Transduction

Nuclear & MIL VDU

TR-VDU-8000

TR-VDU-8000 Class 1E Visual Display Unit

Features

- Class 1E Visual Display Unit for monitoring and emergency shutdown of nuclear reactors.
- Consists of TR-MAXIM-NS computer server and TR-LCD1900-NS rack/panel mount monitor with resistive touch screen.
- Rugged steel zinc plated chassis with baked epoxy paint designed to pass Seismic and EMI/ Environmental certification tests.
- Two Intel Dual Core L5138 2.13GHz Xeon processors with parity on Front Side Bus.
- Internal air flow monitored and controlled with PWM air fans.
- Up to 16GB of parity ECC memory.
- DVI display adapter.
- 2 x fibre type 100 Mbps Ethernet ports or RJ45 (f/10/100Base Tx ports).
- 2 x SLC Flash 32 ~ 256GB high speed solid state drives.
- 19” panel/rack mount LCD monitor (TR-LCD1900-NS) with 1280 x 1024 resolution and LED backlight.
- Universal AC input 90 ~ 240V, 50 ~400Hz.
- Operating range of temperature 32ºF ~ 130ºF with 100% software load.
- Meets MIL-STD-810Fand DEF-STAN 08-123 requirements, EMC compliance to DEF-STAN 59-41 and MIL-STD-461E.
- Actual MTBF > 100,000 hours.
- Longevity of supply is 5 years with strict revision control. Warranty is 5 years.

TRANSDUCTION 5155 Spectrum Way, Bldg 23, Mississauga, ON L4W 5A1
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Specification

Designed for Compliance with Class 1E regulatory requirements for nuclear power plants. It meets MIL-STD-810F and DEF-STAN 08-123 requirements, and EMC compliance to DEF-STAN 59-41 and MIL-STD-461E.

TR-VDU-8000 VDU consists of the TR-MAXIM-NS computer server with two Intel Xeon Dual processors and TR-LCD1900-NS rack/panel mount monitor with resistive touch screen. Both units have been designed for maximum reliability to meet specifications of the current standards for VDUs to be used in the nuclear power plants and military applications. Interconnecting cables are included.

Operating range of temperature of the TR-VDU-8000 is 100% software load at 32ºF ~ 130ºF.

The test compliance of the TR-VDU-8000 includes:

1. Radiation up to 1000 RADS – all materials radiation and flame resistant
2. OBE and SSE Seismic tests and MIL-STD-810F
3. MIL-STD 461 E (Requirements For The Control Of Electromagnetic Interference Characteristics Of Subsystems And Equipment): sections CE 101, CE 102, RE 101 and RE 102 (emission)
4. IEC 61000-4-6 low frequency conducted susceptibility (power supplies at 110V and 220V 50/60 Hz)
5. IEC 61000-4-15 common mode conducted susceptibility (power supplies at 110V and 220V 50/60 Hz)
6. Radiated susceptibility: IEC 6000-4-3, IEC 61000-4-8, IEC 61000-4-9, IEC 61000-4-10
7. 48 hour elevated temperature to 130ºF
8. Electrical safety to UL-C and CE standards

Transduction has 35 years experience with design and manufacturing of highly reliable industrial computer systems. Our computers work 24/7 in some of the most responsible installations in the nuclear power plants, electrical utility substations, process control and telecom and thousands of various applications to include US submarines, aircraft carriers and destroyers. We specialize in manufacturing of reliable, high quality computers with long term supply and most of all long term service support. For example during the last 20 years our computers guide oil tanker ships with radio beacons via Egyptian Suez Canal without any faults. Another example is control of paid highways where few hundred of our computers work 24/7 over 10 years without any faults. Please call Transduction when you need reliable, high quality computers with long term supply and most of all long term service support.

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MTBF of the TR-MAXIM-NS computer server is in excess of 100,000 hours and MTBF of the TR-LCD1900-NS monitor is 50,000 hours, limited only by the life of LED backlight used in LCD module. Longevity of supply is 5 years with strict revision control. Warranty is 5 years from the date of shipment.

TR-MAXIM-NS computer server for nuclear applications

- Rugged steel zinc plated chassis with baked epoxy paint designed to pass Seismic and EMI/Environ mental certification tests
- Two Dual Core Intel L5138 2.16 GHz Dual Core Xeon 8MB L2 processors with parity Front Side Bus
- Parity ECC memory up to 16GB
- DVI video adapter
- 2 x fibre type 100 Mbs Ethernet ports or RJ45 (f/10/100Base Tx ports)
- 2 x SLC flash 32 to 256GB high-speed solid state drives
- 3 x front USB ports, 1 x rear USB port for TR-LCD1900-NS monitor
- Fused 12VDC power output for the TR-LCD1900-NS monitor
- PWM air fan control and alarms. Proportional fan control up to 104ºF
- Full speed 104ºF ~ 130ºF
- Dual redundant load sharing 800W power supplies with over voltage and under voltage protection, alarm on failure of each voltage with thermal shutdown at 140ºF
- Universal AC input 90 ~ 240V, 50 ~ 400 Hz
- 2 x power cords, one for each input – for dual AC phase connections
- Front panel key lock ON/OFF switch and Power ON, DISK LED's
- Software compatibility: Windows XP Pro, Windows 2003 and QNX

TR-LCD-1900-NS 19" 4:3 LCD monitor for nuclear applications

- 19" Rack Mount or Panel Mount versions
- Rugged steel zinc plated chassis with baked epoxy paint
- LCD resolution 1280 x 1024 with LED backlight
- Brightness 550 cdm
- Resistive type touch screen
- Optional front panel OSD controls
- 10 feet 12VDC power, DVI and USB cables

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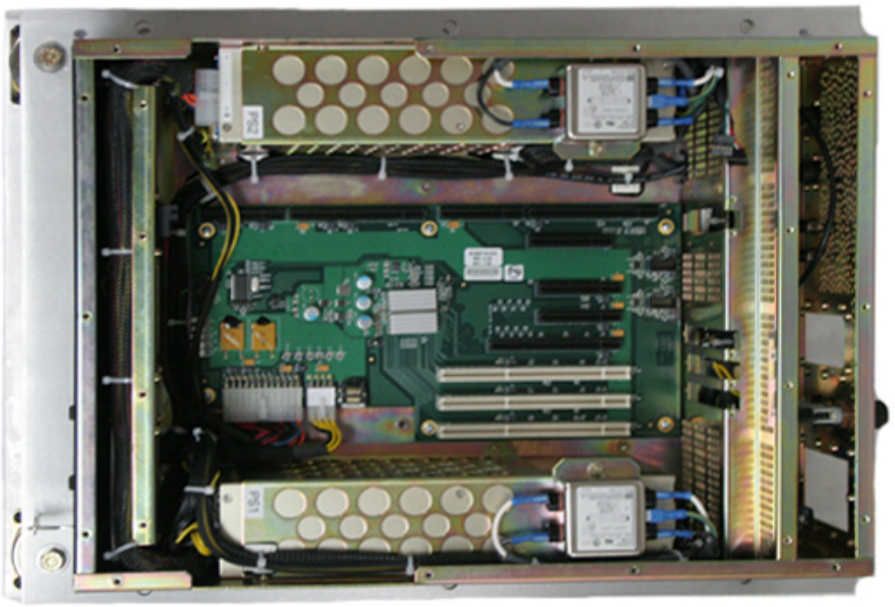
Special Features

Modern VDU must be very reliable to pass all tests required for certification for use in nuclear power plants.

Only the highest quality, field proven, off the shelf components have been used to assure expected reliability, long term supply and revision control of each component.

TR-VDU-8000 VDU is manufactured in strict compliance with Nuclear QA standards. QA records are available from the purchase of cold rolled steel to final tests done prior to shipment of each unit.



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