

# Arm and Gardner Denver Boost Uptime for Manufacturers

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Case Study

**Gardner  
Denver**

## Company Snapshot

Name: Gardner Denver

Industry: Industrial  
Equipment & Technology

Size: 51 to 200 employees

HQ: Milwaukee, WI

Founded: 1859

[www.gardnerdenver.com/en](http://www.gardnerdenver.com/en)

## Pelion Connectivity Management helps flow control technology providers; Gardner Denver delivers a services platform for the compressed air industry.

- + eSIM enables streamlined global connectivity management
- + Creating new revenue streams by retrofitting existing assets with IoT connectivity
- + Improving operational equipment effectiveness

Gardner Denver has over 150 years' experience in developing industrial solutions for manufacturers, including the development of air and gas compressors for their international client base. The age of the smart factory, driven by Industry 4.0 means their customers were looking for a way of harvesting real-time data relating to their plant performance in a bid to eradicate downtime and maximize efficiency. The Milwaukee-based industrial equipment provider responded to the market's appetite for data insights by creating the cloud-based iConn, an Intelligent Compressor Data Platform.

### Opportunity

Internet of things (IoT)-enabled sensors integrated within the air compressor collect vibration and temperature data which is relayed via an eSIM over a 4G network to a browser-based visualization tool for remote monitoring and analytics. This data generates insights that can highlight machine parameters, and trends over time that may indicate a loss of efficiency or a complete failure that could result in an outage impacting the overall equipment effectiveness (OEE) of a facility. This data can also be passed to the manufacturer's proprietary dashboards thanks to simple APIs, which can assist in predictive preventative maintenance (PPM).

### Solution

Pelion's on-demand connectivity and global federated network of mobile network operators (MNO) meant Gardner Denver could offer 'Connectivity as a service' (CaaS), meaning clients enjoy remote diagnostics that reduce the cost of physically sending engineers to site to troubleshoot plant failures and offer energy optimization tools to help reduce energy costs.

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Pelion's pre-negotiated tariffs with over 600 networks offer competitively priced coverage regardless of how many networks are used.

It's all very well offering a platform that delivers analytics, pattern recognition and algorithms that can compute and predict issues before they happen, but the platform is useless without a reliable means of relaying that data from around the globe in an efficient and secure manner. Charles Joel, Gardner Denver's IoT & Analytics Director and self-proclaimed 'IoT gadgeteer' was tasked with their digital transformation and set about finding a connectivity partner that could support their fledgling platform.

Charles' challenge involved extracting value from the data gathered via thousands of devices in remote locations whilst developing a retrofitted solution that could IoT-enable the thousands of compressors that were already in the field.

*"The manufacturing landscape has changed dramatically, but the industry's technology has struggled to keep pace. Pelion Connectivity Management allows us to create a secure and intuitive platform that helps facilitate that change"*

*-Charles Joel, IoT and Analytics Director, Gardner Denver*

The Pelion partnership meant that Charles and his team of four could focus on developing the open source iConn platform, rather than concerning themselves with maintaining connectivity in export markets. Appointing Pelion as Gardner Denver's connectivity partners meant Charles could focus on improving his manufacturer's user experience, rather than managing multiple MNO contracts and invoices.



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### Additional Revenue Opportunities

Pelion's cellular connectivity is embedded in Gardner Denver's current compressor range, whilst their retrofit kit is designed to give existing assets the means to connect to the platform. It's part of a two-pronged approach, which is key to Gardner Denver adopting an aaS revenue model that compliments their plant machinery sales. Charles noted "Our plan was to create new revenue streams by offering an intelligent solution that appeals to new clients, plus grow our share of wallet with existing customers by eradicating downtime from their existing compressors. Pelion Connectivity Management makes this possible".

The aftermarket kit has seen early success thanks to its plug and play operability which can see a retrofitted compressor kit installed in under 20 minutes and, thanks to Pelion, start to relay data to the cloud-based iConn platform in just seconds.

This embedded connectivity, global coverage across many standards and access to multiple networks means that Gardner Denver can assign the best possible network post-deployment, then maintain the same SIM and connectivity with iConn, even if the manufacturer relocates their plant to alternative factories elsewhere in the world.

"Pelion not only facilitates our manufacturers' digital transformation in minutes, but connectivity management expedites our ambitions to grow from delivering basic analytics and gaining predictive insights, to offering clients valuable cognitive data analysis that's processed at the edge"

Whilst a single eSIM for all territories dramatically reduced the need for multiple SKUs and SIMs to support each country, Charles cited the appointment of an agile partner that could scale with his ambitions as a key factor in choosing Pelion.

"The partnership transformed Gardner Denver into a service provider that could facilitate global deployments with just a small team, then add resources as the proof of concept showed a return on investment".



To learn more about Arm Pelion Connectivity Management for manufacturing, visit [www.learn.arm.com/connected-industry](http://www.learn.arm.com/connected-industry) or email us at [PelionCM@arm.com](mailto: PelionCM@arm.com)

