Grab-and-Go Connectivity - A case of communications convenience

MWC Communications – A Customer Case Study

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The Client

MWC Communications is an organisation focussed on providing reliable connectivity wherever, whenever. Whether for a permanent network solution, a construction site or other remote location, or even a fleet of vehicles that need on-board connectivity, MWC specialises in providing the solution.

Opportunity

MWC Communications' objective is to deliver instant internet access anywhere. The team already had a range of hardware that could be installed on site to provide connectivity, however this requires power and, often, an installation team. What they needed was a quick, portable solution that was easy to setup and could be in place for maybe two hours to a few months.

MWC engineers were familiar with Peli products for storing and transferring equipment. They understood that they could, with some design change, keep the connectivity equipment in such a case but with the additional benefit of a "Plug & Play" facility.

Another issue they were faced with was how to integrate a battery that allowed the units to be truly operational anytime, anywhere. Furthermore, the unit had to be easily transportable internationally.

Solution

DMS technologies was approached due our expertise in integrating custom design batteries into portable rugged cased systems.

A housing was designed to secure the connectivity equipment within the case, wired to provide both internal and external connection points. With various DC voltages required, a suitable PSU along with DC/DC converters were installed for both mains and battery operation.

There are currently 3 models in the range, each with a mix of connections including LAN Power over Ethernet (PoE), cellular, WiFi, LAN & WAN depending on the model.

For the ‘Classic’ and ‘Maxi’ models continuous operation was specified even when powered by batteries alone. Therefore two battery packs were designed Incorporating a hot-swap capability, discharging consecutively instead of concurrently to maximise runtime.

While lightweight batteries were specified, the use of lithium was discounted due to the transportation issues of batteries above 100Whr. Instead, the use of high capacity NiMH cells was recommended, balancing weight and energy density with simple transportation requirements.

Battery features (HD4 Maxi)

- 2 off 24V 9Ah NiMH batteries
- 30 hrs run-time in normal operation
- “Push-to-test” state of charge
- Hot-swappable without connectivity interruption
- 16hr recharge time from fully discharged batteries.


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