

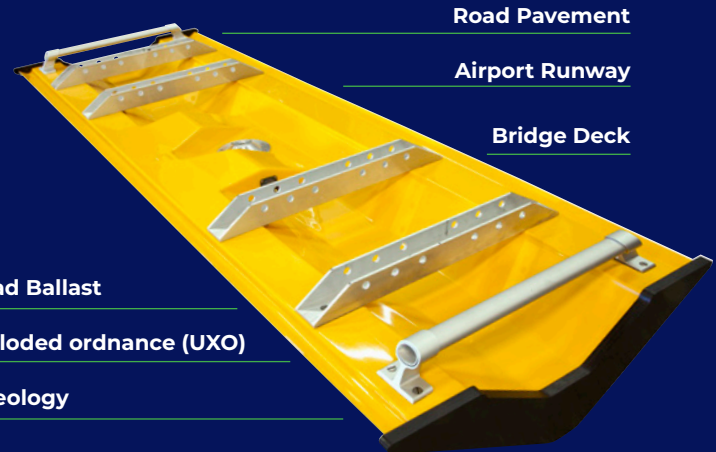


DX™ ANTENNA ARRAY Series

AIR-COUPLED ANTENNA ARRAYS FOR 3D STEP-FREQUENCY GPR

FEATURES & BENEFITS

- Superior resolution at shallow depths – ideal for near-surface GPR data acquisition at high speed
- Wideband Coverage (200MHz to 3GHz) enables detailed surveys from near surface to deeper depths in a single pass with less than 2.5 cm resolution at shallow depths
- Capture wide swaths of survey data in one pass
- Support for multi-offset data recording
- Built-in GPS receiver for coarse positioning and precise GPS timing
- Delivered in rugged shipping container for safe storage and transportation



Road Pavement

Airport Runway

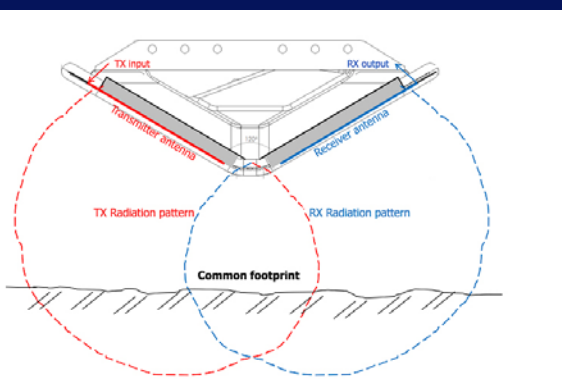
Bridge Deck

Railroad Ballast

Unexploded ordnance (UXO)

Archaeology

Figure 1: Antenna principle.



DX™ Antenna Arrays Series represents the latest innovation in three-dimensional ground penetrating radar (GPR) data collection. The air-coupled antenna array is suitable for applications where the antenna needs to be elevated off of the surface for road and railroad inspection, and landmine / improvised explosive device (IED) detection. Antenna arrays allow scanning of up to 41 channels over a continuous 200MHz to 3GHz frequency range. The antenna arrays collect three-dimensional GPR data with dense line spacing. DX™ Antenna Arrays Series provides high resolution at shallow depths and deeper penetration compared to traditional air-coupled pulse-based GPR systems.

The unique wideband antenna design consists of bow-tie monopole antennas whereby the combination of the different transmitter/receiver antenna elements allows the user to collect three-dimensional data along multiple survey lines with a channel spacing of 7.5 cm. The antenna is equipped with a standard 5/8" thread mount for easy mounting of a global positioning system (GPS) antenna or TotalStation prism.

3D-RADAR DX™ ANTENNA ARRAY SERIES

TECHNICAL SPECIFICATIONS

	DX0909	DX1821	DX2125	DX2429	DX3341
WIDTH	0.9 m	1.8 m	2.1 m	2.4 m	3.3 m
FREQUENCY RANGE	200-3000 MHz	200-3000 MHz	200-3000 MHz	200-3000 MHz	200-3000 MHz
NUMBER OF CHANNELS	9	21	25	29	41
CHANNEL SPACING (Cross-Line)	75 mm	75 mm	75 mm	75 mm	75 mm
EFFECTIVE SCAN WIDTH	0.675 m	1.575 m	1.875 m	2.175 m	3.075 m
DIRECT WAVE SUPPRESSION	> 50 dB	> 50 dB	> 50 dB	> 50 dB	> 50 dB
POLARIZATION (in-line direction)	Linear	Linear	Linear	Linear	Linear
SIZE (LxWxH M)	0.92 x 0.585 x 0.22	1.82 x 0.585 x 0.22	2.12 x 0.585 x 0.22	2.42 x 0.585 x 0.22	3.39 x 0.585 x 0.22
WEIGHT	18 kg	28 kg	33 kg	38 kg	50 kg
TRANSPORT CONTAINER SIZE (LxWxH M)	1.0 x 0.65 x 0.27	1.9 x 0.65 x 0.27	2.2 x 0.65 x 0.27	2.5 x 0.65 x 0.27	3.5 x 0.65 x 0.275
TRANSPORT CONTAINER WEIGHT	18 kg	27 kg	30 kg	33 kg	55 kg

Note: Other sizes are available on a custom order basis. Contact 3D-RADAR for additional details: sales@3d-radar.com.

APPLICATION AREAS

- ROAD PAVEMENT
- AIRPORT RUNWAY
- BRIDGE DECK
- RAILROAD BALLAST
- UNEXPLODED ORDNANCE (UXO)
- ARCHAEOLOGY

ACCESSORIES

- Two-wheel, light-weight trailer
- Antenna cables – up to 8 m length
- DMI / Odometer with wheel adapter

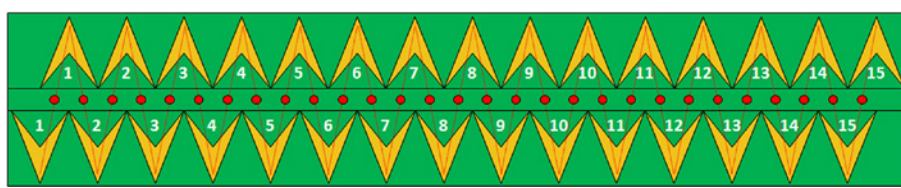


Figure 2: Displacement of elements and channels of the standard scan pattern for DX2429. Other antennas have identical spacing, but different numbers of channels that are strictly dependent on antenna width.

3D-RADAR RELATED PRODUCTS

- DXG™ Antenna Array Series
- GeoScope™ Mk IV 3D GPR
- Examiner™ Software

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