Guangzhou Sonostar Information Technology Co., Ltd.

S O N O S T A R

Wireless Probe Selection Guide

By department · By examination site · By model

Version	2026-10 External edition
Intended for	Clinical department physicians, primary care facilities, distribution partners
About this guide	All specifications quoted verbatim from the original technical documentation, unmodified

Important

Please read the instructions for use carefully, and purchase and use the device under the guidance of medical personnel.

For contraindications and precautions, see the instructions for use.

The intended use described in this guide is a reference explanation based on technical specifications; the specific intended use is subject to the content stated in the product registration certificate.

The product must be operated by a licensed physician with the appropriate qualifications.

How to use this guide (3 steps, 3 minutes to the right probe)

Step 1: Find your department in "1. Quick reference by department" and check the recommended probe type.

Step 2: Confirm the site you need to examine in "2. Quick reference by examination site" and check the frequency requirement.

Step 3: Compare the specifications of specific models in "3. Probe specification master table" and select a model.

> If you need to scan both the abdomen and superficial structures (for example general practice or health screening), go straight to the **dual-head / 3-in-1** series — one probe covers multiple examinations.

1. Quick reference by department

Department / setting	Main uses	Recommended probe type	Reference models
Anesthesiology	Deep vein puncture such as internal jugular and subclavian vein; nerve blocks such as cervical plexus and wrist plexus; lumbar puncture; peritoneal dialysis catheter insertion; airway and cardiac monitoring	High-frequency linear array	5P, 6L
Pain management	Venous puncture, peripheral nerve block and radiofrequency modulation, disc radiofrequency ablation, intra-articular drug and ozone injection, peripheral soft tissue release, guidance for carpal tunnel syndrome treatment	High-frequency linear array	5P, 6L
Nursing / vascular access	PICC, CVC and other central venous catheterization; guidance for IV cannula placement, venipuncture infusion and local drug delivery	High-frequency linear array	5P, 6L
Nephrology	Vascular access; monitoring of thrombosis, stenosis and calcification; subclavian vein catheterization, dialysis catheter placement, arteriovenous fistula creation, synthetic graft placement	High-frequency linear array	5P, 6L
Vascular surgery	Central and peripheral venous assessment and puncture, arterial assessment, peripheral arterial puncture, sclerotherapy for varicose veins	Linear array	6L, 5L
Thyroid and breast surgery	Thyroid and breast examination and interventional treatment, microwave ablation, biopsy localization guidance	High-frequency linear array	5P (10MHz–H14MHz)
Rehabilitation	Musculoskeletal trauma, inflammation and lesion assessment; joint effusion aspiration, interventional treatment, botulinum toxin injection guidance	Linear array	6L, 5L
Orthopedics	Fracture assessment, joint injury and lesions	Linear array	6L
Acupotomy / acupuncture	Measuring muscle thickness to judge depth; identifying needle position relative to	Linear array	6L, 5L

Department / setting	Main uses	Recommended probe type	Reference models
	surrounding nerves and vessels		
Plastic and aesthetic surgery	During injection guidance, identifying vessel course, tissue planes, bony landmarks and eye position, as a reference for choosing the injection route and depth; guidance for breast surgery	High-frequency linear array	5P
ICU / critical care	Assessment of internal bleeding, pleural and abdominal fluid, pneumothorax and acute abdomen; pericardial effusion assessment and aspiration guidance	Convex array + linear array	6C / 5C (with linear array)
Emergency department	Acute abdomen, solid organ injury and rupture, fracture assessment, internal bleeding, pleural and abdominal fluid, pneumothorax, pericardial effusion	Convex array	6C, 5C
Pre-hospital emergency (120) / ambulance	Organ injury, internal bleeding, pneumothorax, pericardial and abdominal fluid, cardiovascular abnormalities, thrombosis, fractures	Convex array	6C, 5C
Respiratory medicine	Pleural effusion assessment and puncture guidance, alveolar-interstitial syndrome, lung consolidation / atelectasis	Convex array + linear array	6C + 6L
Cardiology	Cardiac function and volume status assessment; guidance for cardiac arrest, pulmonary artery thrombosis, aortic dissection and pericardial effusion puncture	Phased array / cardiac mode	USB phased array, cardiac probe
Gastroenterology	Esophageal foreign body and disease assessment, gastric and bowel examination (oral coupling agent required)	Convex array	6C, 5C
Neurology	Stroke screening (vascular ultrasound), carotid atherosclerosis assessment	Linear array	6L, 5L
Hepatobiliary / general surgery	Sclerotherapy of hepatic and renal hemangiomas; guidance for aspiration of cysts, abscesses and pelvic or abdominal fluid; biliary puncture, organ biopsy guidance	Convex array	6C, 5C
Urology	Percutaneous nephrolithotomy, renal biopsy, catheterization guidance; post-void residual volume, prostate examination	Convex array / endocavity	6C, USB endocavity
Gynecology	Breast, uterus and adnexa; IUD position and pregnancy checks; visual guidance for uterine evacuation	Convex array + endocavity	5CT, USB endocavity
Obstetrics	Fetal development, fetal heart, umbilical cord and amniotic fluid assessment; postpartum pelvic floor and pelvic assessment, post-void residual volume	Convex array	6C, 5C
Reproductive medicine	Ovarian follicle monitoring, endometrial thickness measurement, visual guidance for oocyte retrieval	Endocavity	USB endocavity, biplane probe

Department / setting	Main uses	Recommended probe type	Reference models
Neonatology	Screening for developmental dysplasia of the hip, transcranial brain imaging, lung and abdominal assessment	Microconvex + linear array	5MN, 5ML
Ophthalmology	Vitreous foreign body, retinal and ocular artery assessment	Dedicated ophthalmic	Ophthalmic probe
Health check-up center	Thyroid, breast, uterus and adnexa, prostate examination; stroke screening; screening for fatty liver, cirrhosis and stones	Dual-head / 3-in-1	5CP, 5CL
Primary care facilities	Abdominal organ assessment (screening for fatty liver, cirrhosis and stones); carotid, thyroid, breast, uterus and adnexa, prostate, superficial masses	Dual-head / 3-in-1	5CP, 5CL, 5MN
Family doctor / home care	Routine check-ups, home antenatal visits, in-home chronic disease management; post-void residual volume and catheterization guidance	Dual-head / 3-in-1	5CP, 5MN
Nursing home / postpartum care center	Routine check-ups, post-void residual volume and catheterization guidance, postpartum pelvic floor and breast assessment	Convex array / microconvex	5C, 5MN

> **Note:** The table above is a suitability reference compiled from product technical specifications and **does not constitute clinical guidance**. The specific intended use is subject to the content stated in the product registration certificate. For actual procedures, follow the rules of your institution and the product instructions for use.

2. Quick reference by examination site

Examination site / organ	Frequency requirement	Why	Suitable models
Thyroid, breast, musculoskeletal, nerve, superficial masses	High frequency (7.5–14MHz)	The higher the frequency, the better the resolution, but penetration is shallow — suitable for superficial structures	5P, 6L, 5L, 5P B&W
Vascular, carotid, pediatric, small parts	High frequency (7.5–12MHz)	Fine structures need to be resolved	5P, 6L, 5MN
Abdomen (liver, gallbladder, spleen, kidney)	Low frequency (3.2–5MHz)	Lower frequency penetrates deeper and shows deeper structures	6C, 5C, 8C, USB convex
Gynecology, obstetrics, urinary system, kidney, lung	Low frequency (3.2–5MHz)	Same as above	6C, 5C, 8C
Cardiac	Low frequency (2.2–5MHz)	Must penetrate the chest wall to see deep structures	USB phased array, cardiac probe
Endocavity (transvaginal, transrectal, prostate)	Mid frequency (6–8MHz)	The scanning distance inside the cavity is short, balancing depth and resolution	USB endocavity, 5CT, biplane probe
Ophthalmic	Mid-high frequency (8–11MHz)	Ocular structures are superficial and fine	Ophthalmic probe
Neonatal / pediatric abdomen	Microconvex (5–7MHz)	Small body size; microconvex balances depth and resolution	5MN, 5ML

3. Probe specification master table

3.1 Linear array series (superficial, high frequency)

Model	Frequency	Scanning depth	Imaging modes	Applications	Charging
5P	10MHz–H14MHz	20-30-40-55mm	B / B+M / Color / PDI / PW	Thyroid, small parts, pediatrics, vascular, carotid, breast, musculoskeletal, nerve	Wireless + wired
6L	7.5MHz–H10MHz	20-40-60-100mm	B / B+M / Color / PDI / PW	Same as above	Wireless + wired
5L	7.5MHz–H10MHz	20-30-40-55mm	B / B+M / Color / PDI / PW	Same as above	Wireless + wired
5P B&W	10MHz–H14MHz	20-30-40-55mm	B / B+M	Same as above	Wireless + wired
T-shaped probe	7.5–10MHz	20-40-60-100mm	B / B+M / Color / PDI / PW	Thyroid, small parts, pediatrics, vascular, carotid, breast, musculoskeletal	Wireless + wired (on iOS, use the T-probe app WLUSG-TP)

3.2 Convex array series (abdominal, deep)

Model	Frequency	Scanning depth	Imaging modes	Applications	Charging
6C	3.2MHz–H5MHz	90-160-220-305mm	B / B+M / Color / PDI / PW	Abdomen, gynecology, obstetrics, cardiac, urinary system, kidney, lung	Wireless + wired
5C	3.2MHz–H5MHz	90-160-220-305mm	B / B+M / Color / PDI / PW	Same as above	Wireless + wired
8C	3.2MHz–H5MHz	90-160-240-300mm	B / B+M / Color / PDI / PW	Same as above	Wireless + wired (2200mA)
5M	3.2MHz–H5MHz	90-130-160-200mm	B / B+M	Same as above	Wireless + wired
5C B&W	3.2MHz–H5MHz	90-160-220-280mm	B / B+M	Same as above	Wireless + wired
USB convex	3.2MHz–H5MHz	90-160-220-305mm	B / B+M / Color / PDI / PW	Same as above	Wired charging

3.3 Dual-head / 3-in-1 (one device, multiple uses)

Model	Configuration	Frequency	Scanning depth	Imaging modes
5CP (dual-head)	Convex + linear	Convex 3.2-H5MHz / Linear 10-12MHz	Convex 90-160-220-305mm / Linear 20-40-60-80mm	All modes
5CL (3-in-1, high-spec)	Convex + linear + cardiac	Convex 3.2-H5 / Linear 7.5-H10 / Cardiac 3.2-5MHz	Convex 90-305mm / Linear 20-80mm / Cardiac 90-160mm	All modes
5CL	Convex + linear	Convex 3.2-H5 / Linear 7.5-H10MHz	Convex 90-305mm / Linear 20-80mm	All modes
5CL B&W	Convex + linear	Convex 3.2-H5 / Linear 7.5-H10MHz	Convex 90-230-305mm / Linear 20-30-40-60mm	B / B+M

Model	Configuration	Frequency	Scanning depth	Imaging modes
5CPL (3-in-1, standard-spec)	Convex + linear + cardiac	Convex 3.2-H5 / Linear 7.5-H10 / Cardiac 3.2-5MHz	Convex 90-305mm / Linear 20-80mm / Cardiac 90-160mm	All modes
5MN	Microconvex + linear	Microconvex 5-H7.0 / Linear 10-H12MHz	Microconvex 60-90-120-160mm / Linear 20-40-60-80mm	All modes (2800mA, wireless charging)
5ML	Microconvex + linear	Microconvex 5-H7.0 / Linear 7.5-H10MHz	Microconvex 60-90-120-160mm / Linear 20-40-60-80mm	All modes
Cardiac probe	Convex + cardiac + linear	Convex 3.2-H5 / Cardiac 2.5-H5 / Linear 7.5-10MHz	Convex 90-305mm / Cardiac 90-160mm / Linear 20-80mm	All modes
Biplane probe	Linear + endocavity dual mode	6.5MHz–H8MHz	40-60-80-100mm	All modes (long-press the power button to switch)

3.4 Endocavity series

Model	Frequency	Scanning depth	Imaging modes	Applications
5CT	Convex 3.2-H5MHz / Endocavity 6-H8MHz	Convex 90-305mm / Endocavity 30-120mm	All modes	Abdomen, gynecology, obstetrics, cardiac, urinary system, kidney, lung
USB endocavity probe	6MHz–H8MHz	30-60-90-120mm	All modes	Abdomen, gynecology, obstetrics, cardiac, urinary system, kidney, lung

3.5 Phased array / cardiac

Model	Frequency	Scanning depth	Imaging modes	Applications
USB phased array probe	2.2MHz–H3.6MHz	90-130-160-190mm	All modes	Cardiac, abdomen

3.6 Specialty probes

Model	Frequency	Scanning depth	Imaging modes	Applications
Ophthalmic probe	8MHz–H11MHz	30-60-90-120mm	All modes	Ophthalmology

3.7 Other available configurations

The following are some of the available configurations. **Exact model names and compatible software can be confirmed on request**:

Configuration	Frequency	Scanning depth	Notes
Linear + high-frequency linear	7.5-H10MHz / 10-H12MHz	20-40-60-80mm	2800mA, wireless charging
Ultra-high-frequency linear	16MHz–H20MHz	10-20-30-40mm	2200mA
Linear + cardiac (phased array)	7.5-H10MHz / 2.2-3.6MHz	20-100mm / 20-240mm	Requires the designated software

Configuration	Frequency	Scanning depth	Notes
Phased array	2.2MHz–H3.6MHz	90-160-200-240mm	Abdomen, cardiac, urinary system
Convex + linear	Convex 3.2-H5 / Linear 7.5-H10MHz	Convex 90-240-300mm / Linear 20-100mm	2800mA

4. Common specifications (all series)

Item	Specification
Imaging modes	B, B+M, Color (color Doppler), PDI (power Doppler), PW (pulsed wave Doppler)
Gain range	30–105 dB
Noise reduction	Levels 0-1-2-3-4
Dynamic range	40-50-60-70-80-90-100-110
Needle guide line	Supports both in-plane and out-of-plane modes
Charging method	Wireless charging / wired charging (some models are wired only)
Image transmission	The probe has a built-in WiFi signal and does not depend on whether WiFi is available at the site

Color Doppler (Color) and pulsed wave Doppler (PW) specifications

Item	Linear	Convex	Cardiac
Steering angle	-12 / -7 / 0 / 7 / 12 degrees	Not available	Not available
PRF	≥4 groups	≥4 groups	≥4 groups (USB phased array: 2-20K, ≥8 groups)
Wall filter	0-15	0-15	0-15
Color gain	0-100	0-100	0-100
Sample volume	1 / 2 / 5 mm	1 / 2 / 5 mm	1 / 2 / 5 mm
Baseline	0-500 cm/s	0-800 cm/s	0-600 cm/s
Correction angle	-85 to 85 degrees	-85 to 85 degrees	-85 to 85 degrees

Measurement functions

Mode	Measurable items
B mode	Routine measurements
B+M mode	Depth, time, heart rate
Color / PDI mode	Length, angle, area/circumference, trace, area ratio
PW mode	Velocity, heart rate, S/D, depth

Measurement items by application:

Thyroid, small parts, pediatrics, vascular, carotid, breast, musculoskeletal, abdomen, gynecology, cardiac, urinary system, kidney, lung — all support length, angle, area/circumference, trace and area ratio.

Obstetrics additionally supports: crown-rump length, biparietal diameter, gestational sac diameter, femur length, head circumference, abdominal circumference, estimated fetal weight (biparietal diameter), estimated fetal weight (femur length).

5. Frequently asked questions

Q: Can it be used in the field or in an ambulance where there is no WiFi?

A: Yes. The device uses the WiFi signal emitted by the wireless probe itself and does not require WiFi in the working environment, so it can be used anywhere.

Q: What if it reports a WiFi password error or cannot connect?

A: This usually means the probe is already connected to another phone or tablet. Disconnect that device from the probe's WiFi, then connect again.

Q: Can it be connected to a laptop?

A: Laptops generally run Windows, and a Windows version of the software is available, so it can be connected and used.

Q: How long does the battery last, and how is it charged?

A: With continuous scanning in normal working mode, it runs for about 3 hours. It can be charged with a USB cable or with a wireless charger / power bank, and a full charge takes about 2-3 hours. With wireless charging, you can put it back on the charger to top it up between scans.

Q: Can several phones or tablets display the image at the same time?

A: The probe can connect to only one phone or tablet at a time. On Android devices, multi-screen mirroring can be set up through WiFi-Direct; iOS devices do not support this due to system limitations. Remote synchronized display is not currently available.

Q: Are there any consumables?

A: Ultrasound itself uses very few consumables; the main one is coupling gel. The single-use needle guide bracket used for interventional guidance is also a consumable.

Q: Can it produce reports or print images?

A: The device is positioned for emergency use, initial screening and visual guidance, and has no built-in reporting function. If a report is required, images can be exported to a computer for editing; phones and tablets can be connected to a printer, or images can be transferred to a computer for printing.

Q: How are procedure charges handled?

A: When used by a qualified ultrasound physician who issues a diagnostic report, it can be billed as a routine ultrasound examination; clinical interventional guidance is a billable item. Charging policies differ by region, so please follow local regulations.

6. Three more suggestions on selection

1. Look at the main use first, then decide whether you need a multi-purpose device

If you only perform one type of examination (for example nerve blocks only), a single probe is more cost-effective. If you need to cover both the abdomen and superficial structures (for example general practice or health screening), a dual-head or 3-in-1 model is more suitable and costs less in total.

2. Color is not essential

If you only perform puncture guidance or catheter placement guidance — procedures where you "watch the needle tip and the position" — the B&W (B / B+M) version is sufficient. Color Doppler and PW are only needed when you have to see blood flow (vascular assessment, cardiac).

3. Higher frequency is not automatically better — match it to scanning depth

The higher the frequency, the better the resolution at superficial depths, but the shallower the penetration. For the abdomen and cardiac use, choose low frequency (2.2–5MHz); for thyroid, breast, musculoskeletal and nerve use, choose high frequency (7.5–14MHz).

7. Disclaimer and notes

- All technical specifications listed in this guide are taken verbatim from the original product technical documentation. Where updated, the latest version prevails.
- The intended use described in this guide is a reference explanation based on technical specifications; **the specific intended use is subject to the content stated in the product registration certificate**.
- For contraindications and precautions, refer to the product instructions for use. The product must be operated by a licensed physician with the appropriate qualifications.
- This guide makes no claims regarding therapeutic effect and does not constitute clinical diagnostic or treatment advice. For actual procedures, follow the rules of your medical institution and the requirements of the product instructions for use.

> **Important**
>
> Please read the instructions for use carefully, and purchase and use the device under the guidance of medical personnel.
> For contraindications and precautions, see the instructions for use.

Find out more

Configurations differ by department and by examination requirement. For recommendations tailored to your department, pricing and a configuration list, please contact us.

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This material is provided to clinical departments and distribution partners as a technical selection reference. For complete model documentation and configuration lists, contact us through our website or your sales contact.