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Phoenix Product Description

The Phoenix is an outdoor, stationary ground based sensor for perimeter protection. It is POE operated, consumes ~30Watts and transmitts ~3.2Watts (before antenna gain). It transmits a modulated LFM-CW signal and receives the returned signal. It has an integral antenna array with 8 transmit channels and 8 receive channels. Transmit and receive occurs simultaneously. All transmit channels operate simultaneously. Tx signal is always on except for short interval between the LFM scans. Transmitted signal is a “saw-tooth” LFM – repeated frequency scans. Digital Beam-forming techniques are used to determine receive signal angle of arrival.

Summary:

Maximum output power: Roughly 0.4 Watts into antenna per channel,
Total of 8 channels → 3.2 Watts into antenna
Antenna gain ~5dBi (standard printed patch antenna).

Frequency Band range: 300 MHz LFM around 10.25 GHz. – Preferably allow 2 “channels” or bands of operation between 10 and 10.7 GHz. Minimum requirement is 10.1 to 10.4 GHz.

Modulation: LFM-CW – sawtooth frequency scan within the band limits.
Bit-Rate – Irrelevant this is a radar not a communication device.