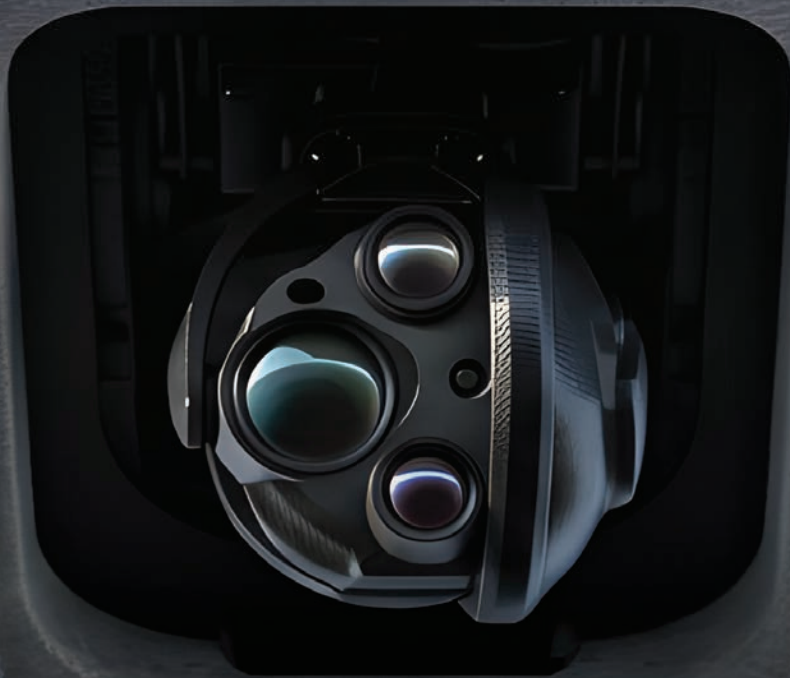




SKY-WATCH



Zentra Sensor Suite

Frontline-ready ISTAR built for changing conditions

Mission sensing, navigation support and AI-assisted processing for Sky-Watch RQ UAV platforms.

- High-performance sensing
- Compact form factor.
- AI-assisted intelligence.

Redefining Tactical Awareness and Navigation Resilience

Zentra is Sky-Watch's next-generation payload suite, redefining performance for tactical UAV operations. It establishes a new benchmark in visual and thermal imaging and advanced GNSS-denied navigation performance.

Zentra combines high-performance sensing and navigation payloads in a compact, custom-built architecture, delivering EO/IR, EO and IR capability in a small form factor built for tactical UAV missions.

4K resolution

Sensor Edge AI

Superior low-light performance



More capability at the sensor edge

The Zentra Payload Suite follows a simple operational principle:
deliver more capability at the sensor edge.

Zentra combines EO/IR, EO and IR mission payloads with EO and IR navigation payloads in a compact, SWaP-optimized architecture.



Super resolution

Enhances image resolution by increasing pixel density and reconstructing finer details, improving clarity when zooming or enlarging imagery.



De-haze

Advanced image processing enhances visibility by reducing the impact of fog, mist, and atmospheric disturbances in real time.



Low light performance

The advanced imaging hardware delivers high-resolution, low-noise video with excellent performance in low-light conditions, maintaining image clarity from early dawn to late dusk.

Mission data is tracked, detected and enhanced earlier in the chain, adding actionable intelligence even before it reaches the UAV platform or Ground Control Station.

The result:

Clearer mission data, less operator workload and stronger mission continuity when conditions change.

From sensor input to operational insight

Zentra is where mission intelligence starts.

At the sensor edge, Zentra collects, stabilizes, enhances and processes mission data close to where it is captured.

The RQ platform carries that intelligence into the mission environment and extends edge processing across the aircraft.

Mission Software turns mission data into operator workflows, supporting flight control, payload control, live ISTAR, AI-assisted outputs and mission data handling.

Third-party integrations connect intelligence to ATAK, DELTA, SitaWare and other C4I systems where decisions are made.

Together, these layers create one operational ISTAR capability, from sensor input to operational insight.

High-performance sensing for tactical operations

Zentra Mission Payloads give operators clear, mission-relevant intelligence across changing light, weather and operational conditions.

Depending on the payload configuration, operators can use high-resolution EO imaging, thermal detection, fused EO/IR operation, superior low-light performance, continuous zoom, laser illumination, and simultaneous video and still-image capture.

At the core of the Zentra mission payloads is the Qualcomm Dragonwing™ QCS8550 processing platform and the Sky-Watch onboard software architecture.

This turns the payload from a passive camera into an intelligent sensing node that enhances images, supports target tracking, detects objects and helps operators interpret mission data faster.

Zentra delivers advanced sensing performance without adding unnecessary size, weight or platform complexity.

Zentra Mission Payloads

The Zentra Mission Payload range let operators select the sensor configuration that fits the mission. The range includes combined EO/IR for multi-sensor intelligence, dedicated EO for long-range visual identification, and dedicated IR for thermal detection in low-light, degraded or nighttime conditions.

Zentra-35 EO/IR



Zentra-35 EO



Zentra-35 IR



	Zentra-35 EO/IR	Zentra-35 EO	Zentra-35 IR
Sensors	2x EO 1x IR	3x EO	2x IR
Key Capabilities	• Multi-sensor EO/IR, • 4K native sensor resolution • Fused imaging, • Superior low-light performance, • 850 nm laser illuminator, • 360° continuous pan	• 4K native sensor resolution • Long-range visual intelligence, • Superior low-light performance • 850 nm laser illuminator, • 360° continuous pan	• Thermal detection, • Superior visibility in night operations and degraded environments, • 850 nm laser illuminator, • 360° continuous pan
Resolution	EO: 3840 x 2160px, 4K IR: 640 x 480px	EO: 3840 x 2160px, 4K	IR: 1024 x 768px,
Zoom	EO: x50 smooth continuous IR: x4 smooth continuous	EO: x100 smooth continuous	IR: x20 smooth continuous
Onboard AI Platform	Qualcomm® QCS8550-based AI compute module with 64-bit octa-core CPUs, integrated GPU acceleration and dedicated neural processing - delivering up to 48 INT8 TOPS of AI performance.		

Zentra Navigation Payloads

The Zentra-Nav payloads extend the suite beyond mission sensing by providing resilient navigation support for GNSS-degraded environments.

Available in dedicated EO and IR configurations, the navigation payloads are mounted in a fixed, downward-facing position and support visual tracking and map correlation when satellite navigation becomes unreliable.

By enabling autonomous navigation support, Zentra-Nav payloads help the RQ UAV platform maintain mission continuity when GNSS signals degrade. They reduce operator workload by supporting onboard navigation system, allowing operators to focus on mission execution and intelligence collection.

Zentra-NAV EO



Zentra-NAV IR



	Zentra-Nav EO	Zentra-Nav IR
Sensors	1x EO	1x IR
Key Capabilities	Visual navigation support using visual tracking and map correlation	IR-based navigation support for degraded visibility
Resolution	3840 x 2160px, 4K	640 x 480px

More than a sensor suite

Zentra gives the Sky-Watch RQ platform a compact, AI-enabled sensor architecture for tactical UAV operations.

It combines mission-tailored sensing, navigation support, onboard edge intelligence and modular payload flexibility within the integrated Sky-Watch ISTAR ecosystem. Together with RQ-35 Heidrun, RQ-70 Dainn and Sky-Watch Mission Software, Zentra Sensor Suite helps frontline units collect, process and distribute mission-relevant data closer to the tactical edge.

Built for the RQ UAV platform. Ready when conditions change.

SKY-WATCH

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Authorized for BVLOS
Operations under
PDRA-G02.