

FAR STANDOFF THREAT DETECTOR

FSTD

The FSTD threat detector system operates as a remote early-warning microwave indicator which uses millimeter electromagnetic waves for detecting explosive belts, pistols, rifles and etc. concealing under cover (ex. Clothe) locating 20 meters (extendable up to 100 meters) far away from the system.

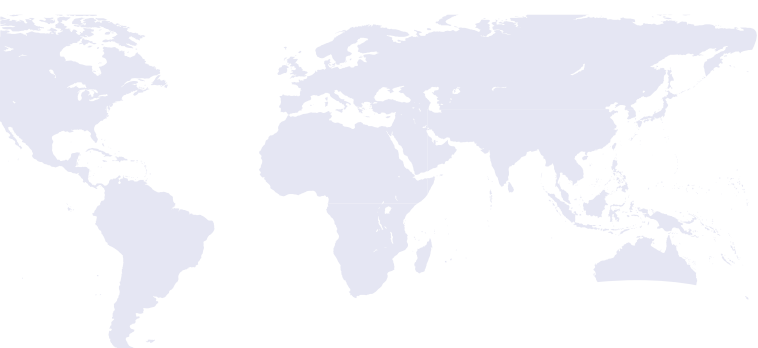
Main core

The FSTD operates similar to an FMCW radar working on 24GHz frequency. It detects probable threats surveying Polarimetric features of the reflecting wave. There are one transmitter antenna and two cross-polarized receiver antennas for sending and receiving radar signals. Figures below display the single-channel architecture model.



Operational features:

- Capable of detecting explosive belts and etc. in 20 meters of range (extendable up to 100 meters)
- Capable of threat detecting in less than 1 second
- Night-vision mode available for operating in any low light or complete dark situation
- UPS backed-up power available for operating in the areas with no electricity available
- Capable of being used with a standard tablet or a wireless gamepad for an operator to be located in a distant safer place
- Nobody (or body organs) scanning for protecting personal privacy



Technical specs:

- Containing Polarimetric continuous wave radar core
- Using 24GHz free frequency band with no interference on any radio frequency bands
- Using neural network algorithms to decrease the detection failure rate
- Low detection failure rate (less than %5)
- Phase noise controlling using a phase-locked circuit
- Range resolution of approximate 1 meter
- Simultaneous surveying of both receiving signals using a -2channel receiver

