


Technical RFP

Work Package for “Adaptation of Wide Band Exciter Receiver Processing (WBERP) Unit of Jammer as RWR Digital Receiver”



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Project: ARK

CASDIC

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CASDIC (erstwhile DARE) is working in the field of EW systems for combat aircrafts. CASDIC has designed, developed and integrated several EW Suites for various IAF airborne platforms.

CASDIC is looking for the Industry Partner for the adaptation Wide-Band Exciter Receiver Processing unit (WBERP) as RWR Digital Receiver. The procurement shall include the following activities

The major scope of work is as follows:

- 1.1. Finalization of design of WBERP, which is to be integrated as Wide Band Digital Receiver (WBRx) of RWR.
- 1.2. Reconfiguration of WBERP hardware w.r.t. I/O requirements to interface with RF Front-end of RWR (Switch Matrix, Single Channel FEA and Quad Channel FEA)
- 1.3. Modification of WBERP backplane as per the interface requirements for WBRx – RWR functionality.
- 1.4. Adaptation of reference firmware (which will be provided by CASDIC) as per the hardware configuration
- 1.5. Adaptation of reference software (which will be provided by CASDIC) as per hardware configuration and system software.
- 1.6. Development of Firmware and Software for the new functional requirements of RWR
- 1.7. Support for Setting up of SW Development environment at CASDIC by providing VxWorks 6.9 License and IDE
- 1.8. Hardware, Firmware and Software Integration and Testing
- 1.9. Development of System Test Software
- 1.10. System Testing as per the ATP document (will be provided by CASDIC)

2 List of Deliverables

The work package includes four major activities and the list of deliverables as per the activities are listed below

Sl. No.	Activity	Deliverables
1	Modification of existing backplane of WBERP	2 nos of modified backplane
2	Modification of BSP and Drivers of WBERP for adaptation as RWR	1 set of modified BSP and drivers
3	Porting of reference software and firmware of other system to WBERP hardware	1 set of modified software and firmware source code

4	Upgrade of ported SW and FW for frequency extension and BLI capability in 2-LRU configuration and synchronization	1 set of upgraded software and firmware source code
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3. Unit cost Details (per unit, if different types of units have to be developed)

Not Applicable

3.1.1.1. Diagram of non-Architecture items

Not Applicable

3.1.1.2. Test equipment

As per the Scope of Work Document No: CASDIC/ARK/RWR/SOW/001
Version 1.1 dated 04-Nov-2024

3.1.1.3. Mechanical Specifications

Not Applicable

3.1.1.4. Interface Specifications

Not Applicable

3.1.1.5. Bill of Materials

Not Applicable

3.1.1.6. Assembled hardware and firmware requirements

Not Applicable

4. Documents

Following documents shall be submitted by the Industry Partner

4.1. Software Documents

The following documents of the reference source code to be updated.

1. SRS
2. STP
3. STR
4. VDD

Not Applicable

Not Applicable

- Not Applicable

4. Automatic Test Equipment / Test Setup:

Not Applicable

4.1 Functional Testing Capability:

Not Applicable

4.1.1 Block diagram / Algorithms of ATE / Test setup:

Not Applicable

4.2 ATE system capabilities:

Not Applicable

5. Scope of work

5.1 Sub scope of work

Refer the Scope of Work Document (Document No:
CASDIC/ARK/RWR/SOW/001 Version 1.1 dated 04-Nov-2024)

5.2 Industry Partner Scope of work

Refer the Scope of Work Document (Document No:
CASDIC/ARK/RWR/SOW/001 Version 1.1 dated 04-Nov-2024)

5.3 Terms and conditions

Refer the Scope of Work Document (Document No: CASDIC/ARK/RWR/SOW/001
Version 1.1 dated 04-Nov-2024)



7. Realization schedule with Milestones:

The activities listed for this work package is divided into two milestones as given below:

Sl. No	Milestone	Activities to be completed	PDC
1	M1	Modification of existing backplane of WBERP	T0+1.5 Months
		Modification of BSP and Drivers of WBERP for adaptation as RWR	
		Porting of reference software and firmware of other system to WBERP hardware	
2	M2	Upgrade of ported SW and FW for frequency extension and BLI capability in 2-LRU configuration and synchronization	T0+3 Months

8. Acceptance test plan of the item

Acceptance is based on completion of all the activities and delivery of all the deliverables listed in the section 2 of this document within the specified timelines at CASDIC.

9. Qualification/Inspection authority

Center Head CASDIC or his nominated Rep

10. Training requirement

Four weeks of training to be given to CASDIC personnel after the completion of work

11. Installation / commissioning if any

The upgraded system shall be installed and integrated at CASDIC

12. Free issue of material if any

NA

13. Delivery period

The entire activities to be completed and deliverable to be submitted within 3 months from the date of placement of supply order

14. Price Bid Details (Cost breakup details as required)

- a. Unit Pricing
- b. Total cost of deliverables
- c. Taxes applicable

15. Industry Partner qualification criteria

Not Applicable

16. Pre-Bid Technical Conference

Not Required

17. Other Requirements

Nil

18. Non – Disclosure agreement format

Industry Partner needs to sign a Non-Disclosure Agreement (NDA) with CASDIC.