

## Technical Specifications

## 1. Supply :

- (a) **E1 to Serial Port Converters** - as per RDSO/LKO letter No.STS/E/Data logger/Vol. XX, Dt. 12.09.2011 ::
- DTE SIDE: Asynchronous (RS232)
  - D-Type connector supportable to a baud rate between 9600 & 57600 bits/sec.
  - DCE SIDE: 4 WIRE e1 COMMUNICATIONS (g.703) Line speed 2 MBPS.
  - Line Impedance : 120 Ohm/75Ohm
  - Connector : RJ-45 or BNC
  - POWER SUPPLY RATING : 16V to 30 VDC or 230V AC
  - Make : Anda Make/equivalent.

These converters can be in-built or external.

(b) **E1 Extender** :

- Operating Voltage: - 48VDC for STM end / + 24VDC for data logger end.
- Operating Temperature:- -10°C to 70°C.
- Distance :- 2Km at 2mbps.
- Make :- RAD or equivalent.

(c) **PC** - as per RDSO/LKO letter No.STS/E/Data logger/Vol. XX, Dt. 12.09.2011 :

- Intel Core i7-860 2.8GHz, 8MB, cache or latest
- 2 GB Memory or as required for latest OS and application software
- 500 GB Hard Drive
- Dual Gigabit Ethernet ports
- 2 Serial Port
- Keyboard (USB)
- Mouse (USB Optical)
- Windows 7 Professional OS
- Kaspersky Antivirus
- 22" TFT Monitor-1No
- Make : HP/IBM/DELL

(d) **UPS** - 230V/1KVA offline UPS with 30minutes back up for one PC. Make : APC/Emerson/Numeric**NOTE:**

- One additional **PCI-VGA** card to be procured for PCs provided in the **test room**.
- One 40 inch monitor to be procured for signal monitoring of each section consisting of about 32 data loggers.
- One 22 inch monitor along with a KVM Switch to be procured for data logger network monitoring for each section.

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2. Installation and commissioning :

- (a) Supply of required quantity of 1 X 0.6 mm jumper wire as per specification no. IRS-76/89 (Amdt.-III) or latest and 200 way tag block as per Spec. No. IRS-S-77/2006 (Rev.-I) duly inspected by RDSO.
- (b) Supply of required quantity of 60 core & 40 core indoor cable as per RDSO Spec. No. IRS-76/89 (Amdt-III) or latest duly inspected by RDSO and wiring from tag block to data logger including packeting, lacing, threading, etc. of indoor cables.
- (c) Power supply wiring from IPS room to the datalogger with firm's own cable and dressing materials.
- (d) Earthing of Datalogger equipment from existing nearby Earth Bus Bar in IPS room/Relay room using a copper tape of 15mm X 1mm size with firm's own materials.
- (e) Jumpering from relay tag blocks to datalogger tag blocks on IDF shall be done by Railways using the jumper wires of the supplier.
- (f) Networking with existing (EFFTRONICS MAKE) FEP in Divisional Control office, testing & commissioning of Data logger. Wherever 'T' networking is not required, the E1 to Serial port and E1 Extender pair meant for the same shall be handed over to the consignee for future use as spares. This includes programming of Data logger for fault diagnostic (as per guidelines issued vide RDSO Letter no. STS/E/Data logger/Vol.-XX dated 12.03.2011 & extent practice of WCR) in suitable structured language.

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