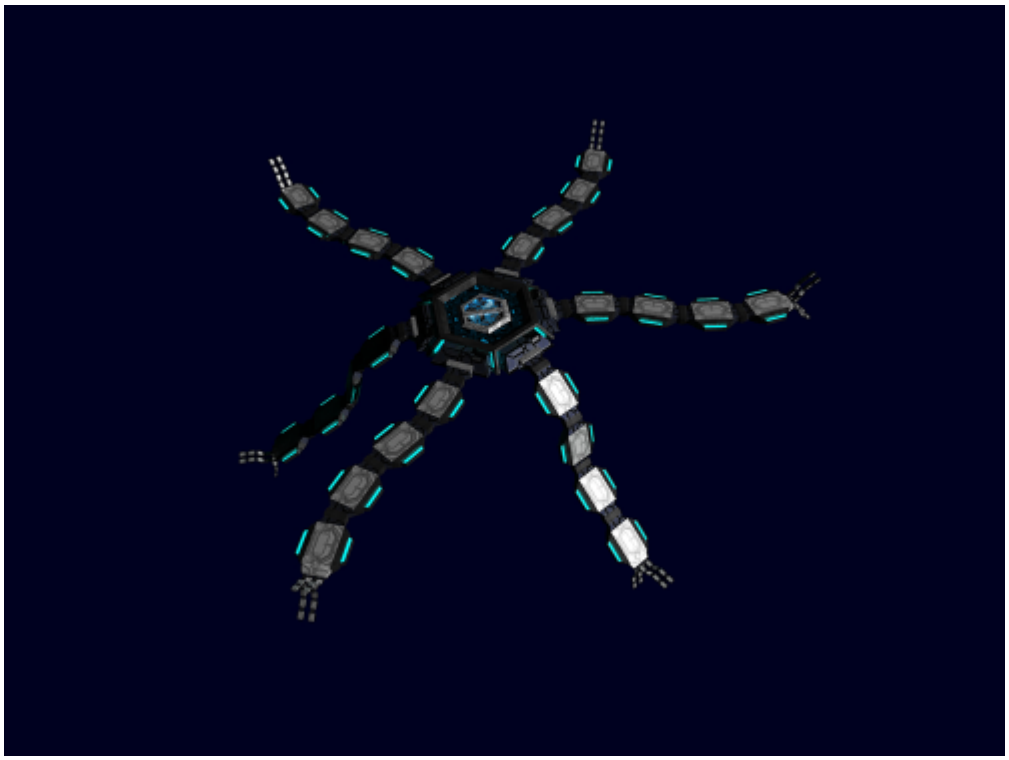
MT-J2-E3500 Molecular Circuitry Node

The *MT-J2-E3500 Molecular Circuitry Node* is an advanced molycirc processing unit and the basic building block in all of Murasaki Technologies artificial neural network-based computer systems. They are manufactured by Murasaki Technologies and first became available for purchase in YE 35.

About the MT-J2-E3500 Molecular Circuitry Node



The *MT-J2-E3500 Molecular Circuitry Node* is a nanomechanical computer system that makes use of molycirc technology to process, store and convey information for a variety of purposes and within a wide range of devices; some examples of which include functioning as the 'brain' inside individual nanomachines, one of multiple nodes forming a more powerful neural network computer inside larger

nanomachines or micromachines, organic neuron-interfacing for cybernetic implants, neuron analogues for androids and other synthetic cybernetic organisms, or as part of a macroscopic-scale neural network computer used in datapads, computer workstations or as the central control system for vehicles and starships, etc.

In terms of size, each node has comparable physical dimensions to the organelles within humanoid cells. The nodes store information as quantum data 'qubits' by using using individual atoms to represent bits of information. Information transmission between individual nodes and other technology or systems can occur either biochemically as with humanoid neurons, allowing the nodes to interface with humanoid cells, or electrically.

Even tiny computer systems utilizing networks of these molecular circuit nodes in unison can store massive quantities of information that can be measured in zettabytes or yottabytes, and allow dozens if not hundreds of simultaneously running programs and sophisticated AI of staggering complexity to function at once without loss of performance.

The molecular circuitry nodes are capable of self-repair and self-replication when in the presence of the required materials. Each node periodically performs a diagnostic routine upon both itself and other adjacent nodes in search of damage or malfunction; if repairs are impossible, a node will either self-terminate or be cannibalized by other nodes for building materials.

Statistics and Performance

General Information

Class: Electronic Subsystem Type: Processing Unit / Information Storage **Nomenclature:** MT-J2-E3500 Designers: Murasaki Technologies Electronics Research & Development Division Manufacturer: Murasaki Technologies Production: Mass Production **Manufacturers Suggested Retail Price:** 1 KS or equivalent currency per 1.14525 x 10^{12} units (Approx 225 grams, 4.5 cm^3) **Availability:** Unrestricted

Dimensions

Diameter: 5 micrometers Height: 0.2 micrometers Mass: 196.5 picograms

Performance

Comparitive Performance Rating: Tier 3 **Memory Storage Capacity:** 1 gigabyte **Maximum Power Requirement:** 40 nanowatts

OOC Notes

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Products & Items Database	
Product Categories	electronics
Product Name	Molecular Circuitry Node
Nomenclature	MT-J2-E3500
Manufacturer	Murasaki Biotechnology