

G3-Alliance

G3-Hybrid for the resilience of safety critical systems

In emergency situations, robust communication is essential. When power fails, infrastructure is disrupted, or thousands of people must be guided to safety, the reliability of your signalling and evacuation systems cannot be left to chance.

G3-Hybrid, combining Power Line Communication (PLC) with Radio Frequency (RF) in a single solution, provides PLC robustness with RF redundancy, ensuring low-latency safety signals when failure is not an option.

Why G3-Hybrid?

- **Field Proven Worldwide:** G3-PLC is already deployed in 100+ million devices across 40+ countries, G3-technologies have moved far beyond smart metering into lighting, mobility, and infrastructure control. G3-Hybrid is now being deployed in many systems worldwide.
- **Open Standard with 100+ international members** including utilities, semiconductor firms, equipment makers, and industrial companies. Together they promote and implement G3-Hybrid and G3-PLC and ensure interoperability through a global certification program.
- **Cost-Effective & Scalable:** Leverages existing power cabling no need for additional signal wiring. Networks scale seamlessly to thousands of endpoints, with multivendor certification and IPv6 integration.
- **Designed for Harsh Environments:** Places like railway stations, tunnels, airports, and skyscrapers are full of electrical noise and crowded radio signals.

Key Application Examples



Emergency Lighting & Exit Signs: Secure control of luminaires, exit signs, and guidance systems, even during blackouts. Wireless control can be intercepted or jammed. G3-PLC provides a secure, cable-based communication that meets the highest safety expectations.



Public Address & Voice Alarm: Triggers pre-recorded announcements ("Evacuate via North Exit") stored in local controllers or amplifiers.



Smart Railway Stations & Tunnels: G3-PLC already powers platform lighting systems at Tokyo's Takanawa Gateway Station (JR East & Panasonic) and is deployed in railway applications in Italy. Designed to handle power electric interference, dense cabling, and tunnel conditions.



Airports & Skyscrapers: Evacuation systems in airports and high-rise buildings face unique communication challenges. Wireless alone is not secure enough for control, as signals can be intercepted or disrupted. G3-PLC is a reliable solution, delivering robust, long-distance communication that penetrates deep into buildings. Hybrid complements this with redundancy, ensuring fast and secure signalling.



Escalators: Reliable control and monitoring of escalators and lifts, essential for passenger flow and evacuation safety.

The Advantage of an Open Standard

G3-Hybrid is an international and open standard with a strong certification process supported by the G3-Alliance, ensuring multi-vendor interoperability and supply, long-term support, and continuous innovation. This is not proprietary technology, it is a globally trusted foundation for mission critical communication.

Visit our website to learn more about [G3-Hybrid technology](#) or contact one of our [members!](#)