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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 transmits ~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 requires 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.