

Date: 01.04.2021

Sub.: Comments on Draft STR for GPS location based Public Address System, PIS and LED destination Boards in LHB type AC & NON- AC Coaches
 Ref: This office letter no. MC/LHB Brake disc dated 20.08.2020

Comments/Remarks: General Description of GPS location based Public Address System, PIS and LED destination Boards in LHB type AC & NON- AC Coaches

CI #	Description	Comment of M/s VGS Technologies (SI No. -)	Comment of A Paul Instruments (SI No. -)	Comment of PT Communication (SI No. -)	Comment of M/s Signotron (S No.-)	M/s Sirveen control	RDSO Remark
	Cover page modified						Cover page modified as per ISO document CG-WI-4.2.1-1 ver 3 .1 dated 25.03.2021
1.1	<p>General:</p> <p>Following shall be applicable when this item appears in RDSO's vendor directory:</p> <p>"All the provisions contained in RDSO's ISO procedures laid down in Document No. QO-D-7.1-11 dated 19.07.2016 (titled "Vendor-Change in approved status") and subsequent versions/amendments thereof, shall be binding and applicable on the successful vendor/vendors in the contracts floated by Railways to maintain quality of products supplied to Railways."</p> <p>The Govt. of India policy on 'Make in India' shall apply.</p>						New para added
3.1.8	Scope of Supply: Network Switch and Wi-Fi access point Device Networking					Wi fi Access Point should be removed as no functionality has been included for this Access Point in the specification. MPU already has the provision for built-in Wifi access point (15.1.vii). This will take care of any required Wifi Communication with BMU.	Para No. 3.1 (8) modified

14.1.1							Modified as marked in red colour to make more clear
14.2						BMU should have static IP. Regular 4G will not work. SIMs installed in coaches cannot contact BMU without a static IP. GPRS modem should therefore be removed.	No changes required at this stage, as this item is optional
						Static IP to be provided by Railways. Only Railways has authority to provide static IP in stations/control rooms	
14.6.2	<p>Physical Dimensions: Based on provisions available in coaches, indicative sizes are as under:</p> <p>B) LED display (two lines) of 64 x 16 LED matrix (5-8 mm pitch) approx. size 400 mm x 300 mm x 45 mm</p>					400MM is very small to show messages. It will be difficult to read messages. 550MM would be preferable.	Not agreed as it this dimension is approximate
14.6.5	LED Color Amber				<p>Electrical Properties of LED</p> <p>Max. Peak forward current (1/10 Duty cycle same pulse width) [I_{fs}] shall be within 120 mA.</p>	Should remove colour. Wavelength range is good enough. Restricting the colour description to Yellow or other colours causes	Type LED and Colour removed and wavelength revised. Change in Electrical properties is not acceptable, as desired rating LED is available. Data sheet attached.

					<p>Reason- Electrical Properties of LED</p> <p>Max. Peak forward current (1/10 Duty cycle same pulse width) [I_{fs}] shall be within 200 mA or 240 mA .</p> <p>Because For DC forward current of 50 mA Max. Peak forward current will be 200 mA . Datasheet enclosed for reference</p>	problem with RITES inspection.	
15.1 (iii)						RAM minimum 1GB soldered on board/SODIMM/any equivalent memories with proper fixing facility	Para modified accordingly
15.1 (iv)	8 GB flash disk or better	In main processing unit clause No. 15.1 (iv) 8 GB flash disc or better mentioned by RDSO and in clause 15.1 (v) internal 128 GB of mSATA SSD , this can be accommodated as flash disc no need of 8 Gb.					Not accepted considering safety and reliability of system
15.1 (v)	1 mSATA internal SSD of minimum 128GB ; two removable SSD slots for accommodating upto 2TB SSDs	Reason- Ubuntu and any other Linux distribution versions are not fit to 8 Gb Memory more than 16 GB of memory is required. So mSATA is enough to solve our requirement.					Para modified
15.1 (vii)	Built in/external Wi-Fi module compliant to IEEE: 802.11 n/ac or later standards			Built in /external Wi-Fi module to be optional because in present scenario it is not in use till base monitoring unit at depot become operational.			Not agreed , system has facility so BMU can be make functional as and when available.
15.2 (iv)	IP65 protected mechanical enclosure with 3mm polycarbonate sheet with silicon hard coating having more than 85% light transmission properties	3mm polycarbonate sheet with silicon hard coating is more expensive so 3mm polycarbonate with UV protection should be fine.					Not accepted
15.1 (xv)	MPU Dimension: Maximum dimension of the system shall be 370mmX260					Maximum dimension for MPU is OK, but	Noted

	mmX140mm along with provisions for DIN Rail mount on wall I rack or mounting of the system to VESA 75 standard					with mounting brackets, it should be changed to 485x260x140mm (These dimensions will fit in the existing Switch Board Cabinet slot, and the drawings are approved by RCF, Kapurthala)		
15.4 (1)	Size : Slave PIS LCD Display 10 inch for 1 st AC coupe					This shall be 10 inch or 10.1 inch for 1 st AC coupe . As 10.1and 10 inch both are standard and 10.1 is more available with better specification This shall be 16:9 or 16 :10	Accepted modified accordingly Modification in ratio is not acceptable due to uniformity of system.	
15.4 (4)	Contrast ratio 1500:1 or better		For 18.5 inch Display, contrast ratio 1000:1 (Typical) For 10.1 inch Display , further availability of suitable LCD has contrast ratio 800:1 (typ) and Resolution 1280X800 or better	Contrast ration to be 1000:1 (typical in order to availability of panel in market		This shall be 1366X768 or 1280 X800 or better . Because 1280X800 is also HD. This shall be 1000 :1 or better . As 1500 :1 are not generally available with the specified requirements . Also for display monitors 1000:1 are widely used. For 10 inch 16 M colour is not generally available . So for 10 inch Display color shall be 262 K	The specification mentioned is very difficult to get. Change in specs is needed to get multiple sources, and to make sure that Indian Railways and its vendors do not depend on just one source for this critical product. Changes Required: For both 18.5 and 10 inch LCD screens Screen Size: Tolerance of +- 0.5inch to be included. Contrast Ratio: Remove item or minimum 700 LCD Resolution: 1280x800 or better	Accepted- modified as – for 18.5 inch display Typical contrast ratio- 1000:1 or Better for 10.1 inch display Typical contrast ratio- 800:1 or better and Resolution 1280X800 or better. Regarding 16 M colour , the panel is available hence need not modify.
15.7 (i)	8 Port PoE 10/100/1000Mbps network "Active type" Compliant to IEEE802.3 af/at having M12 Connectors. Switch.....	Managed (active type) Ethernet switch is more expensive so Unmanaged Ethernet switch should be fine to serve our purpose.	Rational: Ethernet switch : you have specified 10/100/1000 for all POE ports. Typically, most POE ports are 10/100 for such applications to support the LCD and Cameras etc. Suggestion: We request that ports	8 Port PoE 10/100Mbps Ethernet switch is sufficient for single coach functionality		10/100/1000 Mbps POE is mentioned in spec in some lcoations, while other areas mention 10/100.10/100 is more than sufficient for our application. There are no systems that can run just from this network	Accepted- modified as – 8 Port PoE 10/100Mbps or better . Comment of M/s VGS is not accepted.	

			should be defined as 10/100 Mbps or better			switch POE. 10/100/1000 POE significantly increases the cost of the product without any benefit. Description should be changed to "8 Port 10/100 Mbps network compliant to IEEE802.3 having M12 connectors".	
15.7	Wifi-Access Point					Should be removed as no functionality is included in the specification. MPU wifi communication can still occur with the inbuilt Wifi Access Point within MPU (15.1.vii). This will take care of any required Wifi Communication with BMU.	Not agreed, as discussed above
15.8 (v and Vi							Modified to make more clearly
15.1 0.1	Circular M12 connector, 4 pin A coded crimp connector according to IEC 61076 2-101 for power supply where separate power is required					A-coded M12 connectors are 4A max only. In the 15.14, Audio amplifier requirement is a minimum of 80W. For this we need 24V/6A Power Supply. Therefore, for the connector from Power Supply Unit to MPU, we suggest MS (Military Standard) Circular Connectors or M12 Power Connectors	Not agreed
15.1 0.4	Connecting cable for all subsystem shall be provided with male crimp connector	Please include the soldered version of the M12 connectors which is cost effective and performance remains same please specify more vendors (Hi Tech connectors from Hyderabad).	Rational: Crimping of connectors at site causes delay in installation and increases probability of wrong connections due				Not accepted considering safety and reliability of system.

		Reason- No M12 connectors of crimp type are made in India, all are imported.	to human error whereas each overmolded connectors are tested at manufacturer's facility before dispatch as a standard practice. overmolded connectors drastically reduce installation errors. Suggestion: Crimped M12 connectors are specified. We recommend "Crimp or over molded M12 connectors"				
15.1 0.5	All the connectors shall be of reputed make either from WAGO/ Phoenix / Weidmuller / Amphenol / Harting/ Allied Electronics corporation etc					Please add "Katlax, and similar" to the list of Approved vendors	The name of supplier is indicative. The etc also mentioned in specification.
15.1 1	Class D surge protection device	In power supply the surge protector device. Instead of the class D please permit to use the class C for cost effective solution with SAE standard IEC 616643-11-2011. Class D is 3 times the price of class C					Not accepted considering safety and reliability of system.
15.1 4	Technical details for amplifier: • Power Output : 80W	Instead of 80 W RMS Amplifire 20W to 30 W Amplifire is also cost effective solution. And performance wise same. And 80 W RMS Amplifire is more cost and burden to the power supply.					Not accepted, as it requires to 8 speakers in each coach.

15.1 5	EPB Unit Technical Specification					Currently, once activated, there is no specified 'STOP' time. It is advised that the specification be amended to include emergency announcements for 5 times before the system automatically resets	New clause added-
CL 17.2 .1 Type Test					Sample size / No of each unit or subsystem like LCD Display unit , LED display unit for prototype inspection shall be mentioned in the specification to avoid any confusion		IS 2500 is mentioned for inspection and sampling criteria.