



NATIONAL AUTOMOTIVE TESTING AND R&D INFRASTRUCTURE PROJECT

(A Registered Society under Ministry of Heavy Industry and Public Enterprises)

Ref. No. 305/NATRiP/GARC/VEL/GPS DATA ACQUISITION
SYSTEM/2019-11 - NIQ

Date: 17/6/2019

NOTICE INVITING QUOTATION

Subject: - Call for sealed quotations for “Design, Supply, Installation, Testing & Commissioning of GPS DATA ACQUISITION SYSTEM in VEL lab” at GARC, Chennai.

National Automotive Testing and Research & Development Infrastructure Project (NATRiP) Implementation Society under Government of India, Ministry of Heavy Industries & Public Enterprises invites quotations from registered and authorized firms for **Design, Supply, Installation, Testing & Commissioning of GPS DATA ACQUISITION SYSTEM in VEL lab** at ‘Global Automotive Research Centre (GARC) at Plot E-1, Oragadam Industrial Growth Centre Oragadam, Mathur Post, Sriperumbadur, Taluk Kanchipuram District-602105.

- (i) The detailed Scope of work & Technical Specification is attached as “Annexure – I”
- (ii) Check List (Compliance form) is attached as “Annexure – II”
- (ii) The Financial Form is attached as “Annexure – III”
- (iii) Documents required to be submitted along with the bid.
 - a) The bidder should have a minimum annual turnover of Rs. 50 Lakhs each during the last three financial years i.e. 2016-17, 2017-18 and 2018-19. Copies of profit and loss account and balance sheets with ITR for these three years must be enclosed with quotation.
 - b) Copy of the detail of the past experiences. The bidder will be required to submit a proof of work order or agreement of successful and satisfactory completion of supply & installation of GPS data acquisition system. At least minimum (03 Contracts/WO) three contracts/work in last two years
 - c) Proof of attachment of GST Registration details.

Note: Technical Specification (Annexure-A), Compliance Form (Annexure-B), Financial Form (Annexure-C) and above listed all documents shall be duty stamped & signed by the bidders, quotation failing to adhere the required details are liable to be rejected summarily.

Sealed quotations Titled “Quotation” with ref. no of this document, addressed to the **The Procurement Officer, Global Automotive Research Centre (GARC) at Plot E-1, Oragadam Industrial Growth Centre Oragadam, Mathur Post, Sriperumbadur, Taluk, Kanchipuram District-602105** should reach latest by 03:00 p.m on 03.07.2019. The quotations should be delivered to GARC in stipulated date and time.

TERMS AND CONDITIONS

- 1) It shall be the responsibility of the successful bidder to complete the job as per the technical specifications stated herein in at Global Automotive Research Centre (GARC).
- 2) The rates quoted by the bidder shall remain firm till the completion of the job/work order and price variation shall not be entertained.
- 3) The prices/amount should be quoted both in figures and words and financial form must be free from any kind of overwriting, alteration and correction.
- 4) At the time of payment of bills, the taxes liable to be deducted, if any, shall be deducted at source as per Government rules and guidelines as may be prevailing at the time of payment.



NATIONAL AUTOMOTIVE TESTING AND R&D INFRASTRUCTURE PROJECT

(A Registered Society under Ministry of Heavy Industry and Public Enterprises)

Ref. No. 305/NATRIP/GARC/VEL/GPS DATA ACQUISITION

Date: 17/6/2019

SYSTEM/2019-11 - NIQ

- 5) **Taxes (GST)**, if any, should be clearly mentioned in the attached financial bids (Annexure-C).
- 6) **Delivery charge** if any, should be clearly mentioned in the attached financial bids (Annexure-C).
- 7) **Warranty/Guarantee**, if any, should be clearly mentioned in the attached financial bids (Annexure-C).
- 8) **Sub-letting of Work:** The firm shall not assign or sublet the work or any part of it to any other person or party.
- 9) Quotation should be valid for atleast 60 days
- 10) The Competent Authority of this office reserves the rights to reject any or all the quotations without assigning any reason and the decision of the competent authority of this office shall be final and binding.
- 11) Period of work completion should be mentioned in the attached financial bids (Annexure-C) and the date to be strictly adhered.

Terms of Payment:

1. 95% payment shall be release after installation, commissioning, testing & acceptance of the system as certified by the Engineer-incharge.
2. Retention Money: 5% of the gross value of the bill raised by the supplier shall be deducted from the bills as retention money for a period of 1 year (deflect liability period). The Retention amount shall be released by GARC to the vendor after defect liability period. The retention period will be start from submission of acceptance certificate as certified by engineer-incharge.
3. There is no provision for advance payment for executing the works.
4. Payment shall be released within 45 days from the date of submission of work completion report signed by engineer incharge of the lab.
5. At the time of payment of bills, the taxes liable to be deducted, if any, shall be deducted at source as per Government rules and guidelines as may be prevailing at the time of payment
6. All payments to the Vendor shall be made by Account payee cheque or RTGS in Indian Rupees
7. **Liquified Damages:** In the event of delay on part of the supplier/contractor to achieve completion of the work within the time lines as specified in the quote, the supplier/contractor liable to pay to GARC a sum equal 0.5% of the contract price for every week of delay, or part thereof, subject to the maximum of 10% of the contract price, for such default as liquified damages, which the supplier/contractor is not a penalty but a genuine pre-estimate of loss and damage likely to be suffered and incurred by GARC for every day, or part thereof, that such delay subsists till the date of actual completion. GARC may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to the supplier/contractor. GARC shall be at liberty to withhold any of the payments in full or in part subject to recovery of taxes including TDS as applicable


Rajeswar Tripathy
(Procurement Incharge)

ANNEXURE- I

TECHNICAL SPECIFICATION FOR GPS DATA ACQUISITION SYSTEM		
SI No	SPECIAL FUNCTIONALITY	MINIMUM REQUIREMENT
ENVIRONMENTAL & PHYSICAL CONDITIONS		
1	Input voltage range	5– 30 V DC
	Operating temperature	-20°C to +70°C
	Weight	Approx. 900 g to 1kg
	Size	200 x 130 x 45mm(max)
VELOCITY		
2	Accuracy	0.1 km/h
	update rate	100 Hz
	Maximum velocity	1000 mph
	Minimum Velocity	0.1 km/h
	Resolution	0.01 km/h
	Latency	8.5 ms ±1 or 15.5 ms
DISTANCE		
3	Accuracy	0.05%
	update rate	100 Hz
	Resolution	1cm
Accel/Brake test-TIME		
4	Resolution	0.01S
	Accuracy	0.01S
Acceleration		
5	Accuracy	0.50%
	Maximum	20G
	Resolution	0.01G
	update rate	100 Hz
Brake stop accuracy		
6	Accuracy	+/- 1.8 cm
IMU UNIT		
7	Pitch angle	<0.028° for 2.5m
	Roll angle	<0.028° for 2.5m
	Slip angle	<0.04° for 2.5 m
ANALOGUE MODULE		
8	Voltage range	±50V
	update rate	100 Hz
	No of channel	4
OUTPUTS		
9	CAN	1 Mbit selectable baud rate
	Data available	Satellites in View, Latitude, Longitude, Velocity, Heading, Altitude, Vertical Velocity, Distance, Longitudinal Acceleration & Lateral Acceleration, Distance from Trigger, Trigger, Time, Trigger Velocity
TRIGGER SWITCH		

ANNEXURE- I

10	A trigger logging switch allows users to manually choose when they wish to record data.	
STORAGE		
11	It should be possible to store the data generated during the test by gps data acquisition system. Data is stored in a standard PC format allowing fast transfer of data to a PC equipped with a compact flash card reader. The file format is an ASCII text file	
DISPLAY		
12	Height	65 mm(max)
	Width	170 mm(max)
	Depth	35 mm(max)
	Mounting	Either Velcro mounting suction cups
	Weight	Approx. 400 g
	Display	20 x 2 Line LCD with contrast control and adjustable backlight
	Input Voltage Range	12/ 24 V DC
SOFTWARE		
13	compatible	for Microsoft windows
	Version	Latest version
	test configuration	Brake test, Acceleration test, Coast down test,max speed test
	support	Valid for a minimum of 5 years from the date of installation Contract includes: telephone/ email technical support and software upgrades (where applicable).
	Training	Free training
TRAINING		
14	Hardware and software training should be provided at the time of installation	
Regulatory Requirements		
15	Standard Test configuration	Coast down test-as per IS 14785-2000
		Max speed test -AS PER ISO 10278: 2009
		Speedometer calibration -as per IS 11827-1995 for all Vehicles
		Brake performance evaluation 2 wheeler-as per IS 14664-1999
		Brake performance evaluation 4 wheeler-as per IS 11852-2001, Part 3
		Acceleration performance of 2w (as per IS 10407: 1998)
CABLES AND CARRYCASE		
16	Suitable cables ,accessories and Carry case should be provided	
CALIBRATION CERTIFICATE		
17	Calibration certificate should be valid for at the time of installation	
WARANTY		
18	Hardware	1 year
	software	free support for 5 years

CHECK LIST FOR GPS DATA ACQUISITION SYSTEM

S No	General Functionality	Specific functionality	Minimum Requirements	Complied (Yes/ No)	Deviation if any
1	VELOCITY	Accuracy	0.1 km/h		
		update rate	100 Hz		
		Maximum velocity	1000 mph		
		Minimum Velocity	0.1 km/h		
		Resolution	0.01 km/h		
2	DISTANCE	Accuracy	0.05%		
		update rate	100 Hz		
		Resolution	1cm		
		Accuracy	0.50%		
3	Acceleration	Maximum	20G		
		Resolution	0.01G		
		update rate	100 Hz		
		Pitch angle	<0.028° for 2.5m		
4	IMU UNIT	Roll angle	<0.028° for 2.5m		
		Slip angle	<0.04° for 2.5 m		
		Voltage range	±50V		
5	ANALOGUE MODULE	update rate	100 Hz		
		No of channel	4		
6	OUTPUTS	CAN	1 Mbit selectable baud rate		
		Height	65 mm(max)		
		Width	170 mm(max)		
7	DISPLAY	Depth	35 mm(max)		
		Mounting	Either Velcro mounting suction cups		
		Weight	Approx. 400 g		
		Display	20 x 2 Line LCD with contrast control and adjustable backlight		
		Input Voltage Range	12/ 24 V DC		

CHECK LIST FOR GPS DATA ACQUISITION SYSTEM

S No	General Functionality	Specific functionality	Minimum Requirements	Complied (Yes/No)	Deviation If any
8	SOFTWARE	compatible	for Microsoft windows		
		Version	Latest version		
		test configuration	Brake test, Acceleration test, Coast down test, max speed test		
		support	Valid for a minimum of 5 years from the date of installation Contract includes: telephone/ email technical support and software upgrades (where applicable).		
9	CALIBRATION CERTIFICATE	training	Free training		
		Validity	Calibration certificate should be valid for at the time of installation		
10	WARANTY	Hardware	1 year		
		software	free support for 5 years		
11	Test setup	Coast down test-as per IS 14785-2000			
		Max speed test -AS PER ISO 10278: 2009			
		Speedometer calibration -as per IS 11827-1995 for all Vehicles			
		Brake performance evaluation 2 wheeler-as per IS 14664-1999	Auto setup for each test		
		Brake performance evaluation 4 wheeler-as per IS 11852-2001, Part 3			
12	ENVIRONMENTAL & PHYSICAL CONDITIONS	Acceleration performance of 2w (as per IS 10407: 1998)			
		Input voltage range	5- 30 V DC		
		Operating temperature	-20°C to +70°C		
		Weight	Approx. 900 g to 1kg		
		Size	200 x 130 x 45mm(max)		

ANNEXURE - III	
Financial Form - GPS DATA ACQUISITION SYSTEM	
Schedule	Description
Schedule A	Design, Supply, Installation, Testing & Commissioning of GPS DATA ACQUISITION SYSTEM in VEL lab as per technical specification (Refer Annexure - I) (Quantity - 1 SET)
Schedule B	Delivery Charges, if any
Schedule C	Taxes/GST, if any
Schedule D	Freight & Insurance Charge, if any
	Total Amount (Schedule A + B + C + D)
Amount in words:	
Period of work completion:	
Warranty period:	
	Lump sum price in Rs

