

Wired vs. Wireless Monitoring

What Your Team Really Needs to Know

Feature / Factor	Wired Monitoring	Wireless Monitoring (GraceSense™)
Installation Time	 Weeks to months due to conduit runs & cabling	 Installed in hours, no trenching or cabling needed
Initial Cost	 High – hardware, labor, conduit, panel terminations	 Lower – fewer components, no cabling, quick setup
Maintenance & Troubleshooting	 Complex – physical wire faults difficult to locate	 Simple – device-level diagnostics and health checks
Scalability & Expansion	 Limited – adds cost & delay to expand zones	 Easy – deploy more sensors as needed, plug-and-play
Flexibility	 Rigid – tied to fixed locations	 Adaptable – relocate sensors to shifting priorities
Integration	 Direct to PLC – standard if infrastructure supports	 Dual: Cloud-based dashboards + optional PLC/SCADA integration
Data Accessibility	 Localized – often siloed in control systems	 Centralized – access data from anywhere
Upfront Infrastructure Requirements	 Requires control cabinets, conduit, termination	 Only gateway needed – cloud or Ethernet options
Risk During Retrofit Projects	 High – can disrupt production or require downtime	 Minimal – sensors mount on running assets
IT/OT Network Burden	 High – adds load to internal networks	 Optional LTE-based system separates from internal IT
ROI Speed	 Slow – breakeven can take years	 Fast – ROI in months via reduced downtime & labor