

Because the *Gradiance*[™] grounding system conducts electrical charge far more efficiently into soil relative to any other grounding product, a *Gradiance*[™] array can use less land, **and** can be installed at lower cost to achieve a target resistance-to-ground. As an additional benefit, *Gradiance*[™] systems are significantly more stable and dramatically more resilient over time.

Taken together, this means greatly reduced initial *and* ongoing expenses, with superior protection of your critical equipment systems and property.

Overall, because the *Gradiance*[™] system has been designed with **broadband capabilities** in mind, *internal* faults from high frequency systems and equipment can be absorbed and dissipated very easily. This completely unique capability also translates directly to management and dissipation of the *external* high frequency components of lightning discharges* which are at the root of most lightning caused damage.

*In that lightning discharges are Acts of God that massively vary in their characteristics and electrical behavior, no lightning protection system can fully protect against lightning damage. Therefore, GroundLinX Technologies, LLC makes no warranties, expressed or implied, as to such protection or the performance of its products.

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GroundLinX products are protected by multiple U.S. and foreign patents and patents pending.



GRADIANCE[™]

HIGH PERFORMANCE
BROADBAND GROUNDING SYSTEM

Product And Concept Overview

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**UNPARALLELED PERFORMANCE AT
THE BUSINESS END OF ELECTRICAL
GROUNDING AND EARTHING**

IN EVERY ASPECT of contemporary society, electronic devices and the dependable electrical power to drive them, are essential. Protecting mission-critical systems and structures from electrical service faults and failures is therefore of utmost importance. However, the grounding and earthing technology necessary to defend sensitive, 21st Century electronics has not changed significantly since the analog days of the 20th Century.

As a result, expenses incurred by businesses, government facilities, and homes for damage or destruction due to electrical faults (including surges and lightning*) are growing at noticeable and disturbing rates. This condition is supported by insurance claims data which show losses directly related to fault current events are increasing significantly.

Importantly, a solution that economically allows dramatic reduction, if not prevention* of fault current damage is now available.

Based on years of accumulated experience and data, *and by applying advanced principles of materials science, and physics* to electrical grounding systems, GroundLinx Technologies has developed a *breakthrough* in grounding efficiency and efficacy.

Currently, achieving very low resistance with traditional grounding in a cost-effective manner is often very difficult due to limitations introduced by inadequate soil conductivity and challenging geologies such as arid locations, or rocky terrain.

Droughts, lowered water tables, and land availability also complicate the effort. Going forward, the demands for highly efficient grounding can be expected to expand even further, owing to the requirements of 5G mobile communications, and ATSC 3.0 broadcast standards, not to mention the grid demands of server farms, data centers, and large renewable energy deployments.

To address these rising critical needs, GroundLinx Technologies has chosen to treat fault surges as large, somewhat extended *broadband pulses* of electrical charge.

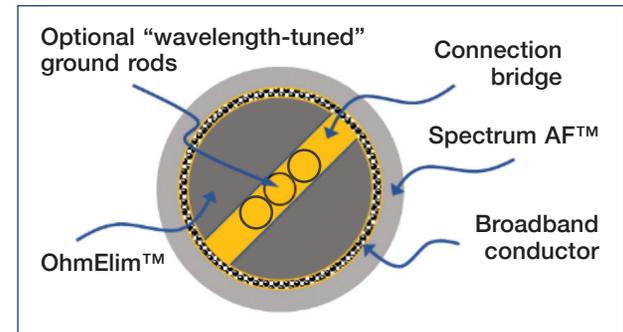
In managing these pulses we have:

1. Incorporated a very high *charge capacity* in the core of our grounding system, thus dramatically reducing charge rejection, while also allowing dissipation of the energy pulse *over time*, and
2. Massively increased the number of emitting points and surface area available for dispersal of charge, to provide many millions more opportunities for fault current – *in any form* – to move into local soil.

Furthermore, by completely re-imagining the structure of grounding electrodes and the materials surrounding them, we have been able to significantly increase the dispersible *frequency range* of fault currents to far beyond the limits of conventional metal conductors.



A particularly important characteristic of our products is the ability to provide for a long-term reduction in *impedance mismatches* between “incoming” grounding conductors and adjoining native soil. To manage this known phenomenon – which hugely degrades the performance of traditional grounding – we have specifically tailored the electro-chemistry, conductivity, and the moisture-holding capabilities of our OhmElim™ and Spectrum AF™ earthing mix products—entirely with impedance *matching* in mind.



The combination of these unique, proprietary materials with our incredibly capable Lohmega CCF™ broadband electrode, is an amazingly efficient, kit-style earthing device we call the **GroundLinx Gradiance™** grounding system.

By substantially taming impedance mismatch issues and greatly increasing opportunities for fault current to dissipate into soil, the **Gradiance™** system can easily reduce resistance-to-ground well in excess of 60% compared with standard, or even chemical ground rods. This improvement also extends comparably to larger, multi-rod installations.