

To,  
Head of Department  
Simulator Development Division  
Secunderbad-500015

Date: 29/09/2025

**Subject: -** Proposal for development of AR based near eye tactical display  
(Situational Awareness Augmented Reality Glasses)

Dear Sir,

We are pleased to introduce ourselves as a premier indigenous technology organization, who has built Indigenous GIS Platform (**mGIS**) & Location Technology Platform (**InTouch**). We are empowering Indian government organizations and customers with high quality digital maps (**MAPPLS**) and providing multiple set of applications and services based on our home-grown technology platform (**Digital Twin, Real-world, Immersive 3D**) and other services in the field of custom application development.

CE Info systems Ltd. an ISO 9001-2015, 27001:2022, 14001 2015, 45001\_2018, 20000-1\_2018 and CMMi3 Certified Leading Indian Public Ltd Company (Listed on NSE) is having core competence in providing end to end Geospatial Solutions to Government and Industry. Most popular mapping brands like **MapmyIndia** and **MAPPLS** are part of CE Info systems Ltd.

As per your email dated 11<sup>th</sup> September 2025 for RFI for Situational Awareness Augmented Reality Glasses and attached Scope of work document. In regard to that please find the technical proposal for your kind consideration.

## **Technical solution: -**

### **R30 AR Tactical Kit**

The R30 Near-Eye Tactical Display is a next-generation monocular augmented reality system designed for modern battlefield requirements. It combines wide field-of-view, waveguide-based full-color display technology with ruggedized mounting and soldier-centric ergonomics, delivering mission-critical information directly into the warfighter's line of sight.

#### **1. Helmet-Mounted, Lightweight, and Modular**

The R30 display integrates seamlessly with standard combat helmets using side rail or NVG mounting options, ensuring compatibility with existing gear. Its lightweight waveguide optics and compact design provide full-color overlays without obstructing natural vision, enabling soldiers to maintain situational awareness even in dynamic combat environments.

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## 2. Integrated Compute and Communication Integration

At the core of the system is a compact compute and communication module, which provides:

- **Wireless connectivity** (Bluetooth, Wi-Fi) for secure, short-range data sharing.
- **Wired standard interfaces** (USB-C DP, RS485) for easy interoperability with tactical radios, sensors, and command systems.
- **Dual-band GNSS** (GPS + NavIC) support, ensuring robust navigation overlays in denied or contested environments.

This architecture allows the R30 to act as a **plug-and-play node** within the broader tactical network, minimizing integration complexity while enhancing interoperability with soldier systems.

## 3. Power for Continuous Operations

The system employs a hot-swappable smart battery pack with modular capacities (3,000–5,000 mAh). Soldiers can replace batteries in the field without interrupting operation, guaranteeing extended mission endurance (6–8+ hours) and eliminating downtime during critical engagements.

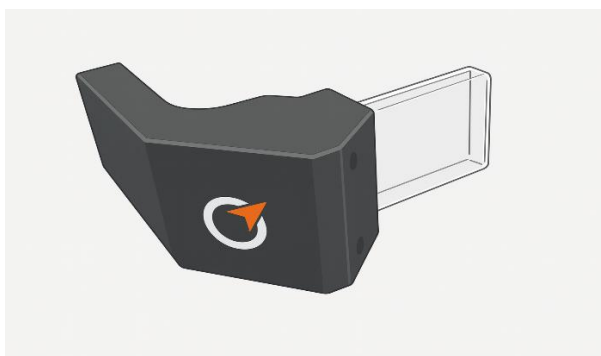
## 4. Mission-Enhancing Accessories

The R30 is designed as a modular ecosystem with mission-adaptable accessories:

- **ZT Drone Receiver Module:** A compact USB-C plug-in receiver optimized for ZT's line of reconnaissance drones, enabling soldiers to view live UAV video feeds directly in the display. This supports real-time reconnaissance, surveillance, and situational awareness
- **Wi-Fi Camera Scope Integration:** Weapon-mounted digital scopes (day and thermal) can securely stream their video feed to the R30 display, enabling corner-shot capability and safer engagement from behind cover

## Solution Component Specifications

R30 Display and Compute Pack



R30 - image for reference only

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**Display System:**

1. Optical Waveguide Display System
2. Full Color Display
3. Resolution: 720p 30fps
4. Field of View: 30 degrees
5. Ambient Brightness control

**Integrated Communication and Compute System :**

1. Arm Cortex -A53 or similar
2. OS: Linux / Android
3. Interfaces: USB-C DP and RS485
4. Wireless Interfaces: Wi-Fi5+ and Bluetooth 5.2

**Battery Pack:**

1. Lithium Ion: upto 5k mAh to support upto 8hrs of usage
2. Supports Hot swap battery and onboard charging

**Total System weight :** ~ 350gms to 500gms based on battery capacity chosen  
Including Drone Receiver ~ 570 gms

**R30 Kit Secure Android App**

1. Installed on Communication unit - such as Sambhav Phone
2. Manages R30 System's modes and setting
3. Receives, Interfaces and relays commands data to R30
4. Allows display positioning and size configuration
5. Manages Accessory connections - such as Drone receiver and Wireless corner shot scope
6. Initiates Secure sessions for connections and data exchange

**Accessories****Corner Shot Wireless digital scope camera**

1. Resolution - 1080p 30fps
2. Rifle Scope compatibility - 32mm – 48mm with additional sleeves
3. Integrated 500mAh battery - upto 1hr continuous use
4. Interface: Wifi - Connects to R30 Display system
5. Configuration and Setup supported by R30 Kit Secure Android App
6. USB C Interface for charging and Data interface
7. Weight ~ 150gms

**ZT Drone Receiver**

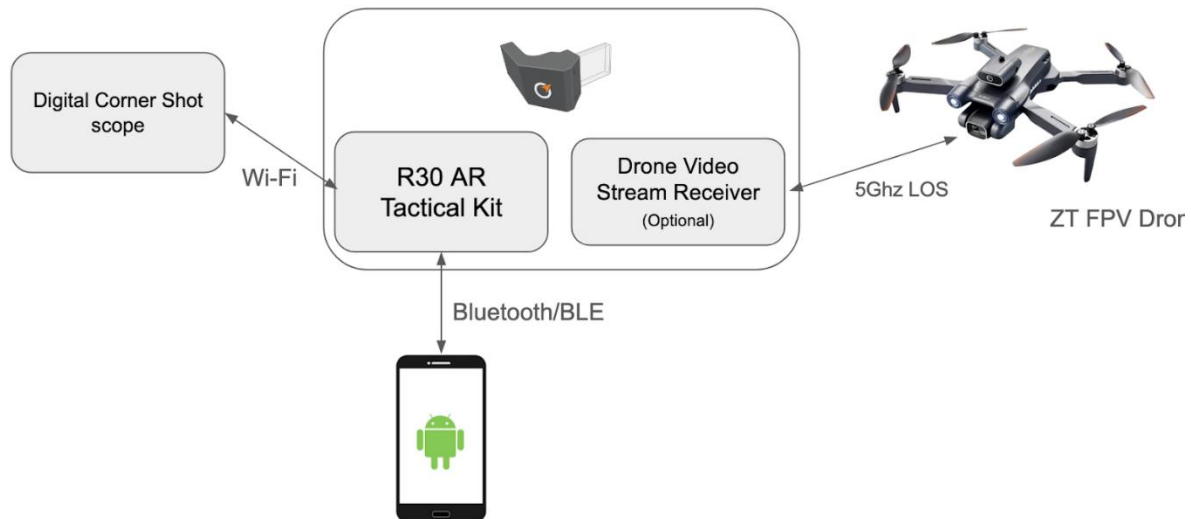
1. Wireless Drone video receiver for ZT FPV drone
2. 5Ghz Receiver with integrated 2dBi antenna
3. Supports 2 way telemetry and RC control via R30 Android app

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4. Uses R30 Display Kit's battery
5. Modular interface for integration with R30 Compute pack
6. Weight~ 70 gms

## Solution Architecture



## Development Milestones

**Development Timeline:** 8 months  
**Number of Milestones:** 3

Milestone	Deliverable Details	Remarks
<b>Milestone 1</b> <b>Week 8</b>	<ul style="list-style-type: none"> <li><b>Monocular AR headset</b> with Full Color sunlight readable display</li> <li><b>Android App</b> for Sambhav phone to receive and relay command and control information</li> <li><b>Mounting System</b> for tactical Helmet - Scheme options to be provided and finalized thereafter post trials</li> </ul>	<p>Acceptance: Diffused sunlight readable display</p> <p>System Weight (without drone receiver) - 500gms</p>
<b>Milestone 2</b> <b>Week 16</b>	<ul style="list-style-type: none"> <li>ZT Drone receiver integration with drone video feed in FOV</li> <li>Android App integration for drone feed management</li> </ul>	<p>Acceptance: LOS 5km+ live transmission with ZT FPV drone</p>
<b>Milestone 2</b> <b>Week 32</b>	<ul style="list-style-type: none"> <li>Corner Shot Digital scope integration</li> <li>Android App integration for digital scope management</li> </ul>	<p>Acceptance: LOS 2m Live transmission of Weapon sight</p>

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	<ul style="list-style-type: none"> <li>Final system handover and User trails</li> </ul> <p>Provided units will be prototype grade only</p>	<p>Complete System User trails</p> <p>Battery Live with Hot swap packs - 8hrs</p>
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#### Deliverables -

1. 2x R30 Situational Awareness Kit with Accessories which include -
  - a. R30 Display and Compute pack
  - b. 2 Battery Packs - upto 5000mAh each
  - c. Accessories -
    - i.ZT drone receiver
    - ii.Corner Shot Wireless Digital Scope
2. 1 x R30 Situational Awareness Companion app on Sambhav Mobile Android App

**Optional** - ZT FPV Drone (required to work with ZT drone receiver)

### ANNEXURE – CAPABILITY RESPONSE MATRIX

Capability and Requirement	Vendor Response
<b>AR Glasses</b> - Rugged, lightweight, sunlight-readable AR display.	Light Weight Optical Waveguide based full color Optical See through Display Platform available High Brightness Display - >1k nits sunlight readable. Current Headset Available - 250gms without accessories Customizable
<b>Communication Device</b> - A portable system to relay text/ images/ video to glasses. <b>Possible Technology Options</b> - Secure smartphone relay; SDR; tactical LTE/5G node.	Communication interface available via Secure Wifi Link between Smartphone relay
<b>Drone Feed Integration</b> - Real-time UAV video to AR glasses. <b>Possible Technology Options</b> - 5G tactical cell; SDR; MANET mesh.	Headset has customizable communication and display interface stack Support FPV mode for drones with interfacing to Drone Ground station via Wifi / USB
<b>Digital Weapon Scope</b> - Live sight video streamed wirelessly to AR glasses. <b>Possible Technology Options</b> - Thermal/ day digital scope with Wi-Fi/ secure link.	Headset has customizable communication and display interface stack Support integration with Weapons sights via Secure Wifi Link
<b>Satellite Integration</b> - Navigation overlays from NavIC on glasses. <b>Possible Technology Options</b> - NavIC	Currently support integrated GNSS/GPS Can be customized to support NAVIC

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receiver module; secure smartphone integration.	
<b>Security</b> - Secure data transmission - <b>Possible Technology Option</b> - AES-256; frequency hopping.	Headset currently supports Secure links over Wifi and includes optional onboard encrypted cores. Can be customized to support Frequency hopping schemes as required
<b>Power.</b> 6–8 hrs battery life; swappable packs. <b>Possible Technology Options</b> - Lithium-ion; soldier-worn power module.	Includes onboard 2000mAh Lithium Ion Battery pack Can be extended with External packs or can be customized to support swappable packs to support 6-8hrs

Please feel free to contact for any further clarification.

Sincerely,



Vinod Mishra  
Vice President – Business Development  
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