

PRISM

Made by [Zen Armaments](#). Zen Armaments Parallel Ray Internal Signal Mainframe (PRISM) Computer System Vacuum-packed supercomputer, optimized for the intense calculations necessary for hyperspace (and even sublight) travel. Uses light as a data transmission method.

Technical information

The CPU, a myriad of twisted and fine-tuned fiber optic strands, as a standard processes only four kilobits in its digital components (compared to the Athlon 64 and PPC G5, 64 times the power) but due to the lossless and non-interactive nature of light, can process a virtually infinite number of concurrent streams by submitting different wavelengths at once, and in the cases where no digital analysis is required (sensor information processing, for example), an analog stream can be directly reported, thereby reducing 'pixelization' effects.

The PRISM contains three layers of memory: the volatile RAM, which allows electrons on a plate to be excited by incoming lightwaves such that they are re-released fractions of instants later, is the fastest of the three but also the most prone to errors. This would mostly be used for things like hologram projection and places where precision calculations are not essential but high access times are.

Secondly, there is the standard RAM; incoming lightwaves in the visible spectrum or lower are stored on a photosensitive plate, and released at the same frequency by higher-energy rays until changed. This type of memory is precise to twenty-four orders of magnitude (one error in one septillion operations) and so is very reliable; most operating systems use dual-precision memory recording, effectively halving the memory available but increasing the precision by a power of two. The size of this memory, however, is limited by the surface area of the plate, which can be expensive to replace once worn out (though this has not yet happened in the testing laboratory, which has been processing constantly for six months as of this writing)

Thirdly, there is the 'hard drive'. An inert organic compound can be probed with any combination of rays and be rearranged into a basically infinite number of permutations, therefore allowing indeterminate long-term storage. Unfortunately, the chemical nature of this compound means that access times will be slow compared to the others, but data can be preserved for pretty much ever.

All of these are connected to a panel on the front of the device which hosts a heroic array of connections, pins, and removable storage interfaces. Connects to all known (up to and including not-quite-legal) standard devices, though adapters may need to be purchased for particularly expensive hardware to plug in.

Power requirements are generally extremely small, since there is virtually no loss of energy from a photon. The innards are kept in a near-vacuum state, surrounded only by very sparse neon gas which helps to carry the minimal excess heat away and diagnose photon leaks. Sensors pretty much power their own processes, but things like life support tend to like a steady stream of power. A backup battery is also included, enough to run a ship on minimal power for about three months.

Standard package includes holographic monitor display with speakers, soft neural interface (brainwave helmet) and starship open-source software suite, for a grand total of 50,000 KS. A corporate mainframe configuration is also available, similarly priced, with only a 2D monitor array and physical interfaces, but expensive software bundled and additional security features. As with all Zen Armaments products, price varies greatly based on who you know.

OOC Information

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