

Rail Coach Factory, Kapurthala

MD46421

Date: 10.10.16

Sub: Combined procurement of infotainment system + PIS + LED Destination Board

Ref: GM's approval regarding procurement of combined system by Mechanical Department.

It has been decided that procurement of infotainment system + PIS + LED Destination Board will be dealt by Mechanical Design (in single PL). Individual procurement of infotainment system, PIS and LED destination board is to be discontinued for further two rakes of Tejas.

Procurement action, as combined system, may please be taken for next two rakes of Tejas as per specification MDTs 24297 Rev-00 (copy enclosed). Following specifications shall also be given alongwith the tender:

- For Passenger Information system RDSO specification no. RDSO/PE/SPEC/AC/0087-2008 (Rev-01).
- For LED destination boards shall be as per RDSO specification no. RDSO/2013/CG-05.

The description shall be as under:

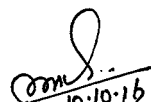
1. For 2nd AC Chair Car:

Infotainment system alongwith PIS and LED destination board (without seats) as per specification MDTs 24297 rev-00. Each set consist of: 78 nos. LCD/LED, one server controller nos, LED destination board 2 nos and PIS-2 nos. However, other requirements such as wiring, ducting etc. mentioned in the specification shall be in the scope of supply.

2. For Executive AC Chair Car:

Infotainment system alongwith PIS and LED destination board (without seats) as per specification MDTs 24297 rev-00. Each set consist of: 56 nos. LCD/LED, one server controller nos, LED destination board 2 nos and PIS-2 nos. However, other requirements such as wiring, ducting etc. mentioned in the specification shall be in the scope of supply.

Eligibility criteria shall be as mentioned in the specification.


(Lalit Kishore)
Dy CME/D-1



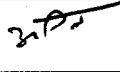
Encls: as above


Dy CPLE-II Dy CMM/E/HQ/TKJ


Copy for kind information to:

CDE CEDE CPLE CMM/TKJ

SPECIFICATION No. MDTS 24297 Rev-Nil	Specification for Infotainment System + PIS + LED Destination Board	Date 06.10.2016 PAGE 1 OF 7
---	--	--------------------------------

<i>Name</i>	<i>Designation</i>	<i>Signature</i>	<i>Date</i>	<i>Level</i>
Aman Bhardwaj	SSE/ SD		6.10.16	Prepared
Lalit Kishore	Dy.CME/D-1		6.10.16	Agreed & Reviewed
A. K. Kathpal	CDE		6.10.16	Approved


Prepared by


Agreed by

SPECIFICATION No. MDTS 24297 Rev-Nil	Specification for Infotainment System + PIS + LED Destination Board	Date 06.10.2016 PAGE 2 OF 7
---	--	--

1. Preamble:

1.1. This technical specification covers the general conditions, technical requirements, inspection, testing procedures, repair and maintenance services to be provided during the warranty period for combined procurement of Infotainment System + PIS + LED Destination Board. The functional requirements of Passenger Information system shall be as described in RDSO specification no. RDSO/PE/SPEC/AC/0087-2008 (Rev-01). The functional requirement of LED destination boards shall be as per RDSO specification no. RDSO/2013/CG-05.

2. Eligibility Criteria:

2.1. The tenderer must submit detailed clause-wise comments on the specification. In absence of above, offers shall be deemed as incomplete and may not be considered.

2.2. The tenderer meeting any of the following criteria shall qualify:

2.2.1. The integrators who have successfully executed work of supply, installation and commissioning integrating electronics system of various suppliers for more than 150% value of the cost quoted by them in this tender. However, sourcing of these items shall be made from those vendors who comply the eligibility criteria laid down in specifications of three items required to be integrated in one system.


2.2.2. The tenderer having experience of successful supply, installation and commissioning of infotainment system in Indian Railways/International Railways. However, sourcing of other two items shall be made from those vendors who comply the eligibility criteria laid down in respective specifications.

2.2.3. The tenderer having experience of successful supply, installation and commissioning of PIS system Indian Railways/International Railways. However, sourcing of other two items shall be made from those vendors who comply the eligibility criteria laid down in respective specifications.

2.2.4. The tenderer having experience of successful supply, installation and commissioning of LED destination board system Indian Railways/International Railways. However, sourcing of other two items shall be made from those vendors who comply the eligibility criteria laid down in respective specifications.

2.3. The tenderer shall submit the details of:


Prepared by


Agreed by

SPECIFICATION No. MDTS 24297 Rev-Nil	Specification for Infotainment System + PIS + LED Destination Board	Date 06.10.2016 PAGE 3 OF 7
---	--	--------------------------------

- 2.3.1. Successful supply of installation and commissioning of offered system to Indian Railways/International Railways.
- 2.3.2. Performance of the installed systems. Supporting documents/certificates from the organization, for which they worked/are working, should be enclosed.
- 2.3.3. Infrastructure for satisfactory installation, repair and maintenance of the systems. RCF may carry out physical verification of the same, if required.

3. Scope of supply:

3.1. The infotainment system shall consist of following major components:

- 3.1.1. 9" to 10.5" LCD/LED touch HMI screens
- 3.1.2. Server controller for infotainment on demand i.e. pre recorded media
- 3.1.3. Integration with available Public announcement system
- 3.1.4. Passenger Information System to be displayed on each screen
- 3.1.5. GPS based LED destination board
- 3.1.6. Redesigned centre table with arrangement for mounting of LCD screen
- 3.1.7. One time supply of Over the ear Headphones for each seat
- 3.1.8. Necessary accessories like cables, duct, etc.

3.2. LCD/LED touch HMI screens

- 3.2.1. The 9-10.5" TFT panel with LED backlight screen shall be housed in shroud (rigid plastic frame) and having a minimum tilt mechanism of 30 degree. The resolution of the LCD/LED touch HMI screen should be minimum 800x480 dpi and it should be able to decode upto 1024x600. The screen should be of industrial grade and sturdy enough to withstand normal usage. It should also be provided with anti finger & glare coating.
- 3.2.2. The input power to the screens should be through PoE (Power over Ethernet). It should not require separate power connection. The screen should be equipped with 3.5mm earphone jack. Hard button for power off/on, contrast, brightness, volume control/mute should be provided on the screen panel.
- 3.2.3. Necessary cut outs in the backrest and conduits for wiring shall be made available in each seat. The firm shall provide shroud in the cut out and install the screen in it.
- 3.2.4. For passengers with central table, LCD screen are to be provided on the table with suitable arrangement. The design and supply of the table shall be in the scope of supply of the firm. The design of the table shall be approved by CDE/RCF.


Prepared by


Agreed by

SPECIFICATION No. MDTS 24297 Rev-Nil	Specification for Infotainment System + PIS + LED Destination Board	Date 06.10.2016 PAGE 4 OF 7
---	--	--

3.3. Server controller for infotainment on demand

- 3.3.1. Each passenger should be provided with pre-recorded media contents in the form of movies, music and documentaries through a server controller. The server controller should be able to support upto 80 LED TFT screens. Each screen should be connected with server controller on Ethernet cable via hub and passenger should be able to select recorded media contents through interactive menu on touch screen. The system should be designed on Linux/Android/Windows platform.
- 3.3.2. Wiring from server controller to each screen shall be routed through channels on the sidewall panels. The channels are to be designed and supplied by the firm.

3.4. Public announcement system

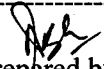
- 3.4.1. The system should have feature for audio/video announcement which shall be broadcasted from a centralized location.
- 3.4.2. The feed from public announcement should override the contents being played on each screen.

3.5. Passenger Information system (PIS):

- 3.5.1. The infotainment system should have provisions for display of Passenger information on a separate channel. The Passenger information system shall be GPS based and mapping of identified routes is to be carried out by the supplier, where the coaches shall be running.
- 3.5.2. The functional requirements of Passenger Information system shall be as described in RDSO specification no. RDSO/PE/SPEC/AC/0087-2008 (Rev-01). All the announcement and display is to be made available on the screen installed on the back rest. As such, there are no separate requirements of LCD screens and speakers, to be installed inside coaches.
- 3.5.3. The supplier of infotainment system shall source the above PIS from the sources who have successfully supplied similar PIS system to Railways in past.

3.6. LED based Destination Board:

- 3.6.1. Each coach is to be provided with LED destination boards to RDSO specification no: RDSO/2013/CG-05. The installation, supply and commissioning of will be in the scope of supply of firm.


 Prepared by


 Agreed by

SPECIFICATION No. MDTS 24297 Rev-Nil	Specification for Infotainment System + PIS + LED Destination Board	Date 06.10.2016 PAGE 5 OF 7
---	--	--------------------------------


3.7. Other Features:

- 3.7.1. The pre recorded media contents shall be provided by Railways. The system should have adequate security provisions so that un-authorized persons cannot play any other media on it. The firm may offer provision of games as an optional feature.
- 3.7.2. Each screen has to be provided with an USB port for charging of mobile phones.
- 3.7.3. The firm may offer optional add-on features such as FM Radio, weather information, etc..
- 3.7.4. The tenderer may offer the system which could be having support for introduction of features like - feedback mechanism through the interactive interface where individual passenger can provide feedback with regards to on board catering services, general cleanliness, working of infotainment system, staff behaviour etc.
- 3.7.5. One time supply of 'over the ear' headphones of reputed make for each of the passengers should be made by the firm. Further, it is proposed to provide disposable headphones to passengers for each journey.
- 3.7.6. Total electrical load for the above system shall be advised by the firm. Space near pantry or above the luggage rack in passenger compartment shall be provided for mounting of infotainment equipments.
- 3.7.7. Firm would be required to submit complete details of the system to CDE/RCF before prototype supply.
- 3.7.8. The offered system should have provisions for retro-fitting of live TV facilities at later stage. The live TV facility shall comprise of satellite dish antenna to be installed on roof of the coach and set up boxes. The general guideline for the same are as below:

3.7.8.1. Satellite dish antenna:

One low profile auto tracking satellite antenna shall be installed on the roof of the coach which shall be sufficient to cater the requirements of live TV for all the passengers. The antenna should be able to rapidly track satellite reception at higher speeds (upto 200 kmph). The signals from the antenna shall be brought inside the coach through a coaxial cable to central signal distribution point. The power consumption of dish antenna should not be more than 50 Watts. The weight and overall dimension of the satellite antenna


 Prepared by


 Agreed by