Enabling Virtual Care™

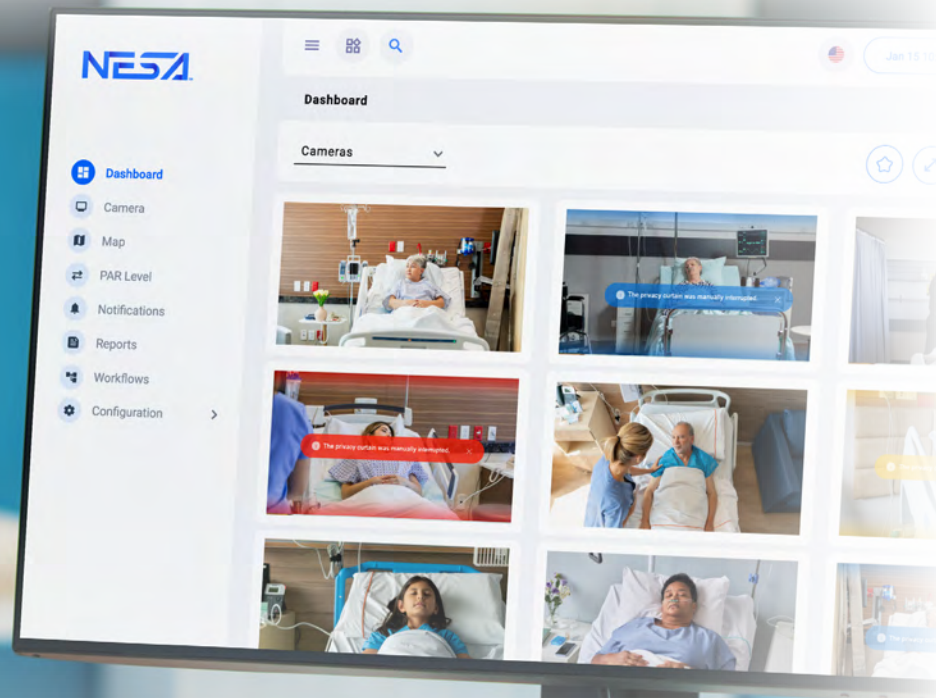## Clinical-Grade Clarity™

NESA™

Healthcare is evolving.
VIRTUAL CARE is at the center of it.

CLINICAL-GRADE CLARITY™

High-definition. High-resolution. AI-powered. Two-way audio & video enabled. Embedded directly within the electronic health record.

NESA was built to enable **Epic's Virtual Care**

WHY NESA?

- Comprehensive software + hardware + service platform including embedded AI, 2-way audio & video, dynamic workflows, and more

- National deployment experience

- Integrations with Nurse Call, patient engagement and other communication systems, offering a transformed patient experience

- Experienced team of administrative, IT and clinical staff members ensuring customer success

NESA Virtual Care Platform™ is embedded directly into the EHR, to power their native virtual care solution suite.

Epic is a registered trademark of Epic Systems Corporation.

Healthcare Provider Benefits:

Single sign-on
Your EHR sign-on allows ease of use

Seamless integration
Automatic updating of patient health records in real-time

HIPAA - compliance
No patient health information (PHI)

NURSE

Give Nurses Time Back

Virtual nurses save bedside nurses between 15 - 29 min per discharge.

• Streamline Efficiency of Care
• Reduce Documentation
• Reduce Burnout
• Increase Retention
• Increase Job Satisfaction

PATIENT

Improve Patient Journey

Patients receive a better, faster experience from admission to discharge.

• Improve Continuity of Care
• Increase Patient Satisfaction
• Reduce Care Delays
• Increase Access to Care
• Decrease Length of Stay

HOSPITAL

Deliver More Efficient Care

Hospitals can deliver the highest quality patient care at a fraction of the cost.

• Enhance Patient Safety
• Improve Patient Outcomes
• Improve Patient Throughput
• Reduce Hospital Readmissions
• Optimize Resource Utilization

The Value of Virtual Care is felt across the entire continuum of care.
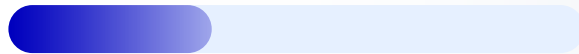
Virtual Care **Advantages**

With an enterprise approach to deploying virtual care, the combined return on investment is remarkable. The benefits include significant safety improvements, risk reduction and efficiency gains.
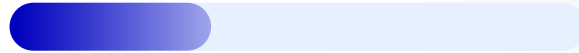
ISSUES

35%
of nurse's time is spent on documentation

70%
increase in the ability to manage patient's aggressive behaviors

70%
increase in the confidence levels of new nurses

35%
of pain reassessments do not occur within the recommended time frame
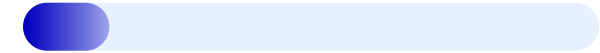
25%
reduction in the workload of bedside nurses
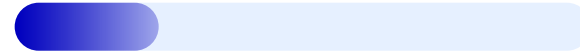
15%
reduction in the nurse turnover rates

References:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3037121/#:~:text=More%20than%20three%2Dquarters%20of,20.6%25;%2086%20minutes)

*Yen et al. (2015)**: A study published in the *Journal of Pain and Symptom Management*

NAMI (2021): Impact of Virtual Nursing on Staff Safety and Patient Care in Behavioral Health Units

Jones, D., et al. (2021): The Economic Impact of Virtual Nursing on Hospital Operations and Nurse Workload.

*American Nurses Association (ANA) Survey (2020)**: A national survey. Impact of Virtual Care on New Nurse Transition*

*Healthcare System Report**: A report from Kaiser Permanente (2019)*

Transforming Care Operations

NESA Virtual Care Platform™ is a groundbreaking AI and computer vision technology that is poised to revolutionize healthcare.

It can perceive different elements, recognize them, analyze them, and enable caregivers to act upon them in real-time, all within a single virtual care platform.

Clinical workflows can now be fundamentally shifted to improve resource allocation, efficiency and patient experience.
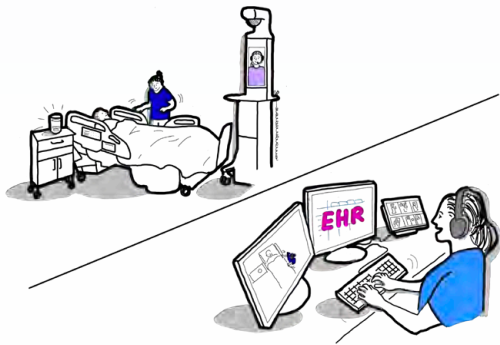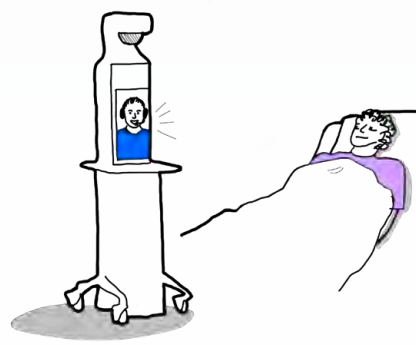
ADMISSION, DISCHARGE & TRANSFER
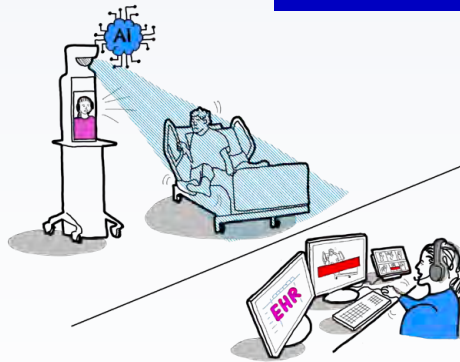
FALL PREVENTION & OBSERVATION

HOURLY / SPECIALTY ROUNDING

CLINICAL SUPPORT / DOCUMENTATION

PAIN ASSESSMENT & REASSESSMENT

CARE COORDINATION

The future of patient care is available now

Transforming the care delivery model

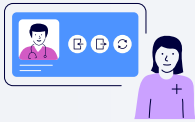### NESA is enabling Virtual Care through leading EHRs

NESA has embedded Virtual Care functionality through Epic Monitor (ECAL and CAL).

Healthcare systems worldwide can implement inpatient Virtual Care within Epic and other leading EHRs.

Epic *Epic is a registered trademark of Epic Systems Corporation.*

What can NESA enable within your EHR Today?

Admission, Discharge and Transfer

Enable ADT processes virtually, to drive efficiencies with critical nursing functions and reduce patient wait times.
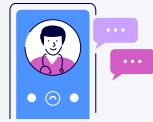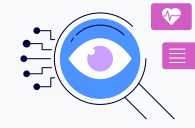
Consultations

Connect to healthcare providers from anywhere anytime, promoting early interventions and improved outcomes.

Rounding

Manage rounds virtually and escalate wherever resources are needed, increasing patient safety and satisfaction.

Observation

Deliver continuous, AI-powered monitoring to predict and prevent adverse events, optimize resources and improve patient experience.

Bed Turnover

Streamline bed turnover processes, reducing patient wait times and increasing operational efficiency.

Eating Disorder Management

Ensuring proper nutritional intake, comprehensive behavioral support, consistent guidance, and proactive crisis prevention.

Double Medication Verification

Connect with virtual nurses as verification to drive greater regulatory and legal compliance while saving valuable time.

Pain Assessment & Reassessment

Enhance pain relief with prompt adjustments, boosting compliance and patient satisfaction.
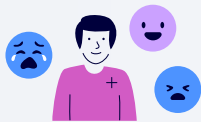
Behavior Management

Remotely monitor patient behavior to ensure real-time patient and staff safety.

Fall Prevention

Leverage real-time AI to predict falls and send alerts to staff to quickly intervene.

Transforming *the care journey* in the nurse-patient experience

WORKFLOW USE CASES

Virtual Nursing ↘

Revolutionizing Healthcare: Boosting nurse satisfaction and patient care

Nurses are crucial for patient care, and their satisfaction can directly impact patient experiences.

Anticipating Needs:
Virtual nursing enables more proactive patient support by facilitating consistent hourly rounding and efficient communication.

Addressing Staff Shortage:
Virtual nursing alleviates the burden on bedside nurses by handling time-intensive tasks remotely, ensuring continuity of care during staffing shortages.

Increased Accessibility and Mentorship:
Virtual nursing supports nurses at all career stages, providing engagement for seasoned professionals and mentorship for newcomers.

Administrative Savings:
Automation of documentation tasks and streamlined processes free up nurses' time for direct patient care, enhancing patient experience while reducing costs.

New Care Models:
Embracing virtual care empowers nurses, optimizes workflows, and elevates patient care standards, shaping the future of healthcare delivery.

Virtual nursing is reshaping healthcare delivery, promoting efficiency and improving patient outcomes.

WORKFLOW USE CASES

Virtual Sitting & Falls Prevention ↘

AI-enabled, predictive alerting assists in preventing falls and other patient safety concerns.

Having trainable analytics that sends on-screen warnings to virtual sitters enables safety warnings well before patients are at risk of falling. Virtual nurses can alert bed-side teams instantaneously.

- Predictive patient fall analytics
- Bed rails up / down
- Low / medium / high risk patient alarms
- Body and Limb Locations
- Irregular behavior warnings
- Trainable new models

OBSERVATIONAL AI

Edge Computing

Outcome

Edge Computing

Outcome
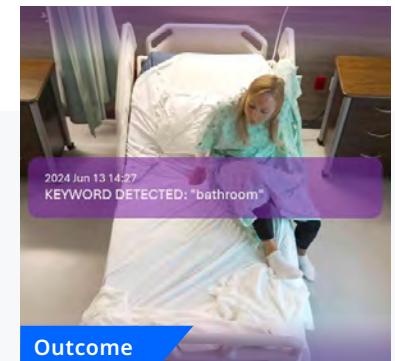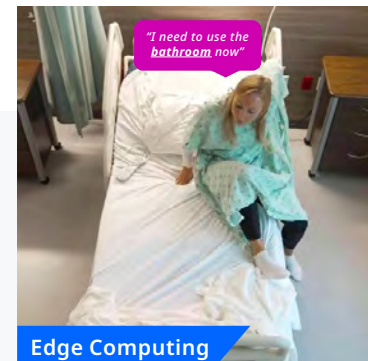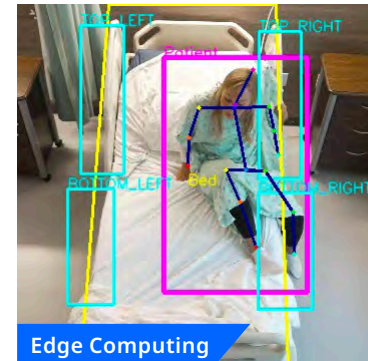
AUTOMATIC SPEECH RECOGNITION

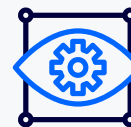- Enhanced patient communication and understanding via speech-to-text technology
- Unlocking the door to natural language processing (NLP) capabilities

COMPUTER VISION

- On-screen alerts inform the telesitter when a patient is likely to leave the bed
- Alerts are designed to quickly capture telesitters' attention
- Customizable alerts target patient events that are most relevant to your use case

WORKFLOW USE CASES

Admission, Discharge and Transfer (ADT) ↘

Giving nurses time back, so they can spend it directly caring for patients.

Nurses spend 35% of their time on documentation, including Admission, Discharge, and Transfer (ADT) processes; each takes an average of 43 minutes. Why should bedside nurses handle this alone?

- Virtual care delivers streamlined processes, improved care coordination, and reduced workload.

- Minimizing ADT documentation for the bedside nurse allows them to spend more hands on time with patients, enhancing the patient care experience.

- Patients benefit from timely delivery of care which is a direct result of shifting the majority of the ADT documentation to a virtual nurse.

Let's work smarter, not harder, by leveraging virtual care technology.

WORKFLOW USE CASES

Rounding & Workflow Integrations ⟍

Virtual nurses can lead hourly rounding and facilitate seamless communication with the healthcare team:

Hourly Rounding:
Proactively check-in with patients to anticipate their needs.

Nurse Call Integrations:
Send alerts and notifications to bed-side team members through existing nurse call system.

Real-time Monitoring:
Receive instant notifications enabling immediate response by caregivers.

Alerts and Follow-ups:
Virtual nurses promptly follow up with bedside nurses or other healthcare providers, addressing issues that may arise.

Care Team Collaboration:
Facilitate communication and coordination among the teams, ensuring everyone stays informed and connected.

Documentation Support:
Assist with documentation and reporting tasks related to rounding, ensuring patient care plans are up-to-date.

Multi-member Video Conferencing:
Instantly connect as many as six participants, including specialists and family with two-way video and audio.

WORKFLOW USE CASES

Pain Assessment ⟍

Virtual nurses play a mission critical role with pain assessment through efficient collaboration. Here's how:

Remote Assessment Tools:
Utilize remote tools for detailed pain assessment, ensuring tailored treatment plans.

Follow-up and Reassessment:
Follow up after interventions to reassess pain levels and address concerns promptly.

Video Consultation:
Conduct video consultations for visual assessment and targeted pain inquiries.
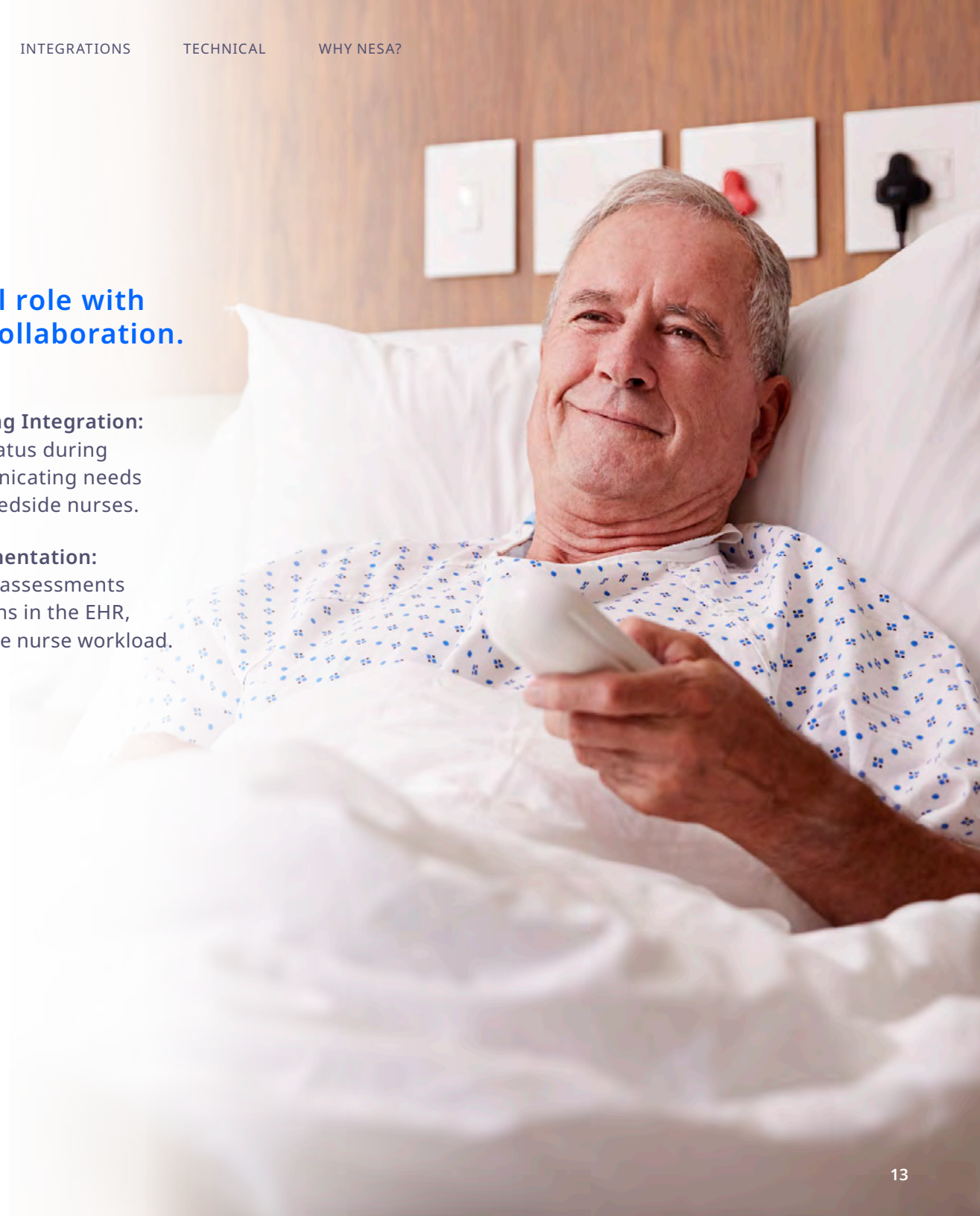
Patient Education:
Provide comprehensive education on pain management strategies for active patient involvement.

Hourly Rounding Integration:
Capture pain status during rounds, communicating needs proactively to bedside nurses.

Efficient Documentation:
Document pain assessments and interventions in the EHR, reducing bedside nurse workload.

WORKFLOW USE CASES

Double-Medication Verification ⟍

Virtual nurses play a mission critical role with double-medication verification through efficient collaboration. Here's how:

Medication Review and Collaboration:
Review medication regimens from the EHR, ensuring effectiveness and timely adjustments.

Double-Medication Verification:
Immediately confirm medications with virtual nurse to maintain compliance and ensure safety.

In-room Medication confirmation:
Use Virtual Nurse to verify the medication through an extreme clarity of the NESA clinical-grade camera in-room (at the IV bag level).

Ultra high-resolution camera with 25x zoom, enables instantaneous double medication verification ▶

WORKFLOW USE CASES

Unlimited clinical workflows – bed turnover, observation, behavior management and many more ◥

Virtual care can complement and enhance the delivery of care being provided to patients in a Behavioral Health Unit by:

• **Improving access to specialists**

• **Facilitating crisis intervention**

• **Promoting continuity of care**

• **Involving Families**

• **Enabling remote monitoring for patient and staff safety**

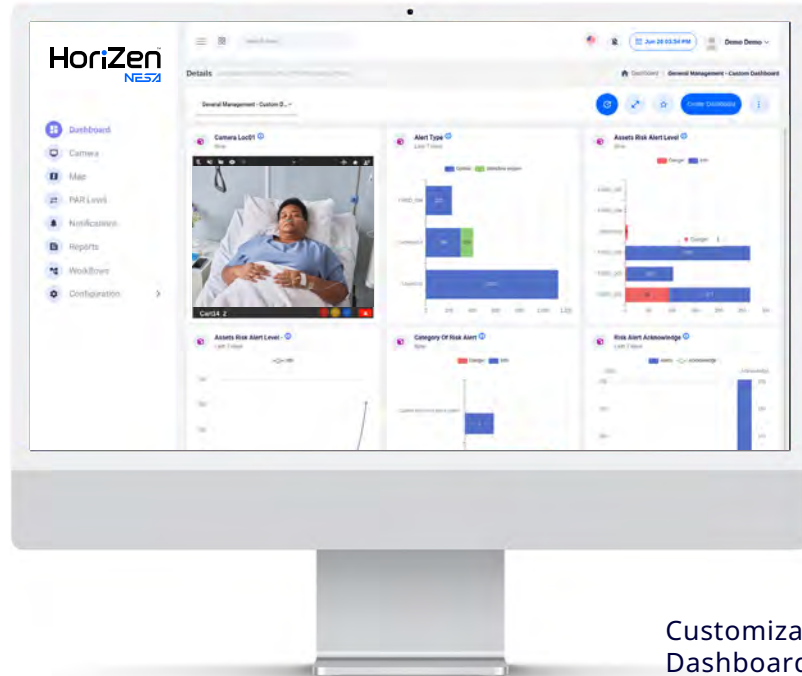Virtual care can help manage bed turnover and patient throughput by:

• **Pre-admission Planning** – Allows clinicians to assess patients' needs, coordinate care and prepare for admission prior to arriving at the hospital. This proactive approach streamlines the admission process.

• **Virtual Consultation**s – Enables specialists to conduct consultations with patients and referring providers remotely. This facilitates timely decision-making and reduces the patient wait time

• **Patient Education** – Virtual nurses can also provide any education the patient needs prior to discharge to expedite discharge process.
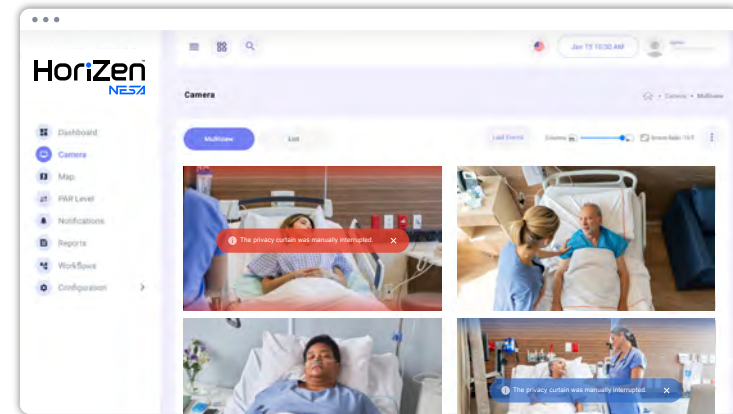
NESA Platform

Evolving clinical workflow management and delivering value to the entire healthcare ecosystem.

NESA can enable unlimited clinical workflows either within the EHR, standalone or other enterprise software.

Patient Multi-View

Configuration

Customizable Dashboard
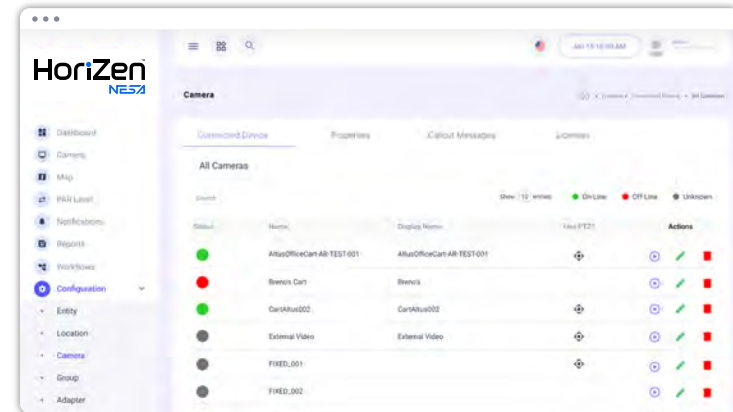
Real-Time Location Maps

EHR Integrations

Clinical-Grade Clarity™

Embedded within Epic's Virtual Care Solution: ECAL and CAL Epic Monitor

SHOWROOM

See us on Epic Showroom - Epic UGM Invitee 2023 and 2024

Epic is a registered trademark of Epic Systems Corporation.

Epic ECAL Interface

Virtual Care embedded directly within Epic and other leading EHRs.
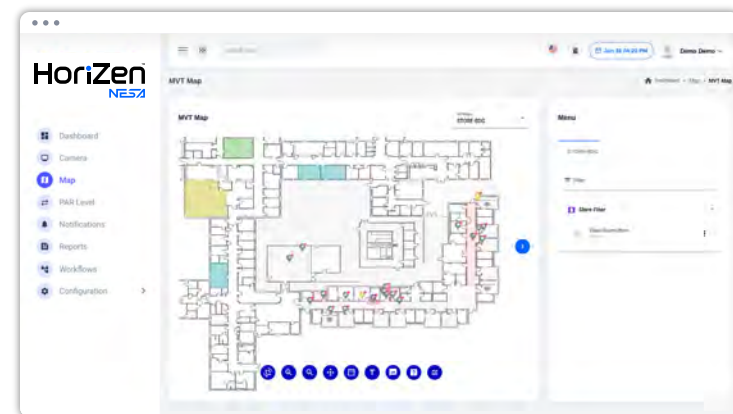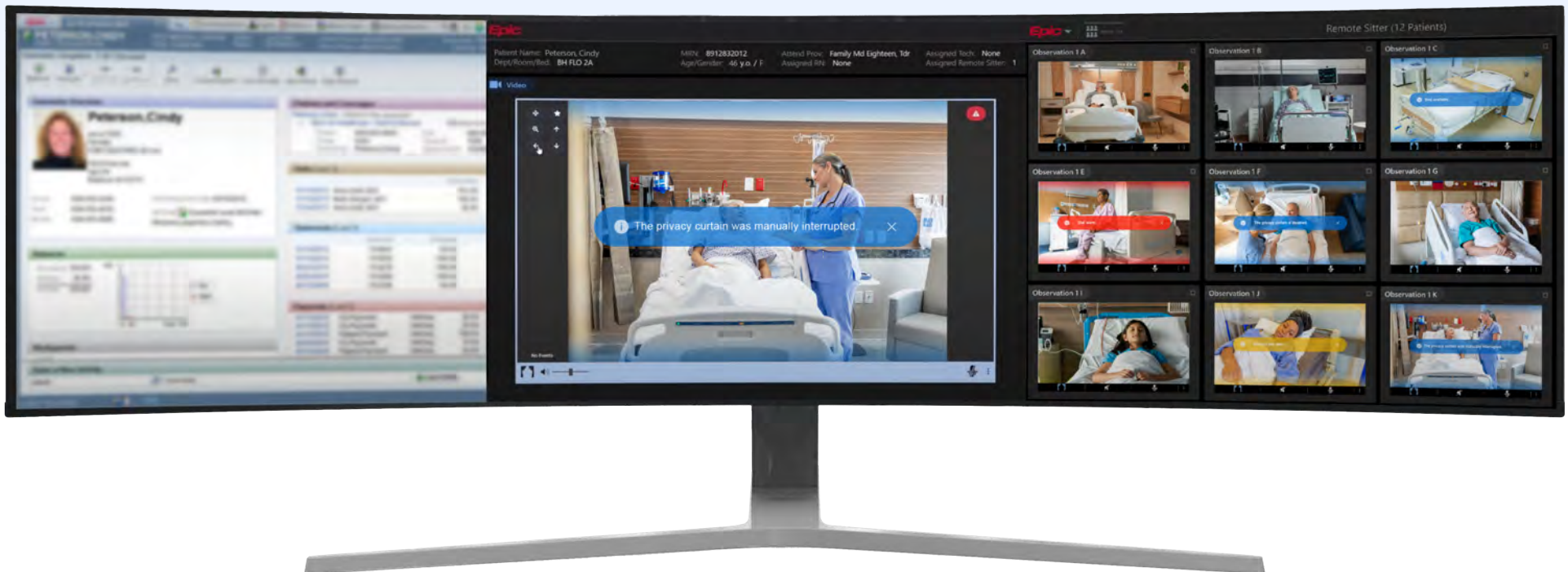
Real-time alert banners can help prioritize workflows and responses from the Virtual Nurse

Epic Monitor & Single Patient View

Patient Information

PTZ Camera Controls

Clinician Information

Refresh Video

Patient Status

Risk Score

Audio Alert

The privacy curtain was manually interrupted.

Notifications from AI or 3rd party integrations

Headset Volume

Audio Controls

Privacy Masking
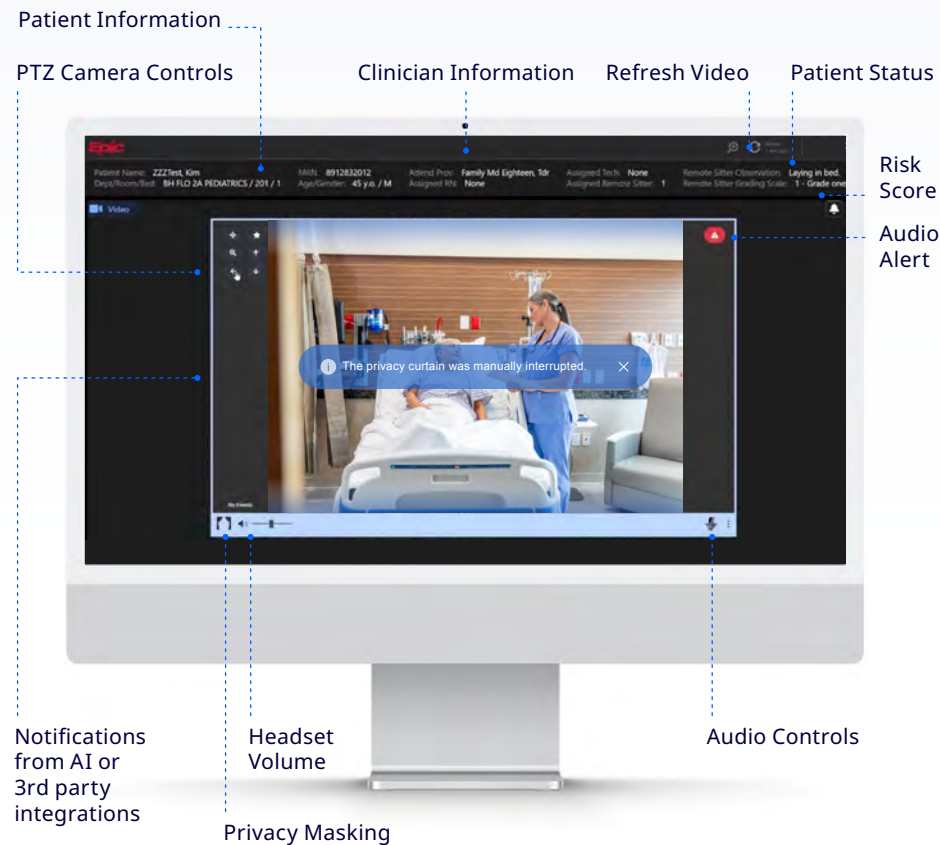
Epic Monitor & Multi-patient Watch List

- 12 - 16 Patients on each watch list view (depending on monitor size)
- PTZ camera control
- Audio commands
- Intelligent privacy screen
- Stat alarm

Enabled Epic EHR Workflows

ICU / Step-Down / ED / Surgery / Acute / Pediatrics / Behavioral / Outpatient								
NESA Embedded within Epic Monitor	Epic Monitor (ECAL/CAL) Single Patient	Epic Monitor (ECAL/CAL) Multi-Patient (Watchlist)	MyChart	Canto	Haiku	Rover	NESA Analytics/ Reporting	NESA Integrations (Nurse Call/ TV/Alerts)
Tele-Sitting	•	•	•	•	•	•	•	•
Continuous Remote Monitoring	•	•	•	•	•	•	•	•
Virtual Nursing	•	•	•	•	•	•	•	•
Admission/Discharge/Transfer	•	•	•	•	•	•	•	•
Double Medication Verification	•	•	•	•	•	•	•	•
Pain Assessment/Reassessment	•	•	•	•	•	•	•	•
Hourly Rounding	•	•	•	•	•	•	•	•
Interdisciplinary Rounding	•	•	•	•	•	•	•	•
Bed Turnover/Placement	•	•	•	•	•	•	•	•
New Nurse Mentorship	•	•	•	•	•	•	•	•
Patient/Family Education	•	•	•	•	•	•	•	•
Care Coordination	•	•	•	•	•	•	•	•
Skin Assessment/Wound Care Consult	•	•	•	•	•	•	•	•
Dietary Management	•	•	•	•	•	•	•	•
Tele-Health/Tele-Stroke/ED Triage/Transfer Center	•	•	•	•	•	•	•	•
Virtual ICU	•	•	•	•	•	•	•	•
Virtual Step-Down	•	•	•	•	•	•	•	•
Rapid Response/Codes	•	•	•	•	•	•	•	•
Virtual Consultations (Upto 6 simultaneous)	•	•	•	•	•	•	•	•
Elopement	•	•	•	•	•	•	•	•
Staff Duress	•	•	•	•	•	•	•	•
Safety Monitoring	•	•	•	•	•	•	•	•
Behavioral Health Observations	•	•	•	•	•	•	•	•

NESA Virtual Care Edge Devices:
All workflows function within the NESA Optikal Hardware line.

Epic is a registered trademark of Epic Systems Corporation.

Industry-Leading Technology

NESA carefully vetted the best-of-breed two-way video, two-way audio and clinical cart hardware manufacturers to bring NESA's software platform to market as a future-proof investment.

NESA's Optikal Hardware line

Fixed Ceiling or Wall Deployment

1-Way Video
2-Way Audio

12x pan, tilt, zoom camera

Anti-ligature corner camera

25x pan, tilt, zoom camera

SIP ceiling speaker with external mic

Mobile Deployment

2-Way Video
2-Way Audio

Fixed Wall Mount

2-Way Video
2-Way Audio

Embedded TV

In-Room Entertainment Integration

NESA's platform is natively built to enable leading EHRs with best-of-breed partners.

NESA Optikal™ Hardware technology innovation
built to enable virtual care

Clinical-Grade Clarity™

Seamlessly integrating the best in class hardware and virtual care software.

NESA's Virtual Care solution integrates the best-in-class hardware technology for two-way audio and video, audible alerts, and enterprise network connectivity in multiple deployment-ready hardware solutions.

OptiKal Fixed In-Room Wall Mount

Technical Specifications:
Dimensions: 22.125" W x 25.875" H x 8.375" D
Weight: 35 lbs.

Includes Built-in Wireless and Ethernet Capabilities

OptiKal Edge Wall Mount

Technical Specifications:
Dimensions: 8" W x 28.5" H x 6" D
Weight: 23 lbs.

OptiKal Mobile Cart

Technical Specifications:
Dimensions: 19" x 22" x 78"
Weight: 115 lbs.
10 ft. Medical Grade Power Plug

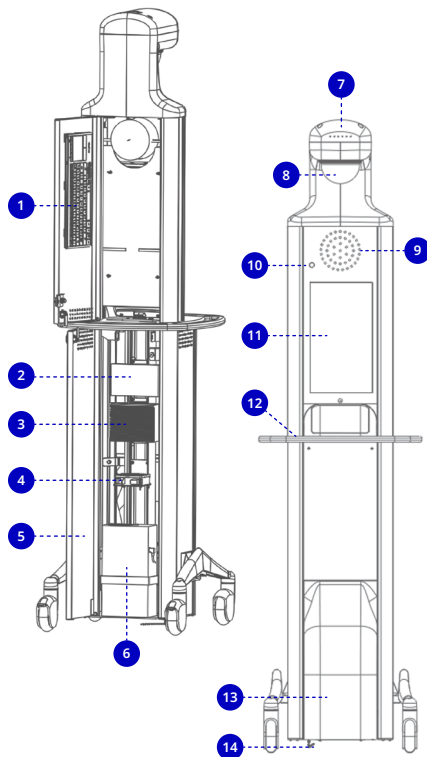Includes Built-in Wireless and Ethernet Capabilities

NESA Virtual Care Hardware: **Detailed Schematics**

Clinical-Grade Clarity™

Virtual Care Mobile Cart

Technical Specifications

Dimensions: 19" x 22" x 78"
Weight: 115 lbs.
10 ft. Medical Grade Power Plug
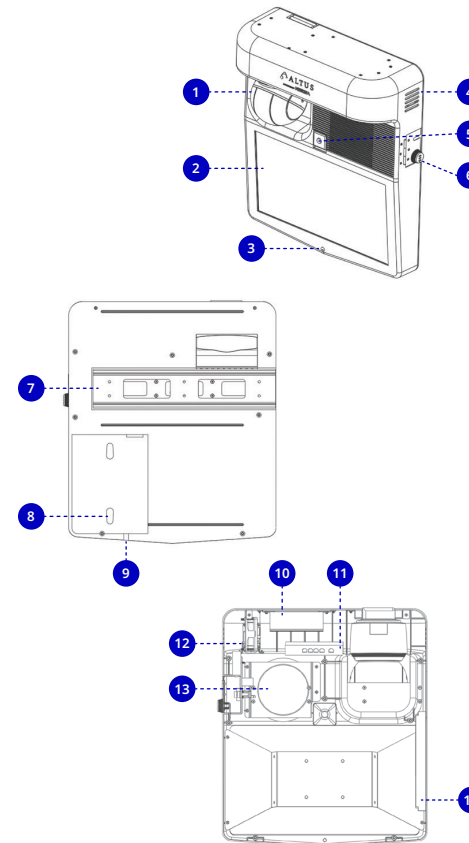

1. Removable Wireless Keyboard
2. Managed PoE Switch
3. CPU
4. Equipment Cooling Fan
5. Combo Lockable Panel with (2) USB Ports, (1) CAT6 Port, (1) HDMI Port, Power Switch, and Volume Switch
6. 2-Panel Technology Access with Integrated Code Lock
7. Alarm Buzzer
8. Hanwha 25x PTZ Camera
9. 5" Commend Speaker
10. 4K Camera
11. 15.6" Medical Grade Touchscreen Monitor
12. 360-Degree Handle
13. 12-Hour Battery Life
14. Static Drag Cable
    • Includes Built-in Wireless Capabilities

Virtual Care Wall Mount

Technical Specifications

Dimensions: 22.125" W x 25.875" H x 8.375" D
Weight: 35 lbs.

1. Hanwha 25x PTZ Camera
2. 21.5" Medical Grade Touchscreen Monitor
3. Microphone
4. Alarm Buzzer
5. USB 4K Camera with Up to 15-Degree Negative Tilt
6. Combo Lockable Panel with (2) USB Ports, (1) CAT6 Port, (1) HDMI Port, Power Switch, and Volume Switch
7. Wall Mounting Bracket
8. Cord Wrap
9. Cable Egress
10. NVIDIA Jetson Edge Computer
11. Managed PoE Switch
12. Equipment Cooling Fan
13. 5" Commend Speaker
14. Power Strip
    • Includes Built-in Wireless and Ethernet Capabilities

OptiKal™ **NESA** | △ALTUS®

NESA Optikal™ Hardware technology innovation
built to enable virtual care

Clinical-Grade Clarity™

Seamlessly integrating the best in class hardware and virtual care software.

Hanwha Vision offers a comprehensive line of security and video surveillance solutions which include IP cameras that support up to 8K resolution, a video management system, video and audio analytics, multi-sensor technologies and device integration with a host of 3rd party application providers. Our intelligent surveillance solutions secure people, property and data, worldwide.

- Largest enterprise video company in the world
- Encrypted video transmission
- NDAA complaint
- S-Cert Data security
- ISO 9001-certified manufacturing

Hanwha Vision

Hanwha 25x PTZ Camera

360 degree pan-tilt-zoom (PTZ), 4K camera and display Clinical Grade 4K

Non-proprietary

A variety of form factors and features can be chosen to meet your virtual care needs.

12x pan, tilt, zoom camera

25x pan, tilt, zoom camera

Anti-ligature corner camera

NESA Optikal™ Hardware technology innovation
built to enable virtual care

Clinical-Grade Clarity™

Seamlessly integrating the best in class hardware and virtual care software.

As the world's largest professional intercom company, Commend stands out with its ISO 27001 and IEC 62443 certifications, ensuring top-tier cybersecurity and operational resilience. Their solutions provide industry-leading audio clarity and robust encryption, critical for secure and effective virtual healthcare communication.
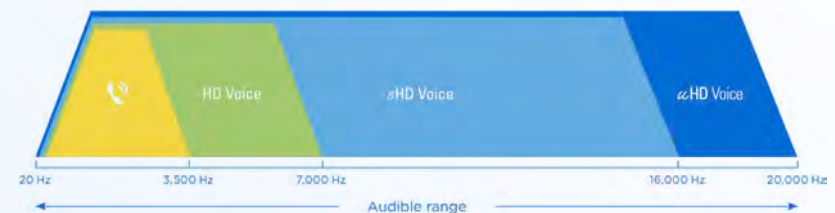
• Proprietary eHD Voice captures the full spectrum of human speech

• Intelligent Volume Control and AI Noise Cancellation automatically adjusts audio levels to match ambient noise, ensuring crystal-clear interactions regardless of the environment.

**TRUSTED.
COMMUNICATION.
ALWAYS.**

commend
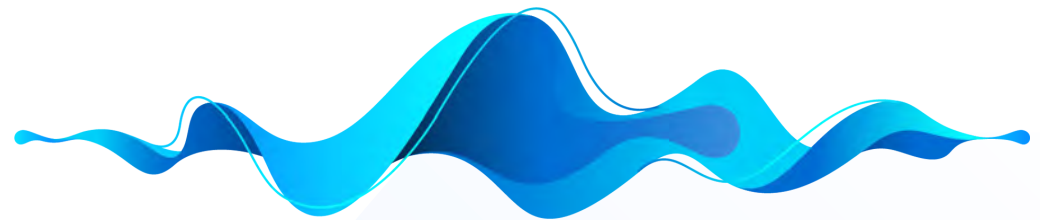
Robust two-way audio systems designed to seamlessly integrate into various healthcare applications.

20 Hz   3,500 Hz   7,000 Hz   16,000 Hz   20,000 Hz
HD Voice   eHD Voice   ɛHD Voice
Audible range

OpenDuplex® since 2003

IVC

**NATURAL
COMMUNICATION**

**INTELLIGENT
VOLUME
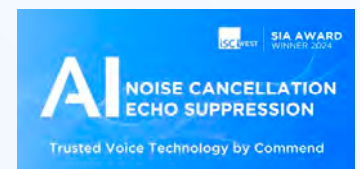ADJUSTMENT**

**BACKGROUND
NOISE
SUPPRESSION**

**LOUDSPEAKER-
MICROPHONE
MONITORING**

◀ **Ceiling Speaker**

Technical Specifications:
Dimensions: 6.57" W x 4.45" D
Weight: 1.87 lbs.

Internal microphone

AI NOISE CANCELLATION
ECHO SUPPRESSION

ISC WEST | SIA AWARD WINNER 2024

Trusted Voice Technology by Commend

NESA Optikal™ Hardware technology innovation
built to enable virtual care

Clinical-Grade Clarity™

Seamlessly integrating the best in class hardware and virtual care software.

Virtual Care Embedded TV: Integrated with In-patient entertainment systems.

Simplify deployment and patient experience by integrating the Virtual Care experience with patient televisions in-room and wall mounted. AI-powered Language Processing and Computer Vision are built right in to TVs.
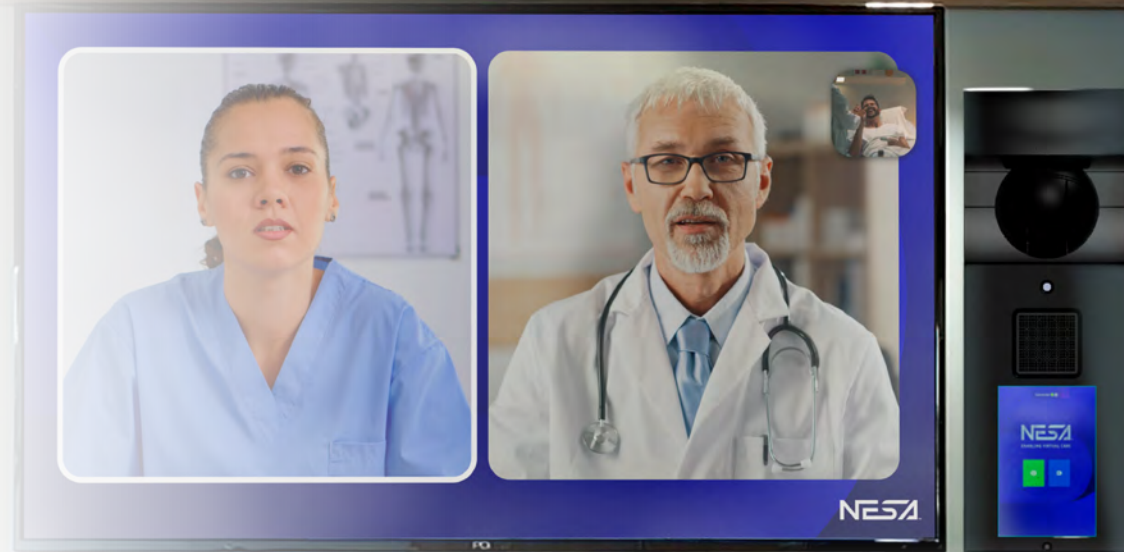
Embedded TV

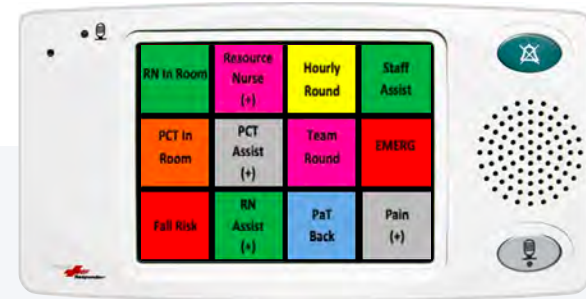Virtual care solution is integrated with in-room patient television sets

Epic is a registered trademark of Epic Systems Corporation.

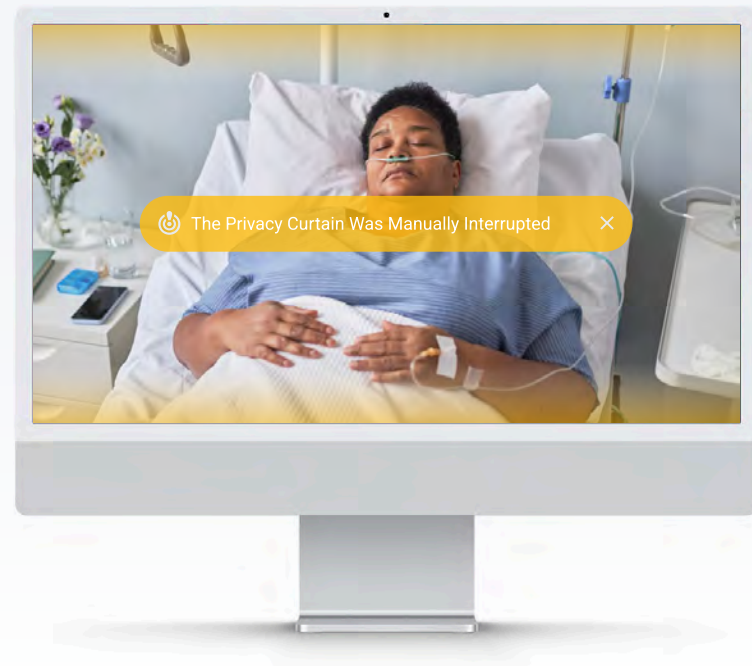# Industry-Leading Integrations: Nurse Call

Evolving care operations where virtual care is an integral part of clinical workflows.

NESA integrates with top Nurse Call systems to provide:

- Healthcare facilities with enhanced functionality and a unified care experience beyond what any single company can offer.

- Streamlined care coordination, enhanced clinical workflows, and improved outcomes.

- Effective alerts, communication, and documentation, to allow caregivers to respond promptly to patients' needs.

- Measurable workflow improvements and easy-to-understand, actionable, and customizable reporting.

- Quick and easy connection between patients and caregivers with one-touch of a button and a visual multi-patient display for effective communication.

- Improved healthcare workflows, to offer transparency and flexibility that benefit both patients and staff.

- Enhanced staff optimization and both staff and patient satisfaction.

All Rauland Nurse Call alerts and workflows can be shown within Epic's virtual care experience (and vice versa)

Industry-Leading Integrations: Patient Engagement

Complete Patient Engagement Solution integrated with Virtual Care

NESA integrates with leading In-room Patient Engagement systems enabling healthcare facilities to deliver the ultimate care experience.
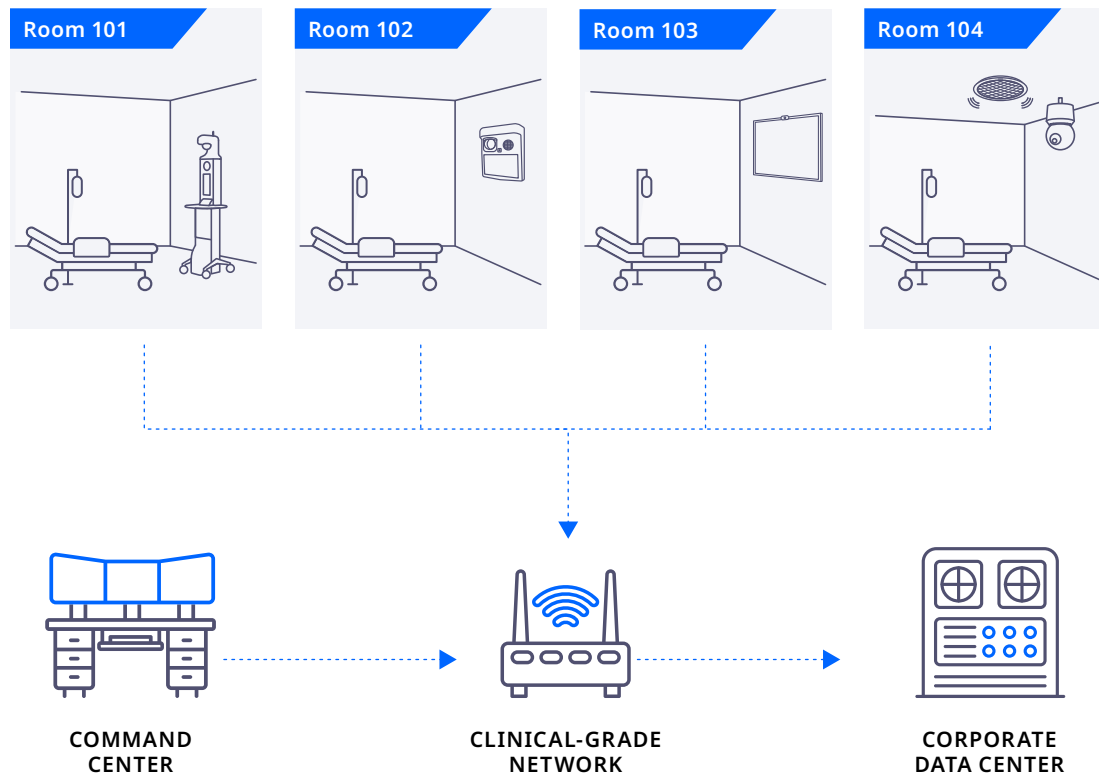
- **Embed virtual care** with Epic Monitor & L-bar whiteboard
- **Streamline workflows** with integrations & automations
- **Reduce call buttons** with smart room features
- **Improve outcomes** with automated education & prompts
- **Promote activation** with simple, intuitive navigation
- **Offer comfort** with entertainment & positive distraction

Technical Architecture

NVIDIA. ELITE PARTNER

Clinical-grade clarity network design and configurations

Choose the setup that fits best for your needs

NESA Virtual Care

Room 101

Room 102

Room 103

Room 104

COMMAND CENTER

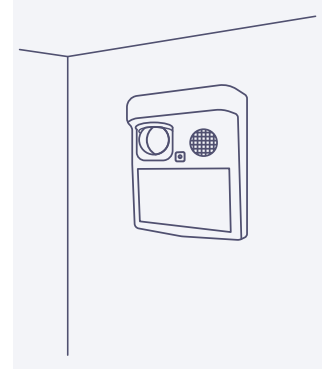CLINICAL-GRADE NETWORK

CORPORATE DATA CENTER

Fixed

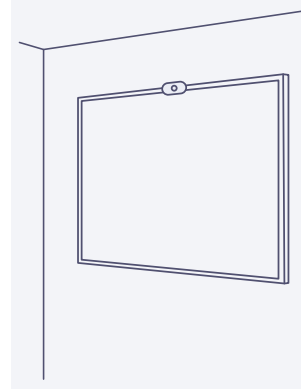One-way video, two-way audio
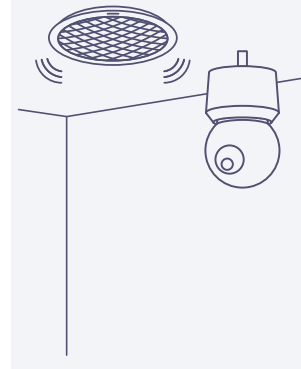
Wall Mount
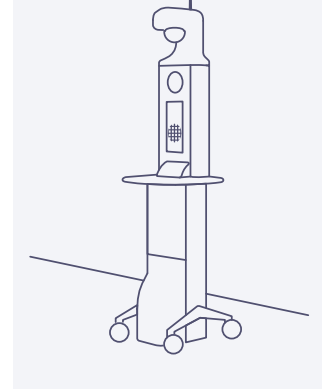
Two-way video and audio with AI

Embedded TV

Two-way video and audio with AI

Mobile Cart

Two-way video and audio with AI

Virtual Command Center

Delivering clinical-grade clarity for the health system

- **Customizable multi-view workflow dashboards**

- **12-1 patient to Virtual Care pods**

- **Enabling multi-faceted workflows**

- **Collaborative access to to all in the EHR**

- **Enterprise-grade environment**

- **Scalable to enable multi-state health system management**

Enterprise-grade

Scalable operations

Collaborative access

Why NESA

- AI-powered, two-way audio and video virtual care platform embedded directly into Epic Monitor (ECAL-CAL)

- Industry-leading technology partnerships with Hanwha Vision, Commend USA, NVIDIA, Sonifi and Altus

- High-performance data analytics and reporting fully embedded into the Epic Monitor platform, delivering highest definition and clinical-grade clarity

- Collaborative and scalable with up to six consultants (users) on screen simultaneously with the patient

- Unlimited clinical workflows, empowering healthcare providers to deliver high quality care more accurate and efficiently

- Seamlessly integrable into your existing infrastructure, with Clinical and Technical expertise to ensure smooth deployments, customization and training

Deployed at world-class medical centers and health systems

Clinical-Grade Clarity™

Ready to embark on your virtual care journey?

Get started today!

See Virtual Care in-action. Watch our <u>video.</u>

ENABLING VIRTUAL CARE