Product brochure

US Radar Quantum Imager

Three frequencies for comparing subsurface images





Quantum Imager records three datasets in one pass using independent transmit paths with central frequencies of 250, 500 and 1000 MHz. The operator can compare responses across bands, rather than assess a target using a single frequency profile. The system combines Stepped Ultra Wideband technology with Direct RF Sampling, a field cart and software for viewing survey data and marking interpreted targets.

Configuration and price on request

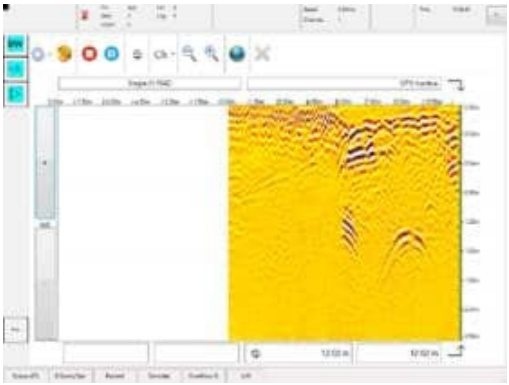
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Photos and technical data: US Radar.

Three frequencies for comparing subsurface images

Utility locating, investigation of buried objects and subsurface changes before construction, and environmental surveys. Different bands allow shallow and deeper target responses to be compared, although visibility depends on ground properties, target geometry and survey design.





Three bands in a single pass

Data from all three paths is collected in parallel. The display can show three channels, two selected channels or one enlarged channel while retaining the others for later analysis. This makes it easier to assess target responses across bands without changing the antenna during the same pass.

Automatic settings and operator control

Automatic configuration helps start a survey, while available settings adapt data display to the task. The operator can mark points, measure distances along a profile and compare signals. GPS mapping and advanced 3D analysis functions depend on the software options selected.

Applications and workflow

Define profiles and set distance-based recording to suit the task. After calibration, compare low-, medium- and high-frequency channels and mark responses of interest. Recorded results can undergo further analysis; GPS mapping and Radar Studio functions require appropriate hardware and licence options.

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Selected specifications

US Radar Quantum Imager

Transmit arrangement	3 independent wideband transmitters
Central frequencies	250 MHz, 500 MHz and 1000 MHz
Total frequency range in the brochure	163.5-1751.0 MHz
Channel acquisition	Simultaneous acquisition of three datasets
Channel display	Three, two or one channel displayed; all three recorded
Technology	Stepped Ultra Wideband and Direct RF Sampling
Signal stacking	Automatic cascaded stacking: hardware and software
Pulse repetition frequency	Typically 500 kHz; subject to regional requirements, 500-667 kHz in the brochure

Configuration and offer scope

The Quantum Imager offer includes GPR with a rugged field tablet controller and two interchangeable power packs. Tablet model, chargers, licences and additional positioning are selected in the quotation.

Practical survey organisation

A folding handle and tablet mount simplify transport, while solid tyres need no inflation. Interchangeable power packs help organise successive field sessions. Agree controller details and equipment alongside licences and positioning before taking the system to site.

Actual range and data quality depend on the medium properties, moisture, target size and orientation, and survey method. Results require interpretation and comparison with available documentation.

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