

## Website Posted Job Description

Created By: Phil Loudin, 12-07-09

Position:	Electrical Hardware Engineer
Reports to:	CEO / CTO.
Overview:	This is a “hands on” hardware engineering position that will function as the lead electrical hardware designer and electrical system integrator for Vanguard Rugged’s mass storage product line.
Responsibilities:	<ol style="list-style-type: none"> <li>1) Integration of Single Board Computers (SBCs), Host Bus Adapters (HBAs), other Peripheral Devices and Operating Systems to create mass storage systems and mass storage devices.</li> <li>2) Electrical design and layout of cPCI and VPX backplanes and transition boards.</li> <li>3) Electrical design for signal integrity of high frequency data channels; USB2, USB3, 3 Gbit/sec. SATA, Gbit Ethernet, 10 Gbit Ethernet, Fibre Channel.</li> <li>4) Analysis, troubleshooting, and debugging of mass storage and computer bus interfaces.</li> <li>5) Built-In-Test (BIT) circuitry interface to Single Board Computers (SBC).</li> <li>6) Digital design using discrete ICs, PLDs and FPGAs.</li> <li>7) Power supply design and / or selection.</li> <li>8) Complete technical execution from concept to finished product, ready to ship.</li> <li>9) Technology and Vendor selection.</li> </ol>
Supervises:	<ol style="list-style-type: none"> <li>1) Assembly &amp; Test Technicians (though not in a “supervisory” role).</li> <li>2) Vendor performance as required for assigned projects.</li> </ol>
Education, required <sup>1</sup> :	BSEE.
Education, preferred:	MSEE.

<p>Experience, Skills:</p>	<ol style="list-style-type: none"> <li>1) Experience and expertise with mass storage device interfaces (SATA, USB, SCSI, FC)</li> <li>2) Expertise in the principles of electrical design for high speed digital communication channels: 1.5 Gbit/sec. 3 Gbit/sec., 10 Gbit/sec.</li> <li>3) Experience with the PCI, PCI-X and PCIe peripheral interfaces for Intel X86 processors.</li> <li>4) High-speed board and system design.</li> <li>5) High speed cabling and connector specification.</li> <li>6) Advanced system integration and debugging skills.</li> <li>7) Excellent verbal and written communication skills.</li> <li>8) Vendor liaison/management.</li> </ol>
<p>The Ideal Candidate:</p>	<p>Will be a hands-on BSEE with 3 to 7 years experience and a detailed understanding of mass storage device interfaces who wants to take on greater responsibilities at the design and integration level for state of the art rugged data storage systems.</p> <p>This is an excellent opportunity for an aggressive electrical engineering professional who wants to prove their design and integration abilities in an organization that can provide excellent opportunities for advancement.</p> <p>The right person for this position wants to work in a small organization with no bureaucracy where they have independence, complete task ownership and the opportunity be a technical and project leader.</p>

**Notes:**

1) BSEE is required for this position. Candidates without a BSEE will not be considered.