Connected by Instrument Identity

The platform integrates asset, usage, reprocessing, procedure, patient, and set information to ensure traceability throughout the surgical instrument lifecycle.

INSTRUMENT LIFECYCLE DATA



Asset	Asset Information	Purchase · Registration · Calibration Location · Status · Repair · Disposal Asset Inventory Management
Usage	Usage Information	Usage Frequency and Volume Set Usage Periodic Utilization Analysis
Reprocessing	Reprocessing Information	Collection · Cleaning · Inspection Sterilization · Disinfection Reprocessing History Management
Patient	Patient Information	Instrument ↔ Procedure ↔ Patient Surgical Record Linkage Issue Tracking and Traceability
Procedure	Procedure Information	Types of Surgery and Procedure Surgeon Information Used Instruments and Equipment
Set	Set Information	Set Composition · Configuration Set Change History Configuration Verification Missing · Mismatch Verification

The Difference Individual Instrument Identity Makes

- Improve the accuracy of surgical instrument management
- Reduce the workload of repetitive verification and counting
- Provide visibility into instrument-level usage and reprocessing status
- Reduce instrument mix-ups, missing items, and management errors
- Strengthen data-driven asset management and patient safety



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ClariTrace™ Technical Paper Download

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AI-Powered Digital Management System

for Reusable Surgical Instruments







ClariTrace™ Platform

Individual Identification · Verification · Lifecycle Traceability

ClariTrace™ Vision Station

One-Shot multi-instrument identification and configuration verification

ClariTrace™ Vision OR

Dedicated AI vision for counting and verifying instrument recovery in the operating room

ClariTrace™ CSSD

Individual instrument identification, set completeness checks, and instrument mix-up detection

ClariTrace™ CCDS

Verification of incoming and outgoing loaner instruments, with end-to-end traceability

ClariTrace™ RSI

Surgical instrument and supply counting, recovery reconciliation, and patient linkage

EverTrace™

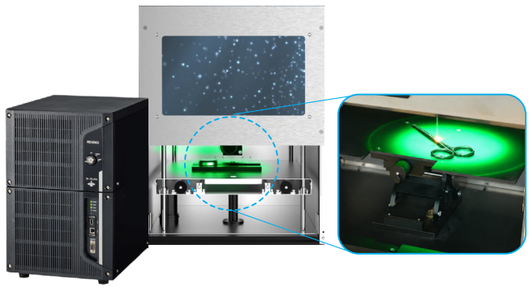
Highly durable, permanent DPM marking for instrument identification

SUJIN Co.,LTD.

Right Instrument. Right Set. Verified.

Technology

CLARITRACE™
Three Core Modules



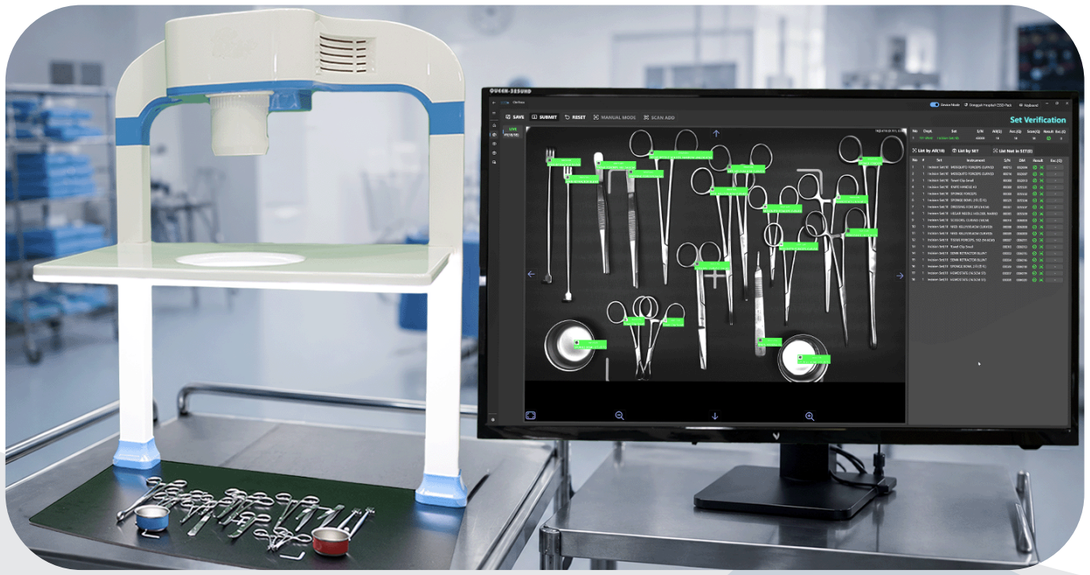
EverTrace™ Laser Marking

- Permanent engraving of a micro-sized 2 × 2 mm Data Matrix code
- Highly durable marking designed to withstand repeated high-temperature, high-pressure sterilization
- Applicable to a wide range of surgical instrument surfaces, including curved surfaces
- Easy laser marking with an intuitive, dedicated user interface
- Establish permanent identities for existing surgical instruments and support full lifecycle traceability

ClariTrace™ AI Vision Platform

One-Shot Identification & Verification

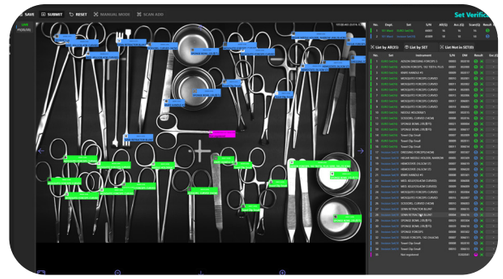
- Identify and verify up to 200 instruments in approximately 0.8 seconds
- Simultaneously recognize overlapping instruments without separating or arranging them
- Multimodal analysis combining AI vision, DPM, OCR, and precise shape structure
- Simultaneously recognize marked and unmarked instruments in mixed groups
- Automatically detect and verify for missing, excess, misplaced, mixed, and unregistered instruments
- Reduce repetitive verification workload with intuitive result displays
- Digital asset and lifecycle records management based on individual instrument identity
- Detect potential signs of surface or structural abnormalities in instruments



Automated Surgical Instrument and Set Verification (CSSD)

Reduce workload and manage assets through individual instrument identification and automated set configuration verification

- Verify each instrument's identity and assigned set
- Automatically detect and verify for missing, excess, misplaced, mixed, and unregistered instruments
- Clearly highlight instruments with verification discrepancies
- Track each instrument's surgical use and reprocessing counts and histories



From accurate set verification to individual instrument usage and asset management

Integrated Management of Loaner Surgical Instruments (CCDS)

Prevent loaner instrument mix-ups with end-to-end verification and traceability from receipt to return

- Verify incoming loaner instruments against the accompanying inventory list
- Detect mix-ups between hospital-owned and loaner instruments
- Manage records of loaner set composition, use, and retrieval
- Reprocessing and outbound verification with end-to-end traceability



Integrated management to reduce the risk of mixed, missing, and incorrectly returned loaner instruments

Automated Counting and Reconciliation in the Operating Room (RSI)

Enhance patient safety through automated counting, verification, and reconciliation before and after surgery

- Automatically count and verify surgical instruments and supplies
- Individually recognize and classify overlapping instruments
- Compare total counts and configurations before and after surgery
- Link each instrument's use history to the corresponding surgery and patient
- Distinguish between used and unused instruments and maintain individual usage histories



Reduce repetitive counting workload and enable accurate pre- and postoperative reconciliation