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| अस्त इलेक्ट्रांनिक्स ACCEPTANCE | ACCEPTANCE TEST PROCEDURE |             |         |             | HIGHER ASSY<br>NO. 1723 003 | 105 17    |
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**PROJECT: GBMES** 

# FOR ACCE RUGGED MONITOR 19"

BEL Part No: 4461 722 603 28

(Designed by BEL - Hyderabad)

| Prepared By<br>BEL-Hyderabad | Checked By<br>BEL QC - Hyderabad |
|------------------------------|----------------------------------|
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|                              |                                  |
| Ap                           | proved By                        |

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| भारत इलेक्ट्रॉनिक्स |
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| BHARAT ELECTRONICS  |

## **ACCEPTANCE TEST PROCEDURE**

DOC CODE

PART NUMBER 4461 722 603 28

ATP

HIGHER ASSY NO. 1723 003 105 17

**ACCE RUGGED MONITOR 19"** 

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This document describes the procedure for carrying out Acceptance Tests on ACCE RUGGED MONITOR 19"

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#### 1.0 INTRODUCTION:

This document outlines the procedure for conducting ACCEPTANCE tests for the RUGGED 19" MONITOR which is an accessory of LCD DISPLAY WITH KEYBOARD & TRACKBALL of GBMES system.

This item is listed under SI .No.14 of Manufacturer's Recommended List of Spares (MRLS) in the contract for GBMES systems.

This item is being supplied by M/s Datasol Pvt Limited, Bangalore.

## 1.1 Brief Description:

The IDS-3119 Embedded Open Frame Monitor series offers flexible options for LCD, signal interface and chassis mounting. Resolution supports up to1280 x 1024 .Dual signal interface with VGA & DVI .The series supports rear and VESA mounting. The integrated brackets bring the benefits of easy installation and provide flexibility for different applications.



Fig-1: Image of RUGGED 19" MONITOR

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#### 1.2 REFERENCE DOCUMENTS

- 1.2.1 QTP Document Ref: QTP for p/no. 4461 722 601 34 ver P1, dtd 10.06.16
- 1.2.2 ESS Tests: COC from OEM
- 1.2.3 MDI/BOM Part no: Not applicable
- 1.2.4 BEL PO No.. BEPO / HD4 / 4000057921 dated 05.04.2016
- 1.2.5 Approved Specifications are as per BEL PP drawing.
- 1.2.6 Contract No. AIR HQ/S/96135/69/1/ASR Dated 31/07/2015.
- 1.2.7 SOFTWARE CERTIFICATION Not applicable
- 1.2.8 FAILURE ANALYSIS Refer Appendix-A
- 1.2.9 MTBF Value of the Sub Assy: Ref BEL letter no. 4706/07/12 dtd 19<sup>th</sup> Aug 2016 to AHQ.
- 1.2.10. Packing Drawing No: 9672 001 084 83
- 1.2.11. Delivery Set List: Enclosed at Annexure B.

#### 2.0 TEST EQUIPMENT REQUIRED:

i. CPU of a standard PC - 1 No. (Straight)

ii. Power cables - 2 Nos.

iii. Video cable - 1 No.

iv. USB Cables - 2 Nos.

#### 3.0 PHYSICAL INSPECTION:

#### 3.1 Visual:

- 1. Check the Display for any damages
- 2. Check if the power circular connector is properly mating at the Display end and also clearly inserted at the power socket.
- 3. Check all the connectors power & signal for any loose pins/wires.
- 4. Note down the result in TDR-1.

#### 3.2 Dimensions & Drawing Verification:

Physical inspection of the unit is to be carried out wrt dimensions, mounting and other details as per drawing and note down the measured dimensions in TDR-1.

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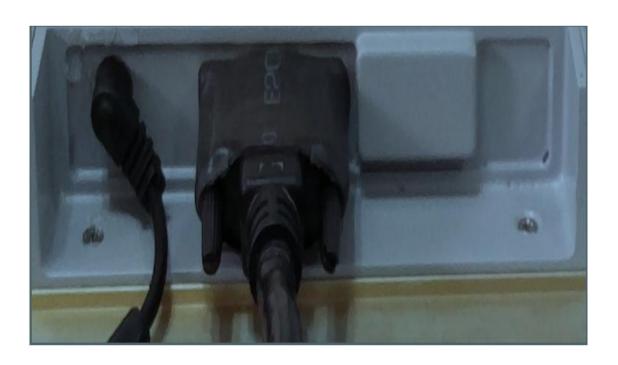
## **Dimensions:**

The following are the dimensions of the Rugged Monitor 19":

| SI.No | Description | Specified Dimension(mm) |  |
|-------|-------------|-------------------------|--|
| 1     | Width       | 425 ± 1                 |  |
| 2     | Height      | 40 ± 1                  |  |
| 3     | Rear Depth  | 370 ± 1                 |  |
| 4     | Front Depth | 400 ± 1                 |  |
| 5     | Weight      | < 6Kgs                  |  |

## **4.0 FUNCTIONAL TEST PROCEDURE:**

1 Connect the DVI cable from PC to Display and give the 12V Power Supply to Display.



## **ACCEPTANCE TEST PROCEDURE**

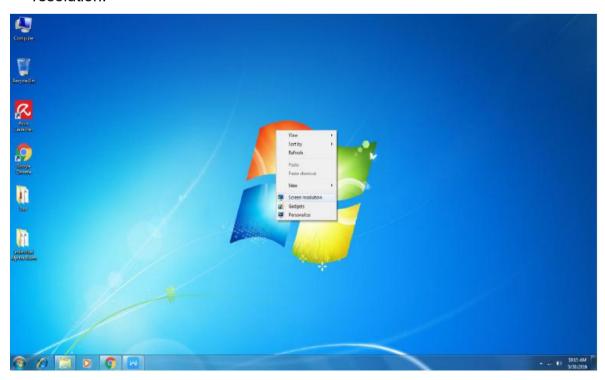
**ACCE RUGGED MONITOR 19"** 

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2 After switching ON the power to Display & PC check the system gets booted and display seen on the screen.

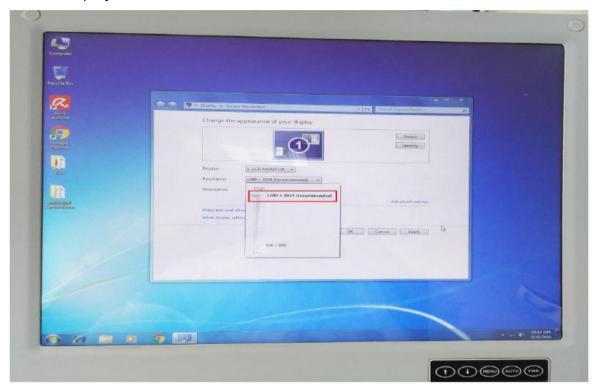


3 To check the resolution Right click upon the Desktop and select the Screen resolution.



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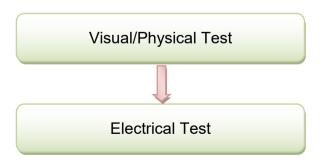
4 Set the Resolution up to 1280 X 1024 and check if the set resolution is supported and displayed on the screen. Note down the results in TDR-2.



5 After checking, shutdown the system and switch off the Display Unit.

## **ENVTRONMENTAL STRESS SCREENING (ESS):**

As the item is an LCD monitor, ESS shall not be done on the unit.



### Flow Chart for ATP

**5.0 Defect** / Failure Analysis: Defect/failure investigation is to be done, entered in the format mentioned in Appendix-A for any failure during any of the tests and to be filed with the results.

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## **TEST DATA RECORD-1**

| Sl.no.  | Date: |
|---------|-------|
| J1.110. | Date. |

**Test condition:** 

## 1. PHYSICAL INSPECTION

| S.No | Test                              | Requirement           | Result     |
|------|-----------------------------------|-----------------------|------------|
| 1    | Display damages check             | No damages            | OK /NOT OK |
| 2    | All the connectors power & signal | No loose pins / wires | OK /NOT OK |

## 2. Dimensional Check For Display

| S.No | Description | Specified Dimensions(mm) | Measured Dimensions(mm) | Result     |
|------|-------------|--------------------------|-------------------------|------------|
| 1    | Width       | 421 ± 0.5                |                         | OK /NOT OK |
| 2    | Height      | 39 ± 0.5                 |                         | OK /NOT OK |
| 3    | Rear Depth  | 370 ± 0.5                |                         | OK /NOT OK |
| 4    | Front Depth | 400 ± 0.5                |                         | OK /NOT OK |
| 5    | Weight      | < 6Kgs                   |                         | OK /NOT OK |

RESULT : OK / NOT OK

OEM .Rep BEL-QA.Rep DGAQA Rep

|   |            |         |             |         | CODE      | PART NUMBER 4461 72         | 22 603 28 |
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| भारत इन्नेक्ट्रांनिकस<br>BHARAT ELECTRONICS | ACCEPTANCE | TES     | PROCE       | DURE    |           | HIGHER ASSY<br>NO. 1723 003 | 105 17    |
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## **TEST DATA RECORD-2**

| Sl.no. | Date: |
|--------|-------|
| Si.no. | Date: |

**Test condition:** 

## **FUNCTIONAL TEST:**

| S.No | TEST  | REQUIREMENT                  | RESULT      |
|------|---|------------------------------|-------------|
|      | Functionality of Display:                             | Observe:                     |             |
| 1    | System booting display seen on the screen of Display. | Resolution up to 1280 X 1024 | OK / NOT OK |

RESULT : OK / NOT OK

OEM .Rep BEL - QA.Rep DGAQA Rep

|   |            |                           |             |         | DOC<br>CODE | PART NUMBER 4461 72         | 22 603 28 |
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# Appendix A

| DIR<br>Defect           | Unit Description:    |         |            |      |     |  |  |  |
|-------------------------|----------------------|---------|------------|------|-----|--|--|--|
| Investigation<br>Report | Unit SI. No.:        |         |            |      |     |  |  |  |
| DI NO.                  | TYPE OF MODIF        | ICATION |            |      |     |  |  |  |
| DATE:                   | H/W                  | S/W     | N/A        | ВОТН | N/A |  |  |  |
| S/W VERSION: N/A        | L                    | 1       | CHECK SUM: |      |     |  |  |  |
| PROBLEM REPORTE         | :D DURING:           |         |            |      |     |  |  |  |
| PROBLEM DESCRIP         | PROBLEM DESCRIPTION: |         |            |      |     |  |  |  |
| MODULE / COMPONE        | ENT AFFECTED:        |         |            |      |     |  |  |  |
| DEFECT ANALYSIS 8       |                      | EM:     |            |      |     |  |  |  |
| REPAIR / REMEDIAL       | ACTION:              |         |            |      |     |  |  |  |
| FOLLOW UP ACTION        | l:                   |         |            |      |     |  |  |  |

OEM .Rep BEL Design Rep BEL-QC.Rep DGAQA Rep