

TENDER EVATUATION. TECHNICAL BID

Tender No. TENDER NO.: AAI/ANS/CNS/VOML/2020/MODULAR UPS/T-02 (E-Tender ID.: 2020_AAI_56243_01)
SITC& CAMC OF MODULAR UPS FOR CNS AT MANGALURU INTERNATIONAL AIRPORT

Part 1- GENERAT INFORMATION

Tender Document reference	Documents for compliance	Name of the Bidder: M/s. Aviosat Technology Pvt. Ltd	Remarks
		Complied/ Not Complied	
Annexure-III.b	Duly filled and signed PQ Bid Checklist	Complied	
11.10.9	Certified Copy of PAN	Complied	
11.10.9	Certified Copy of GST Registration certificate.	Complied	
11.10.1	Certified copy issued from Chartered Accountant for certifying financial turnover for the last THREE YEARS and Abridged Balance Sheets along with Profit & Loss Account.	Complied	
11.10.3	Performance/Experience/Completion certificates duly signed by authorized signatory and issued by the end user.	Complied	
12.1.1	Section A – General Conditions of Contract Bidder is required to upload duly signed, stamped and digitally signed all documents of the Section- A by the firm's authorized signatory as a proof of accepting all conditions of contract.	Complied	
12.1.2	Section B – Special Conditions of Contract Bidder is required to upload duly signed, stamped and digitally signed all documents of the Section- B by the firm's authorized signatory as a proof of accepting all conditions of contract.	Complied	

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12.1.3	Section C – Part A and B: Technical & Qualitative Requirement. Bidder is required to upload duly filled, signed, stamped and digitally signed all documents of the Section- C by the firm's authorized signatory as per guidance given in succeeding para. "Complied", "Not complied" & "Partially Complied" shall be mentioned against each statement/ specification of Section-C along with supported appropriate documentation of the product/item. Further bidder is required to mention corresponding Page and Para number of the OEM Documentation/Test Reports enclosed with the tender Section-C: Part-B, in support of the compliance for each Para, for verification. Tender shall not be considered for evaluation and is liable to be rejected if bidder is failed to comply the same.	Partially complied Refer the attached detailed technical evaluation report	-----
12.1.4	Section D: Notice Inviting Tender (NIT) Bidder is required to upload duly signed, stamped and digitally signed all documents of the Section-D by the firm's authorized signatory as a proof of accepts.	Complied	
12.1.5 ANNEXURE-VI	ANNEXURE-VI (Unpriced Bill of Quantity) Bidder is required to upload in Technical bid duly filled, signed and stamped or digitally signed all documents of Annexure- VI by the firm's authorized signatory as per guidance given in succeeding para. A complete list of deliverables with Make and Model Number of offered equipment(s) and accessories, as per items mentioned in schedule WITHOUT INDICATING THE PRICE.	Not Complied	Model of the Isolation transformer offered is not specified
12.1.6	ISO certificate(s), in respect of the OEM(s) of the offered product(s).	Not Complied	No valid ISO 9001 certificate submitted for the OEM of Isolation transformer

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SECTION- C PART A & B: SYSTEM DESIGN AND TECHNICAL REQUIREMENTSBILL OF QUANTITY FOR SITC & CAMC OF MODULAR UPS.

SL. No.	Description of item	Name of the Bidder: M/s. Aviosat Technology Pvt. Ltd	Remarks
		Complied/ Not Complied	
01	SITC of Modular UPS Frame Scaled with power modules of minimum rating of 10kVA or higher configured for delivering a minimum output of 20kVA with N+N Redundancy along with necessary control Modules, Status and display system, Battery Banks, Battery Management System and external output isolation transformer of minimum 40kVA rating. (2 Sets of UPS frames, configured in parallel load sharing mode) a. Minimum 5 Years of comprehensive onsite warranty for UPS Systems including isolation Transformers. b. Minimum 5 Years OEM (OEM of Battery) Warranty for Batteries	Not Complied	Model of the isolation transformer offered is not specified
02	Laptop Computer as per specifications attached HP/SONY/LENOVO/DELL (For remote status view and control of UPS)	Complied	
03	3 years post warranty on-site Comprehensive AMC inclusive of spares for UPS. (Refer Attached CAMC Work schedule) As per CAMC Works schedule clause 3.1, Breakdown Maintenance / Service Call: The response time for emergency break down service/maintenance call should not exceed 3(three) hours. Contractor should maintain a technical Support Centre having qualified technical support staff preferably within 60 KM radius of Mangalore Airport.	Complied	

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SPECIFICATIONS IN DETAIL FOR SITC & CAMC OF MODULAR UPS

Sl. No.	Item & Required Specifications	Name of the Bidder: M/s. Aviosat Technology Pvt. Ltd.	REMARKS
		Complied/ Not Complied	
1	SITC OF MODULAR UPS		
a	UPS topology: On line, Double Conversion, VFI-SS-111	Complied	
b	Technology Rectifier/ Booster/ Inverter: Using MOSFET/ IGBT devices	Complied	
c	No. of UPS frames: 2 Sets of Frame	Complied	
d	UPS Power Output : Minimum 20kVA per frame	Complied	
e	UPS architecture:		
	i. Each UPS frame shall be modular, Scalable, based on redundant power modules	Complied	
	ii. Each UPS frame shall be configured for delivering a minimum output of 20kVA with N+N redundancy.	Complied	
	iii. Each UPS frames shall be scaled with power modules of minimum capacity of 10kVA or higher Example for scalability per frame. a. if scaled with modules of capacity $\geq 10\text{kVA}$ but less than 20kVA, Total 4 power modules in each frame with 2+2 module redundancy b. if scaled with modules of capacity $\geq 20\text{kVA}$, Total 2 power modules in each frame with 1+1 module redundancy (Refer attached diagram for UPS architecture)	Complied	
f	Parallel Load sharing mode between UPS frames: UPS frames shall be configured in Parallel Load sharing mode between them.	Complied	

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g	Local status and control: Available through LCD GUI based mimic panel user interface.	Complied	
h	Battery Management system: Battery Management System for continuous monitoring of individual battery status for each frames	Complied	
i	UPS Frame size: Each Frame should be able to accommodate all power modules and their controller units with caster wheel and minimum form factor. Empty spaces are to be covered with filler plates	Complied	
j	Isolation Transformer: 2 Nos. of external isolation transformer at the output of UPS with minimum power rating of 40kVA each shall be mounted in a powder coated metallic cabinet and with caster wheels.	Not Complied	Model of the isolation transformer offered not Specified
k	Output wave form while running on mains and battery: Pure sinusoidal	Complied	
l	AC to AC Conversion efficiency: 90% or more at full load	Complied	
m	Inbuilt Power factor correction facility: Available	Complied	
n	Static Bypass type: Static bypass with auto/manual bypass control	Complied	
o	Maintenance bypass arrangement: Available	Complied	
p	UPS Control Mechanism: Separate controller unit for each power module along with the central controller for sub power modules	Complied	Declaration form OEM available
q	Hot swap ability of UPS Power Modules:		
i.	UPS Power Modules should be hot/safe swappable while UPS is in ONLINE mode. (Without switching OFF the UPS) It should be able to swap power modules between frames without making configuration changes on the modules/UPS	Complied	
ii.	On withdrawal/ insertion/ failure of one or more UPS module, the offered system shall gracefully synchronize itself within 50ms.	Complied	Declaration form OEM available

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r	Input Specifications		
	i. UPS frames shall be able to take input supply from different 3 Phase power feeder sources. Example: Frame-1 from Karnataka Electricity Board 3 Phase feeder line Frame-2 from MESCOM 3 Phase feeder line	Complied	
	ii. Connection: 3 Phase, 3P + N + PE Connections	Complied	
	iii. Phase: Three phase, 415 V +/- 15%	Complied	
	iv. Frequency: 50 HZ +/- 10%	Complied	
	v. Power factor: 0.99 typical at 100% load	Complied	
	vi. In-built Surge Protection: UPS shall meet IEEE 587 Categories A & B (6kv) standards or higher for input surge protection.	Complied	
s	Output Specifications		
	i. Connection: 1 Phase: L+N+PE Connectors (Refer UPS wiring Diagram for output connections)	Complied	
	ii. Output Voltage: Single phase 230 V +/- 1% for 100% load	Complied	
	iii. Output Frequency: 50Hz +/- 2%	Complied	
	iv. Nominal Power : 20kW	Complied	
	v. Power factor : ≥ 0.99	Complied	
	vi. Frequency Tolerance : 50Hz +/- 2%	Complied	
	vii. Current Crest factor: $\geq 3:1$ according to IEC EN 62040-3	Complied	
	viii. Total Harmonic content : 2% maximum at 100% linear load, 5% maximum at 100% non-linear load.	Complied	
	ix. Overload Capacity: 10 Min 125 % load rate with no bypass intervention 60 Sec 150 % load rate with no bypass intervention	Complied	

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t	Battery bank for each UPS Frame		
	i. Backup time: minimum 30 minutes with full 20kW load for each UPS frame	Complied	
	ii. One battery bank per frame using Mono Block VRLA-SMF batteries	Complied	
	iii. Total VAH Capacity of each battery bank shall be minimum 24500 VAH	Complied	
	iv. Capacity of individual battery in the battery bank: 12V, 65 AH Minimum., Type: C20	Complied	
	v. Battery Cabinet: a. Each Backup battery bank should be housed in separate powder coated metal cabinet/Enclosure with caster wheels lockable. b. It should have the provisions for sufficient air ventilations and door openings for battery maintenance. c. It should meet relevant safety standards	Complied	
u	Batteries		
	i. Battery type: All the batteries in the UPS shall be of Advanced Glass Mat - Valve Regulated Sealed Lead Acid Battery in Construction (AGM - VRSLAB), in ABS Flame retardant (UL94V-O) grade meeting UL 2436 specifications - spill containment for Lead acid batteries	Complied	
	ii. Make: Exide/Quanta/Rocket/Panasonic/CSB	Complied	
	iii. All the batteries in the backup battery bank shall be of same voltage and ampere hour capacity.	complied	
	iv. Batteries shall be fresh and shall not have completed more than 3 months shelf life on the date of supply.	Complied	
	v. All Battery used in the battery bank should be of the same Make, Model & Lot	Complied	
	vi. All the reference tables regarding conductance, internal resistance, discharge voltage, capacity, etc. shall be supplied.	Complied	
	vii. Batteries in battery bank shall be under warranty of Original Equipment Manufacturer (OEM) of the battery for Minimum 5 years	Complied	
	viii. Warranty card issued by the OEM shall be submitted in this regard	Complied	

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v	Battery Charger Type: PWM Hi Efficiency, one in each power module	Complied	Clarification required on whether battery charger is available in each power module
w	Communication Interface		
	i. Ethernet port for monitoring of UPS status	Complied	
	ii. Provision for remote monitoring of UPS status through TCP/IP and GSM	Not Complied	GSM not available
x	Environmental specs		
	i. Noise level @ 1m < 65 dBA	Complied	
	ii. Working temperature range from 0°C to +40°C @95% RH	Complied	
y	Provision of Control mechanism with appropriate indications to control UPS operation		
	i. Input ON/OFF, Output ON/OFF	Complied	
	ii. Maintenance Bypass Switch should be available to isolate load from UPS.	Complied	
	iii. Battery ON/OFF (Battery bank isolator)	Complied	
	iv. Local status and control through LCD mimic panel user interface.	Complied	
	v. Inbuilt Power factor correction facility	Complied	
	vi. Provision for remote status display, diagnostics and control through SNMP	Complied	
	vii. Audible alarms along with visual alarms on input/output/bypass failures and other warnings Local panel	Complied	
	viii. 19" rack mountable remote panel for status and audible/visual alarms on input/output/bypass failures and other warnings, through Ethernet connectivity	Not complied	Rack mountable not available
	ix. Synchronization control circuits, connection control circuits, disconnection control circuits	Complied	

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z	Monitoring and status display provisions		
	Input and Output status at local and remote locations	Complied	
	Display of RMS current, Peak value current, RMS Voltage, Apparent Power, Active Power and Power factor.	Complied	
	Internal temperature of individual power modules and ambient temperature.	Complied	
aa	Battery Management system: Charging Current, Discharging Current, Display of Battery Operation time, Residue capacity, Battery voltage and date and time of last battery calibration	Complied	
ab	Measurement and display provisions of historic data within the UPS Number of Bypass interventions, Number of thermal protection interventions with date and time, Number of battery commutations, Number of total discharges, Overall time of battery operation and overall time of mains operation	Complied	
ac	UPS protection circuitry		
	i. Built-in protection against :		
	ii. Under voltage	Complied	
	iii. Over voltage	Complied	
	iv. Over load/ Over current	Complied	
	v. Thermal protection	Not Complied	No supporting document
	vi. Deep battery discharge protection	Complied	

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ad	Standards and Certifications: UPS and its components shall comply with the relevant IEC/EN/UL or equivalent standards. (Valid third party lab test certificates are to be attached showing the product confirms to the specified test standards.)		
	Mandatory Standards for compliance:		
	i. IEC 62040-1: 2017 General safety requirements for UPS	Not Complied	Valid Certificates/test reports not attached
	ii. UL1778 standards for Uninterruptible Power Systems, 5th Edition (CSA C22.2-107.3-14)	Not Complied	Valid Certificates/test reports not attached
	iii. IEC 62040-2:2016 Test standard for electromagnetic compatibility (EMC) for UPS systems	Not Complied	Valid Certificates/test reports not attached
	iv. IEC 62040-3:2011 Performance and test requirements of UPS	Not Complied	Valid Certificates/test reports not attached
	v. ISO 9001 Certification for Manufacturing standards (OEM)	Not Complied	Valid ISO 9001 Certification for OEM of Isolation transformer not submitted
	vi. Relevant UL/EN/IEC/IS certifications for Batteries with test reports from IECEE/NABL/JIS accredited Labs.	Complied	
	vii. Relevant parts of IEC 61558 safety standards for Isolation transformers	Not Complied	Valid third party lab test certificates not attached
	Preferred Standards/Certifications:		
	i. FCC Part 15 Class A, EMC standards	---	-----
	ii. The unit's design shall comply with the applicable sections of codes by NEC, NEMA, OSHA standards	----	-----
	iii. Any other relevant CB Scheme certifications for the product obtained from an NCB of IECEE	-----	-----

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ae	Warranty		
	i. Minimum 5 Years of comprehensive onsite warranty for UPS Systems including isolation Transformers	Complied	
	ii. Minimum 5 Years OEM (OEM of Battery) Warranty for Batteries. (Refer attached onsite work schedule for UPS and Batteries on warranty period)	Complied	
af	Time schedule for SITC work SITC shall be completed within 60 days from the date of issue of work order.	Complied	
ag	CAMC Requirement 3 years Comprehensive AMC after the 5 Years Warranty period (Refer attached CAMC work schedule)	Complied	
2	LAPTOP COMPUTER		
	i. Processor: Intel core i5 8 th Gen Quad core, 2.3 GHz clock speed	Complied	
	ii. Memory: 8GB DDR4 RAM	Complied	
	iii. HDD: 128GB SSD + 1TB HDD	Complied	
	iv. Graphics: 4GB NVIDIA Graphics card	Complied	
	v. Screen: 15.6 inches, 1920x1080 pixels	Complied	
	vi. OS: windows10 Professional	Complied	
	vii. Make: HP/SONY/LENOVO/DELL	Complied	
	viii. Warranty: Minimum 1 year or as offered by OEM whichever is higher	Complied	
QUALIFIED/NOT QUALIFIED		NOT QUALIFIED	

No. of Technical bid Opened: 1

Name of the Bidder: M/s. Aviosat Technology Pvt. Ltd

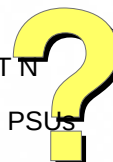
The bidder is not qualified as the products offered not meeting required technical specifications as per tender documents

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Signature Not Verified

Digitally signed by HARIDASAN EMBRAN T N
Date: 2020.12.11 15:51:55 IST
Location: eProcurement System for Central PSUs



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