

# A SOUTH AFRICAN SUCCESS

Vumatel connect over 350,000 homes using end to end pre-terminated 2-Core Miniflex for fiber to the home (FTTH)



## Background

Vumatel pioneered Fiber-to-the-Home (FTTH) in South Africa and knew that innovation would be key to their success. In partnering with PPC Broadband and Mustek SA, Vumatel has since connected more than 350,000 homes across Johannesburg, Cape Town and Durban to world-class broadband internet.

Vumatel deploys super-fast world-class fiber broadband infrastructure, launching its customers into the Information Age and puts a world of knowledge and entertainment at their fingertips.

Vumatel builds an open access fiber network, which means Vumatel is not a service provider but simply installs the infrastructure. Residents can then choose from a number of internet service providers for low latency internet packages ranging from 4Mbps to 1Gbps.

PPC Broadband is the pioneer and market leader in high-quality, pushable and spliceless FTTH solutions for Africa, designed to dramatically reduce installation times, while increasing the quality and network reliability.

Mustek SA has the largest pre-termination facility on the continent of Africa with the ability to produce in excess of 2,500 FTTH leads per day. Each lead is tailored specifically to Vumatel specifications and factory polished before being individually tested and given a unique serial number for full traceability.

## Scenario

When Vumatel entered the FTTH market in August 2014, their mission was to find a cost-effective way to connect customers to their open access network in the most efficient and professional manner. Working with fibre glass requires a different set of skills than traditional copper cables.

"We knew the big challenge for Vumatel was not so much trenching and laying the distribution cables", says Ian Kock, Regional Director at Vumatel. "The real challenge lay in connecting the customers with a 100% reliable solution that worked from day one and gave the customer the high-quality fibre speeds we had provisioned for."

The challenge of introducing fibre optic technology to South Africa is that in contrast to copper cables, fibre glass must be spliced, which requires highly trained engineers with dedicated fibre optic skills and expensive equipment.

"Sadly, those engineers are in short supply," Ian said. "We therefore wanted a ruggedized solution that was pre-terminated and could be easily installed."

## Tailored Vumatel Pre-terminated Solution

Vumatel turned to PPC Broadband and, in partnership with Mustek SA, the teams discussed ways to transform the industry-leading Miniflex® fibre optic cable to better suit Vumatel's method of installation.



### Location:

Johannesburg,  
Cape Town &  
Durban,  
South Africa



### Date:

August 2018

### Synopsis:

End to end pre-terminated 2-Core Miniflex for fiber to the home (FTTH) installations, removing the need for skilled engineers within the customer premises

### Run Lengths:

Made to order between 10m to 150m

### Benefits:

- ▶ Vastly reduced installation time
- ▶ Removal of field splicing at both end
- ▶ Single UV stable white Outdoor/single solution
- ▶ Large reduction in remedial work and repairs
- ▶ Slack management via PPC OLT

### Product Used:

- ▶ Miniflex fiber optic cable
- ▶ PPC OLT
- ▶ 20mm PVC conduit

"Vumatel approached us and asked if we could pre-terminate the Miniflex cable in such a way that their contractors could have a range of cable lengths to suit a variety of challenges when connecting the last-drop," says Simon Roberts, PPC Sales Director for Africa. "We needed to make our outdoor Miniflex cable UV stable and white; improve the material to further ruggedize against the elements; and remove the field termination, which had historically been the issue with so many last-mile connections not just in South Africa, but on the continent at large."

These requirements lead to the Vumatel Miniflex cable – 3mm in diameter, 5x bend radius, white in color (fully UV stable for a seamless outdoor/indoor transition) and a crush resistance exceeding 3,500N or 350kg per square foot.

"Mustek invested heavily in a localized pre-termination facility that can deliver over 5,000 ready-made FTTH leads per week," Sean Lax, PPC Product Manager at Mustek said. "We had seen low-quality products leaking into the South African market and knew that over time, these would lead to network issues.

"Mustek wanted to lead the way with high-quality solutions, localized production and support and a dedicated team focused purely on last-mile, pre-terminated solutions. We not only spent time to understand what Vumatel wanted at the time, but where their network would evolve to in three to five years' time. It's been a pleasure to be part of the Vumatel journey and help connect more than 350,000 customers with our handmade, tailored FTTH solution."

### End-to-End Last-drop Solution

"Civil costs will often account for more than 75% of a network build, so it's essential that operators have a tool box solution that can accommodate the diversity of the home installation" says Ewald van der Westhuizen, Implementation & Operations Executive at Vumatel.

"Flexibility is key of course, but knowing we have the right core products that will not let my contractors down is the stand-up reason Vumatel standardised on the Miniflex pre-terminated solution. This company tailored their cable, invested in localised support

and production and offer the highest levels of support that I have found in the South African market."

The Miniflex fiber optic cable has been designed for the demanding African environment and allows the installer to hand-push up to 100m (328 feet) through existing microducts when present. Miniflex can also be hand-pushed through 20mm PVC microducts when Vumatel runs from the break-out box into the preferred room after consultation with the homeowner.

"Before PPC and Mustek delivered us a high-quality, ruggedized, pre-terminated solution, we struggled with poorly spliced installations," says van der Westhuizen. "Since we standardized on Miniflex almost three years ago, our installation quality has improved significantly.

Darryl Nieuwenhuizen, Head of Installations Department at Vumatel in Ekurhuleni, says "PPC and Mustek are constantly on hand with product tips and hints, new and improved installation methods and top-class support for my contractors. It's one thing to have products shipped in from out of Africa, but it's another to have world-class support from localised suppliers who understand the constraints we face at Vumatel. It's safe to say that without these tailored solutions, the Vumatel network may not have enjoyed the high connection rates we currently do."

### Driving Return on Investment

Throughout Africa, there has been a big influx of low-quality solutions that have entered the market, tempting operators with low prices. "Vumatel made the decision to invest in quality and took the right path in partnering with PPC to develop a tailored African solution that they can trust will always do the job," Roberts said.

In addition, Vumatel receives 24 hour localised support from Mustek and a contractor training program that takes less than 30 minutes. The PPC spliceless solution will plug and play from end-to-fend, empowering the contractor to complete more installations. This helps them raise the bar, in terms of quality and performance, and ultimately drives a far superior return on investment (when comparing the total cost of ownership) than low-cost, low-quality solutions.



▲ Vumatel installers love the PPC FTTH ready-made solution



▲ Durable cable design allows for flexible installation at the boundary box



▲ Hand-pushable Miniflex removes the need for expensive blowing equipment



▲ PPC Broadband ready-made FTTH toolbox deskills the last drop installation