

Ke-M12-E4272 KIES Sensors and Communications

The Ke-M12-4217 possesses a scaled-down version of the sensor suite found within [Compact Integrated Electronics System \(CIES\)](#). Some are removed due to irrelevance to ground combat or to not overwhelm newer operators with sensor data.

Unidirectional Sensors

The unidirectional sensors face either in a fixed forward-facing arc from the torso of Thought Armor or the transmitting apparatus is mounted within the head of the armor. Most have a short range of 4 light-years.

System Name	Notes
Variable Wide-Band Imaging	High-resolution variable optical system capable of monitoring a very wide spectrum. Includes Night-Vision and Ultra-violet modes.
Gravimetric	Detects gravitational fields and identify the location of objects creating them.
Magnetic Resonance and Distortion	Can analyze atomic and nuclear properties of matter from its interaction with radiation/magnetic fields.
Spectrometer	Can identify types of objects, useful for discovery chemical composition.

Omnidirectional Sensors

The omnidirectional sensors have their transmitting apparatus is mounted within the head of the armor. Most have a short range of 2 light-years.

System Name	Notes
Aetheric/Quintessential Field/Differential/Particle/Wave	Cannot be used when aether generators are offline
Scalar Field	
Unified Field Mass/Energy	
Time-Modulated Ultra-Wide Band Radar	Signals transmitted by UWB radars are pulses generated pseudo-randomly in time. They are only 0.5 nanoseconds in duration. The energy content in any conventional frequency band is below the noise, making TM-UWB transmission highly covert.

Communications Systems

System Name	Notes
Radio	Full spectrum, Dual-Modulation, range theoretically unlimited except by interference. The practical range is short since the waves only travel at light-speed.
Laser	For close-range transmissions, it is more difficult for the enemy to intercept, because they have to be in the area of the beam. Also limited to light-speed.
Psionic Filter Device	The PFD is a form of psionic and telepathic protection, capable of nullifying all such activity. Field conforms Thought Armor.
External Audio	External microphone and a speaker to allow the pilot to communicate more easily with nearby persons.
Homing Device	Normally inactive, this beacon has an independent backup power supply that can keep it transmitting for up to ten years, even if the main power system is nonfunctional. If main power is available, the beacon will transmit constantly. If not, the beacon will put out a short distress message twice every two hours (five minutes between).
Subspace/Hyperspace	Allows faster-than-light transmission. A standard means of communication.
Tachyon (select units only)	Quantum tunneling used for faster-than-light transmissions. A tachyon is a photon without any mass. Tachyon transmissions, because they travel faster than light in normal space, appear to travel towards the transmitter from an observer's view.
Transuniversal Quantum Relay (Select units only)	Delivers a message anywhere, instantly, but precise coordinates of the receiver must be available. Mainly used by PANTHEON computers for relaying information through starships. Shields may interfere with TQR transmissions.

TQP-RDD (select units only)

A powerful piece of electronic intelligence, the [Transmetaphasic Quantum Particle/wave Remote Detection Device](#) (TQP-RDD) within the Ke-M12-E4217 has a reduced range compared to ones found on ships. It is found only on Ace Soldier/Commander units with an infomorph as the common soldier would be overwhelmed with the added ability.

Level	Range	Sphere Diameter	Resolution	Minimum Mass
1	10 light-years	1 light-years	Stellar	Star
2	8 light-years	.1 light-year	Planetary	Planet
3	6 light-years	0.05 light-years	Lunar	5,000,000 kg
4	4 light-years	0.02 light-years	Rough	2,000,000 kg
5	2 light-years	5.8×10 ⁹ miles	Low	100,000 kg
6	1 light-years	2 trillion miles	Medium	75,000 kg
7	.5 light-years	50 billion miles	High	45,000 kg
8	.1 light-year	100 million miles	Molecular	20,000 kg
9	.1 light-year	1,000 miles	Subatomic	10,000 kg
10	5.8×10 ⁹ miles	10 miles	Total	20 kg

OOOC Notes

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