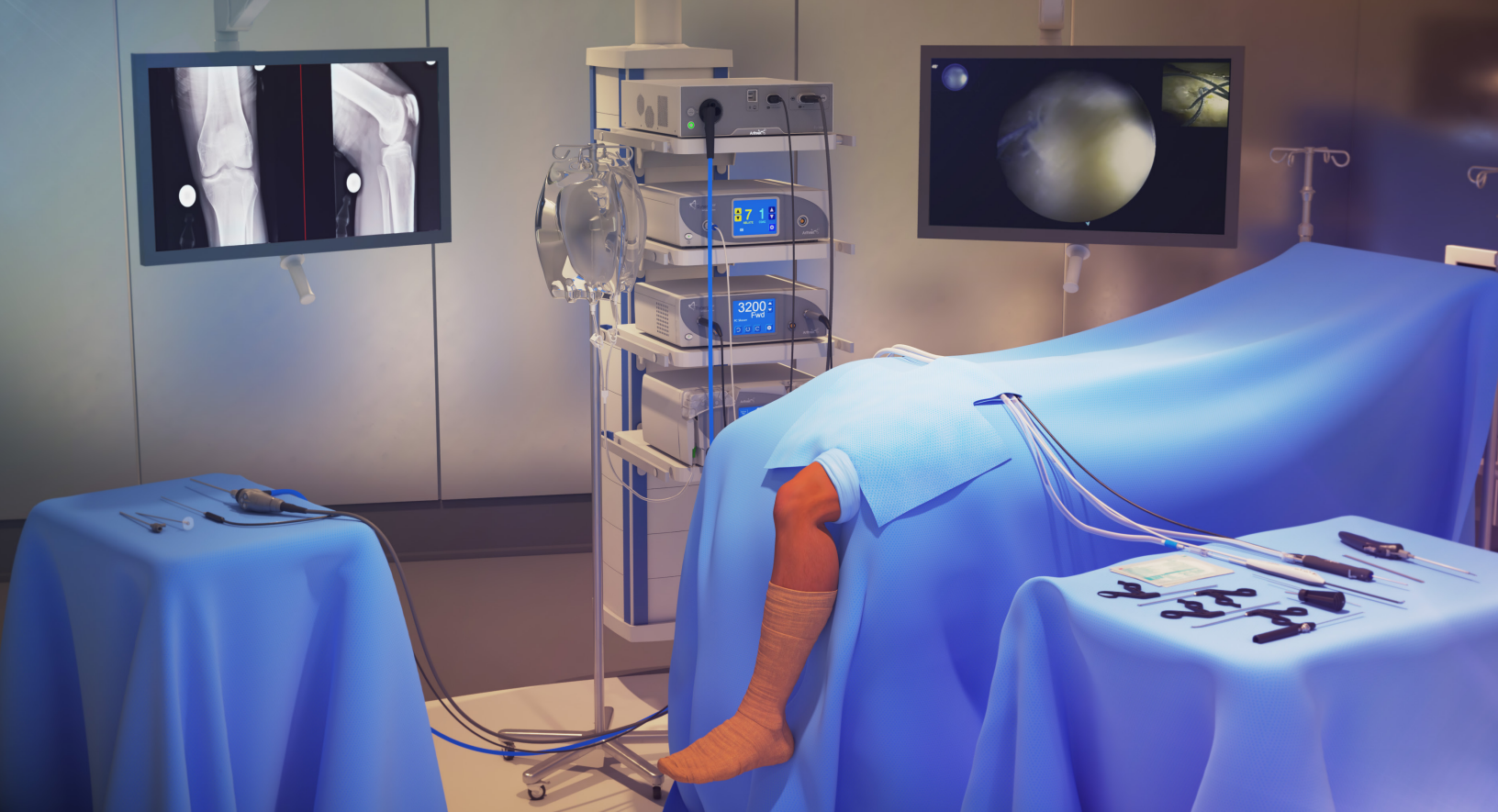
Nano arthroscopy offers a variety of benefits, including:

- Customized anesthetic options (eg, light sedation vs general anesthetic)
- Appropriate for a variety of settings, including procedure rooms, hospitals, surgery centers, etc*
- Same-day diagnostic and surgical treatment options
- Potential to reduce facility costs
- Opportunity to redirect or increase cases in underused treatment and procedure rooms
- Ability to decrease or eliminate medical workup, monitoring, and general anesthetic complications
- Proven, improved outcomes/satisfaction scores regarding patient-surgeon interactions^{1,2}
- Ancillary surgical views not seen with a single 4K camera

Product Description	Item Number
NanoNeedle Scope, 125 mm	AR-3210-0043
NanoNeedle Scope, 180 mm	AR-3210-0044
NanoNeedle Scope, 250 mm	AR-3210-0045

*Please refer to OF1-000119 for additional information on Nano Arthroscopy Billing and Coding.





Synergy Vision Connect™ Console

Explore the world's first imaging console with built-in video integration. A pioneer in visualization, Arthrex designed the Synergy Vision Connect system with a variety of capabilities, including:

- 6 video inputs and 4 unique video outputs allow for in-room surgical video routing; can be routed to surgical displays, composited to create new surgical views, or captured
- Generate a variety of distinctive views, including picture-in-picture (PIP), picture-by-picture (PBP), and quad-view layouts for routing and capture
- Live visual thumbnail views of all video inputs and outputs ensure streamlined and informed routing

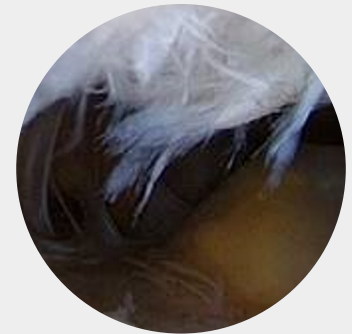
Product Description	Item Number
Synergy Vision Connect console	AR-3200-0027
Synergy Vision Connect integration software license	AR-3200-1088

High Dynamic Range

The Synergy Vision™ imaging system offers the latest in imaging quality, including high dynamic range (HDR). HDR optimizes the way in which light is processed, producing images in greater detail and improved contrast over non-HDR imaging, ultimately offering enhanced surgical imaging.

A 32" 4K IPS LCD surgical display supports HDR10 with backlight output stabilization, continuous even brightness guaranteeing the stability of the LCD backlight, making image viewing thorough and clear, even over a long period of time. The display also supports the PIP and PBP capability of the Synergy systems, allowing for a display of 4 simultaneous inputs.

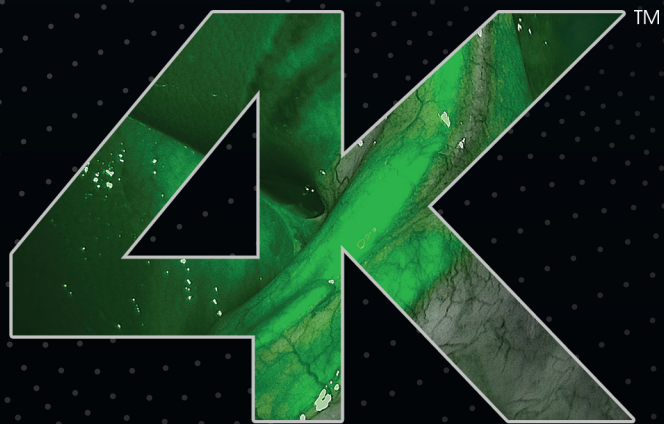
Product Description	Item Number
32" HDR surgical display	AR-3250-3212



Visualization without HDR



Visualization with HDR



HDR ULTRA HD

Fluorescence Imaging

The Synergy Vision imaging system combines state-of-the-art 4K visualization with unique augmented reality features, such as fluorescence imaging, to see more than ever before. Designed to offer a range of customizable surgeon preferences, this system enables advanced visualization in virtually any surgical specialty.

Fully integrated near-infrared (NIR) fluorescence imaging allows surgeons to use different modes in all procedures and at any time.

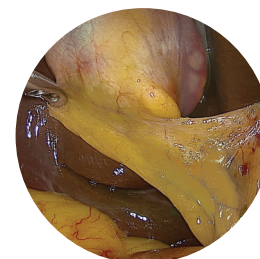
Fluorescence imaging supports multiple modes: fluorescence overlay on full 4K visible light image, fluorescence overlay on grayscale 4K image, and fluorescence image only. All of these modes are easily accessed via the touch of a camera head button.

Product Description	Item Number
Laser light source	AR-3200-1018
4K laparoscope, 0°, 10 mm × 330 mm, NIR	AR-3351-1001
4K laparoscope, 30°, 10 mm × 330 mm, NIR	AR-3351-1031
4K laparoscope, 45°, 10 mm × 333 mm, NIR	AR-3351-1046
4K laparoscope, 0°, 5.5 mm × 300 mm, high magnification, NIR	AR-3352-5501
4K laparoscope, 30°, 5.5 mm × 300 mm, high magnification, NIR	AR-3352-5531
4K laparoscope, 45°, 5.5 mm × 302 mm, high magnification, NIR	AR-3352-5546

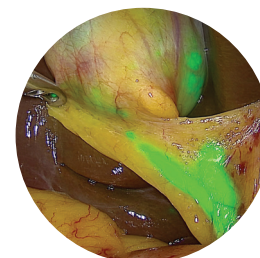
Synergy Vision™ Tablet

The Synergy Vision imaging system is a unique and innovative medical-grade tablet with an advanced touch interface that allows users to remotely and efficiently enter patient information, surgeon preferences, route video inputs, and adjust image management settings within surgical cases. The Synergy tablet controller promotes reduced costs, shortened OR times, and increased efficiency.

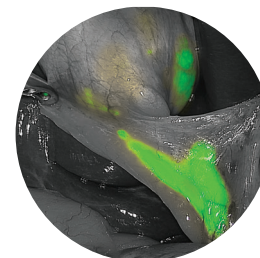
Product Description	Item Number
Synergy Vision tablet	AR-3200-1016



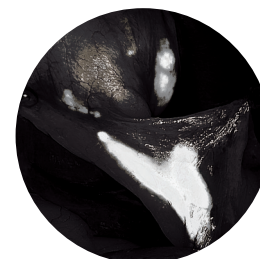
Standard visible light



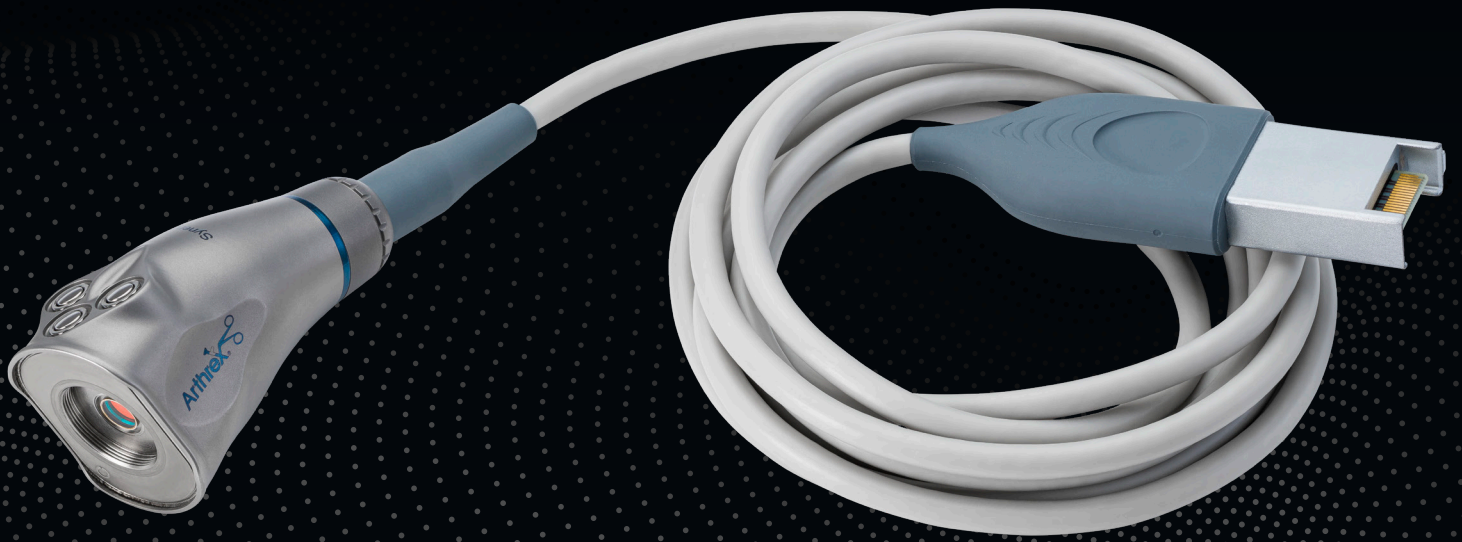
Standard visible light + near-infrared (NIR) overlay



Grayscale visible light + NIR overlay



NIR only



Camera Heads

The Synergy Vision™ imaging system supports 2 distinct options of camera heads: the Synergy Visionary™ camera head and the Synergy Vision camera head. With unique features and benefits for each style, these camera heads were designed for both orthopedic and endoscopic procedures while meeting the needs of health care professionals in both hospitals and ambulatory surgery centers.



Features and Benefits

Ultrawide View*

Both the Synergy Visionary camera head and the Synergy Vision camera head can toggle between 30°, 70°, or a 45° with ultrawide view at the touch of a button. Surgeons will recognize the ergonomics of the traditional camera heads but will notice the introduction of a third, programmable button to toggle between views.

HDR**

The Synergy Vision imaging system features HDR, allowing for exceptional contrast of surgical anatomy and ideal visualization. The Synergy Visionary camera option offers a unique design that produces optimal resolution. With one chip receiving all dark light and another processing all dark light, these 2 chips work together to enhance surgical images while eliminating dark spots and shadows.

Product Description	Item Number
Synergy Visionary camera head	AR-3210-0034
Synergy Vision camera head	AR-3210-0035

*Feature available on both the Synergy Vision and Synergy Visionary camera heads

**Feature available only on the Synergy Visionary camera head

Fluorescence Technology**

The Synergy Vision imaging system with the Synergy Visionary camera head enables advanced visualization in virtually any surgical specialty by combining state-of-the-art 4K visualization with unique augmented reality features, such as near-infrared fluorescence imaging, to see more than ever before. A dedicated NIR sensor in the Synergy Visionary camera ensures that fluorescence imaging capabilities are never compromised.

Synergy Visionary
Camera Head



Synergy Vision
Camera Head





Additional System Features and Benefits

The Synergy Vision™ console contains state-of-the-art visualization, fluorescence imaging, LED lighting, image management, and integration in a small footprint. Producing outstanding 4K video for surgeons, this system allows staff to focus on patients instead of equipment through a simple-to-use, tablet-based user interface. Designed to offer a range of customizable surgeon preferences, this system enables advanced visualization in virtually any surgical specialty.

In addition to the other features detailed in this brochure, the Synergy Vision system offers the following features and benefits:

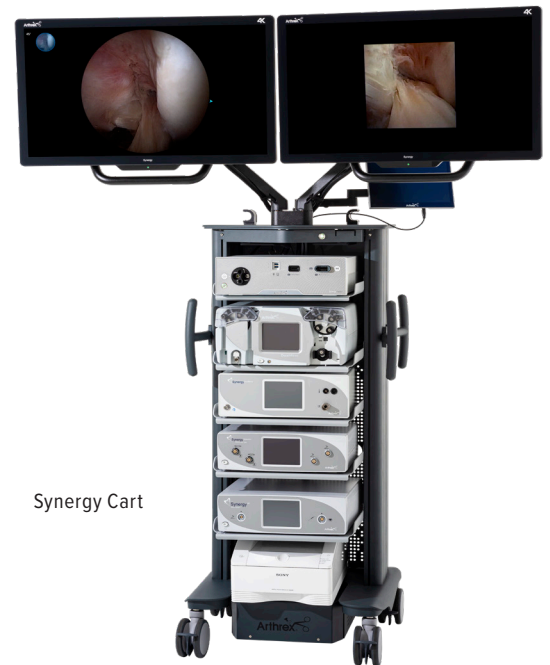
- Ability to capture and automatically export 4K stills and video to multiple destinations, such as a network share, PACS, the Synergy Surgeon iPad application, Synergy.net™ software, and SurgeonVault® system
- Live, secure video streaming to authorized users with intraoperative messaging
- Built-in wired and wireless network connectivity
- Heads-up display to keep the surgeon informed of imaging, shaver, pump, insufflator, and RF settings throughout the procedure
- Software-based solution, allowing for the easy addition of new functionality over the life of the system
- Built-in LED light source with a 30,000-hour warranty
- Unique augmented reality features and image enhancement functionality, which help to optimize visualization
- System control provided via easy-to-learn user interface on tablet
- Programmable individual surgeon/procedure preferences, which reduce system setup time and ensure surgeons have a consistent experience from case to case
- On-screen guided surgical timeout

This revolutionary system also offers unparalleled 4K white light visualization featuring:

- Increased dynamic range and depth of light for unrivaled contrast and even distribution of light
- Unsurpassed depth of field for optimal sharpness from the front to the back of the image

- Brand-new imaging modes for white light color augmentation
- 4 times the number of pixels as HD and a multisensory camera design for increased resolution and a stunning depth perception
- 10-bit color for precise color reproduction
- Direct LED integration with the 4K visualization system for maximum performance

In addition, the next-generation Synergy video cart was designed and developed with the latest ergonomics in mind to outfit even the largest operating rooms. This next-generation cart features a number of customizable configurations, including dual-monitor capabilities to optimally support the Synergy Vision system outputs.



Synergy Cart

Ordering Information

Product Description	Item Number
Synergy Vision™ console	AR-3200-0026
Synergy Vision Connect™ console	AR-3200-0027
Synergy Visionary™ camera head	AR-3210-0034
Synergy Vision camera head	AR-3210-0035
Pano™ scope	AR-3355-4050
Synergy Vision Connect integration software license	AR-3200-1088
NanoNeedle Scope, 125 mm	AR-3210-0043
NanoNeedle Scope, 180 mm	AR-3210-0044
NanoNeedle Scope, 250 mm	AR-3210-0045
Laser light source	AR-3200-1018
32" Synergy Vision HDR surgical display	AR-3250-3212
Synergy Vision tablet	AR-3200-1016
Synergy Video cart, w/ boom, 120 V	AR-3260-0001



References

1. Colasanti CA, Mercer NP, Garcia JV, Kerkhoffs GMMJ, Kennedy JG. In-office needle arthroscopy for the treatment of anterior ankle impingement yields high patient satisfaction with high rates of return to work and sport. *Arthroscopy*. 2021;S0749-8063(21)00848-3. doi:10.1016/j.arthro.2021.09.016
2. Murawski CD, Kennedy JG. Anteromedial impingement in the ankle joint: outcomes following arthroscopy. *Am J Sports Med*. 2010;38(10):2017-2024. doi:10.1177/0363546510369335



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience, and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

arthrex.com

© 2024-01 Arthrex, Inc. All rights reserved. LB1-000453-en-US_B



Arthrex manufacturer,
authorized representative,
and importer information
(Arthrex eIFUs)



US patent
information