



Case Study: Selective Deployment with TS4 defines Commercial Plug-n-Play

Tigo's retrofitted optimization & monitoring TS4 units help pay off a rooftop self-watering solar irrigation system and immediately identify a carport string outage within first days of installation.



Tigo's SMART website tracks minute-by-minute module-level data via this online monitoring portal.

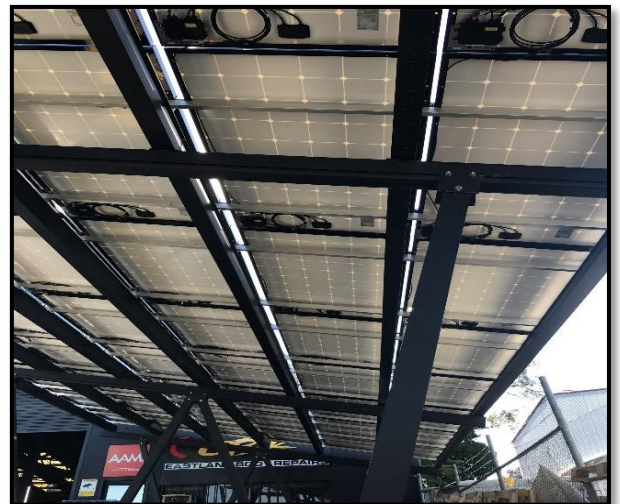
Tigo Products:	1 CCA, 4 Gateways, 95 TS4-R-O (Optimization), 210 TS4-R-M (Monitoring)
Modules:	300 LG NeON2 325W & LG325N1C-A5
Inverters:	SMA - STP50-40 & STP15000TL-10
Location:	Ringwood, Victoria 3134, Australia
System Size:	97.5kW

Summary

With 300 panels and a combination of Tigo TS4-R-O (Optimization) & TS4-R-M (Monitoring) units, this commercial PV system is saving its autobody shop major electricity costs. The roof and carport system also feature 12 zone self-watering solar irrigation, high pressure pump, and 112kwh lead carbon battery bank all designed and installed by Lumenaus Solar. Within the first days of installation, Tigo alerted the owners of a string outage. Lumenaus states the overall "performance is outstanding."

Customer Service

Lumenaus Solar also boasts that "the personal service we received from Jeff Routledge [APAC Sales Manager] at Tigo was outstanding!"



The carport and roof installations featured Tigo's retrofitted/add-on TS4-R-O and TS4-R-M units for shade optimization and module-level monitoring.



The Challenge

This Australian PV system is in a high dust area and requires daily cleaning. A monitoring and optimization solution was needed to keep the panels clean and account for shaded panels in order to pay off the \$25K self-watering irrigation system. *"The effect of panel temperature reduction in summer months remains to be seen,"* says Lumenaus CEO Michael Califano – which is *"one of the reasons we fitted panel-level monitoring [and optimization] using Tigo to see if we could quantify this benefit, if any."*

Lumenaus Solar shares that their *"priority on this project was to monitor the effectiveness of our self-cleaning panel system, but also to optimise around certain areas close to the roof lines and where the upper carport shades the lower section during certain parts of the day."*

The Solution

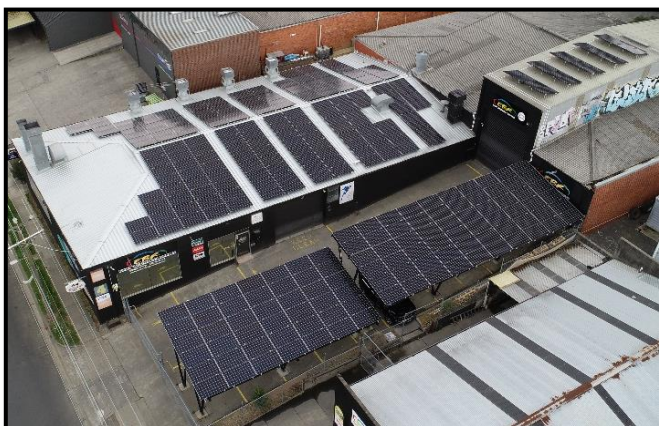
"The Tigo system allowed us to do that using a mixture of monitoring-only and fully-optimised units to keep costs down for the client," confirms Lumenaus. They estimate that the payback of the system will be equivalent to 20 manual cleanings at \$1,250AUD which the lifetime warranty of the self-cleaning equipment will long surpass.



Retrofitted modules with Tigo's TS4-R-M (Monitoring) units *"allow us to monitor the effectiveness of our Solar Irrigation System, which was necessary for daily panel cleaning due to ongoing concrete dust leeching from a nearby Cement Factory."* - Lumenaus



"Tigo also integrates well with the SMA inverters & energy management platform so Tigo was a perfect choice for this project." - Lumenaus



The carport and autobody roof PV systems generate power with 300 total PV modules.



The PV system's inverters and batteries are housed safely inside for easy access during maintenance.