

# AVANTI: **EXTEND**

MANAGED SATELLITE COMMUNICATION  
SERVICE FOR RURAL CONNECTIVITY





**Avanti EXTEND  
is ready to  
connect 100m  
people across  
Africa with the  
highest quality  
service available  
on the market.**



# Delivering high-performance cost effective 2G, 3G and 4G solutions throughout challenging locations

Avanti EXTEND is specifically designed for Mobile Network Operators (MNOs) with requirements in rural and remote areas, in particular Africa. It enables the provision of cellular services to areas that are otherwise impossible or prohibitively challenging to reach using traditional terrestrial infrastructure.

Avanti EXTEND provides satellite backhaul for primary connectivity in addition to infill capacity during peak times.

Integrating seamlessly to MNO's terrestrial networks thus reducing network complexity and increasing efficiency.

## Why should MNOs use Avanti EXTEND?

### Expand networks

Deliver rapid network expansion into rural and remote locations beyond your terrestrial reach.  
Providing high-speed and reliable 2G/3G & 4G connectivity.

### Complement network when down

100% diverse routing from base stations and automatic switching for voice and data traffic over our network.

## Avanti EXTEND

### Reliable and secure

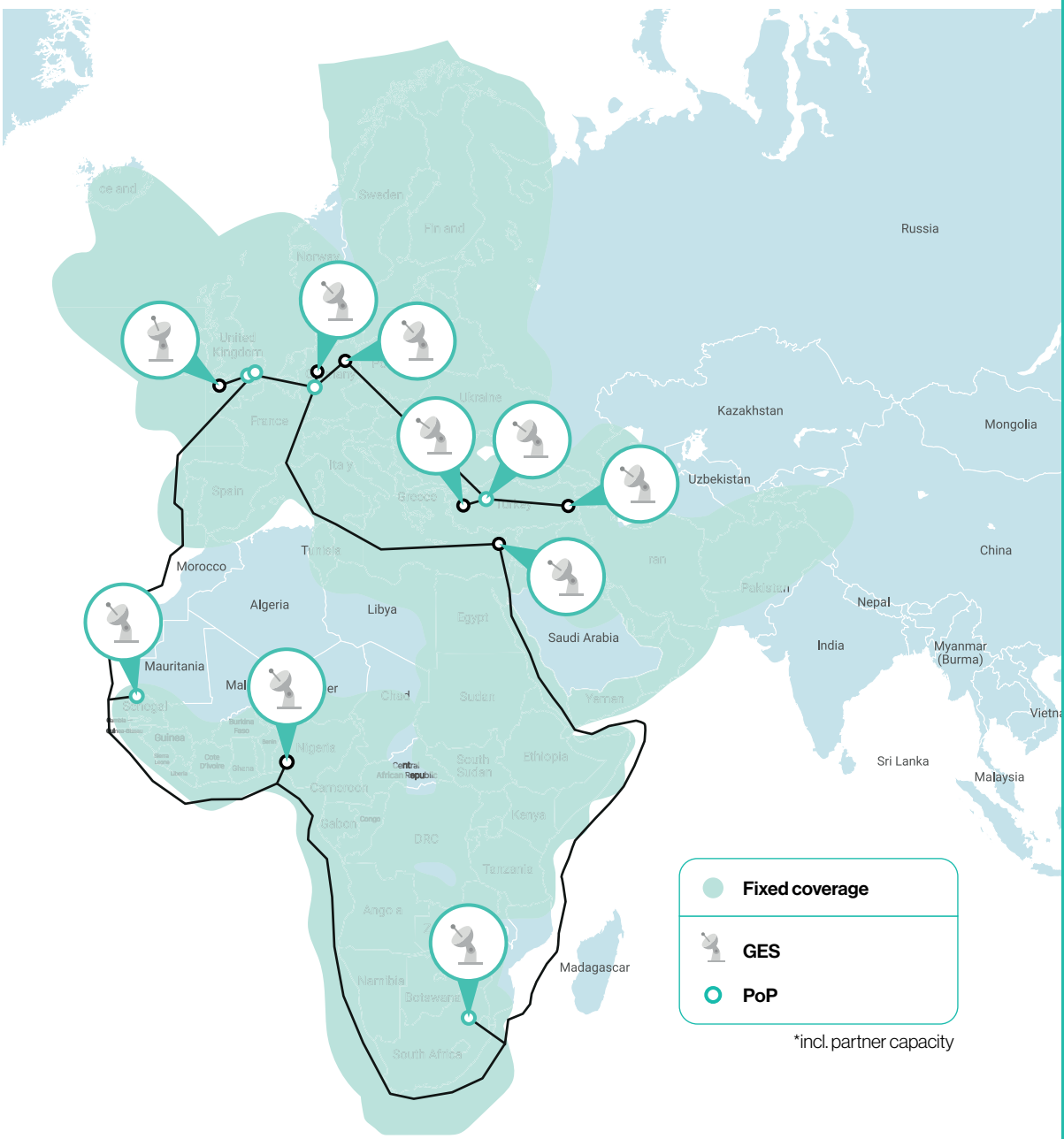
Consistent radio frequency availability of 99.5% SLA - Avanti IP Core Service 99% on Satellite RF, ensuring ultra-reliable service for mission critical applications.

### Cost-effective and quick to deploy

Seamlessly integrates into your existing network management systems.  
Smaller, cheaper and easier to move around equipment.

# Fully operational built-in high value capex solution

- 1** Fully operational and fully regulatory approved ground network
- 2** Interconnected via redundant fibre links
- 3** Fully authorised operations in Africa
- 4** Dual redundant antennas serving all satellites from geographically diverse ground stations
- 5** 99.5% SLA - Avanti IP Core Service. 99% on Satellite RF





The ability of a satellite operator to rapidly upscale to meet the long-term demands from multiple large-scale projects is vital. Avanti's high-throughput Ka-band ensures future requirements for bandwidth are met.

Proven ability to roll out thousands of sites using our HYLAS satellite fleet across Sub-Saharan Africa and Europe provides an incredibly scalable future-proof network design for large deployments – at no additional CAPEX to customers.

Avanti's network and high availability will allow the deployment of 10,000 rural sites in Nigeria.

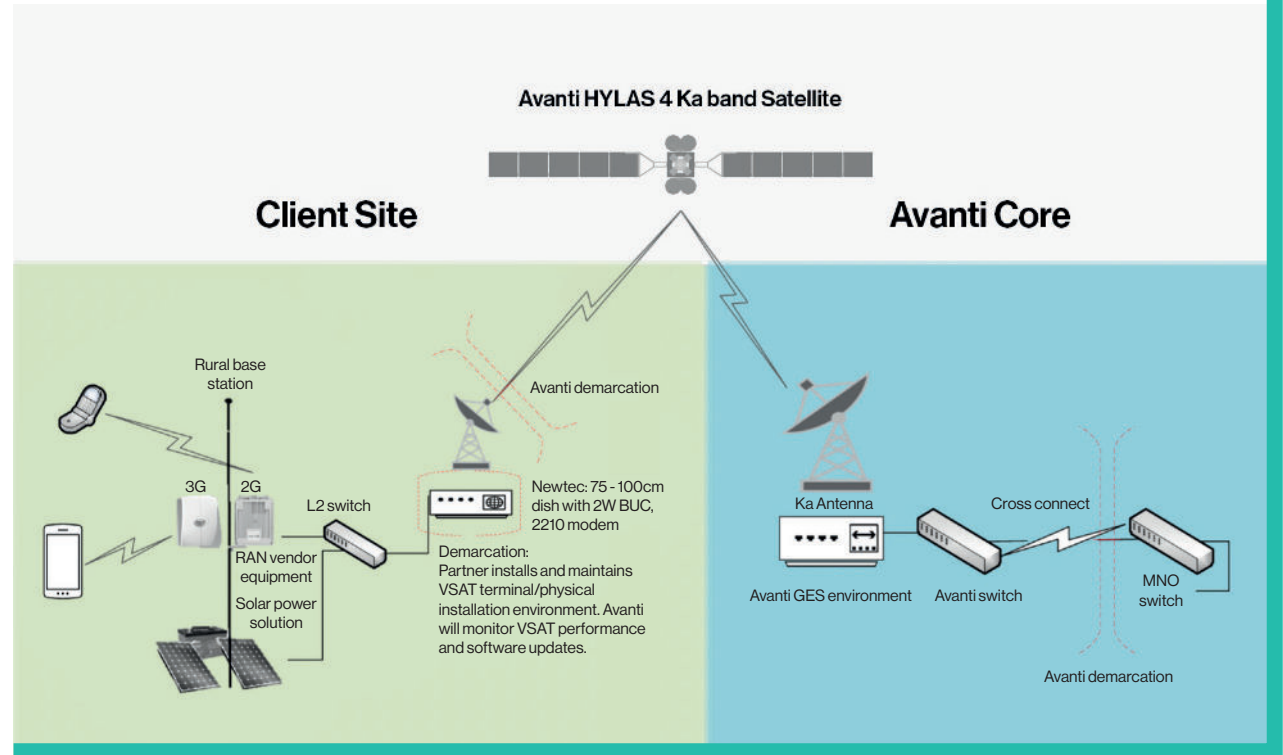
# How does Avanti EXTEND work?

Avanti EXTEND is a managed satellite network service that provides the physical, transport and network layer for transmission of cellular backhaul traffic to and from cellular towers and connection back to the MNO's core network.

By utilising Avanti EXTEND, customers do not need to manage satellite configurations, hub infrastructure or terrestrial networks to deploy a successful satellite cellular backhaul topology.

Avanti EXTEND integrates with the majority of RAN vendors and third party power suppliers.

**Avanti provides the technology, skills and resources to deliver into any MNO core – You do not need to employ network and satellite resources – You can focus on your business.**



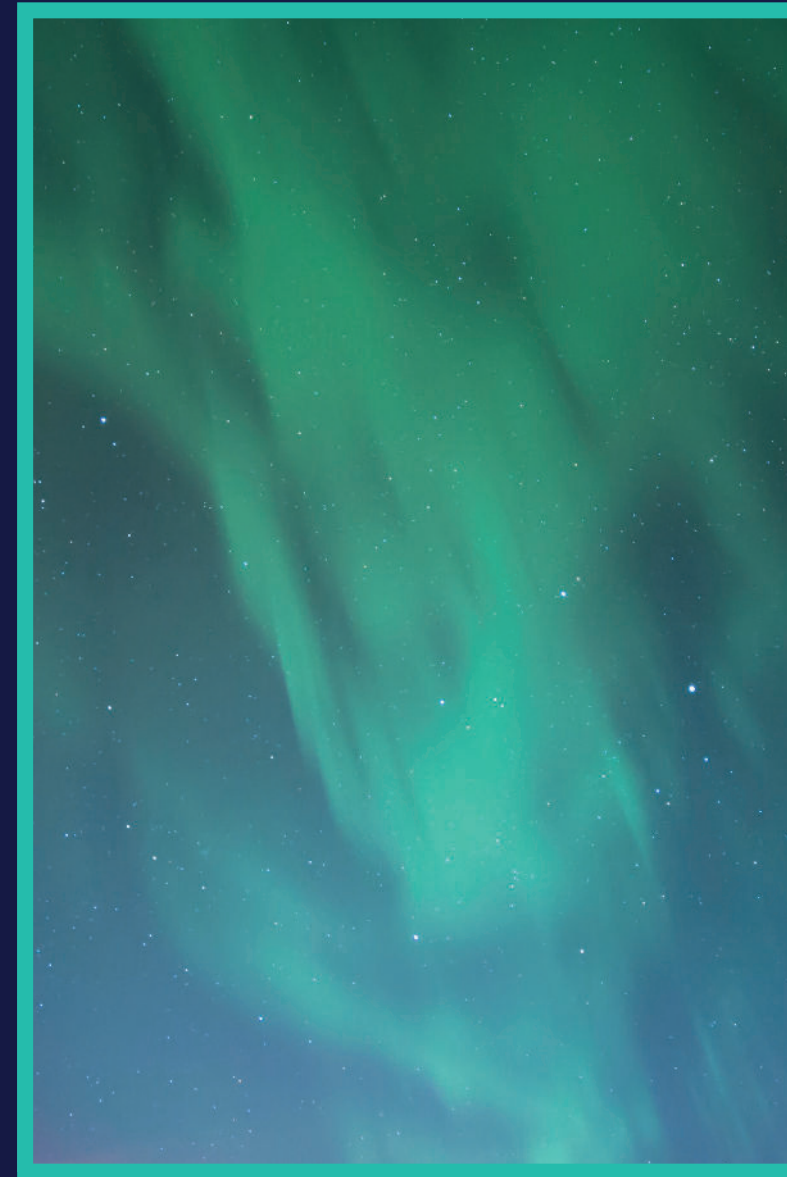
## Avanti VSAT technology

Avanti has selectively collaborated with ST Engineering (Newtec) for its cellular backhaul services. Avanti and Newtec have successfully integrated with some of Africa's largest MNOs, and have several hundred modems in operation

across the region. The modem capabilities facilitate delivery of industry leading speeds for 2G, 3G and 4G services up to 100Mbps downlink and 25Mbps uplink.

# Avanti EXTEND End-to-End Services

Full provision of technology skills and resources  
to deliver into any MNO core.



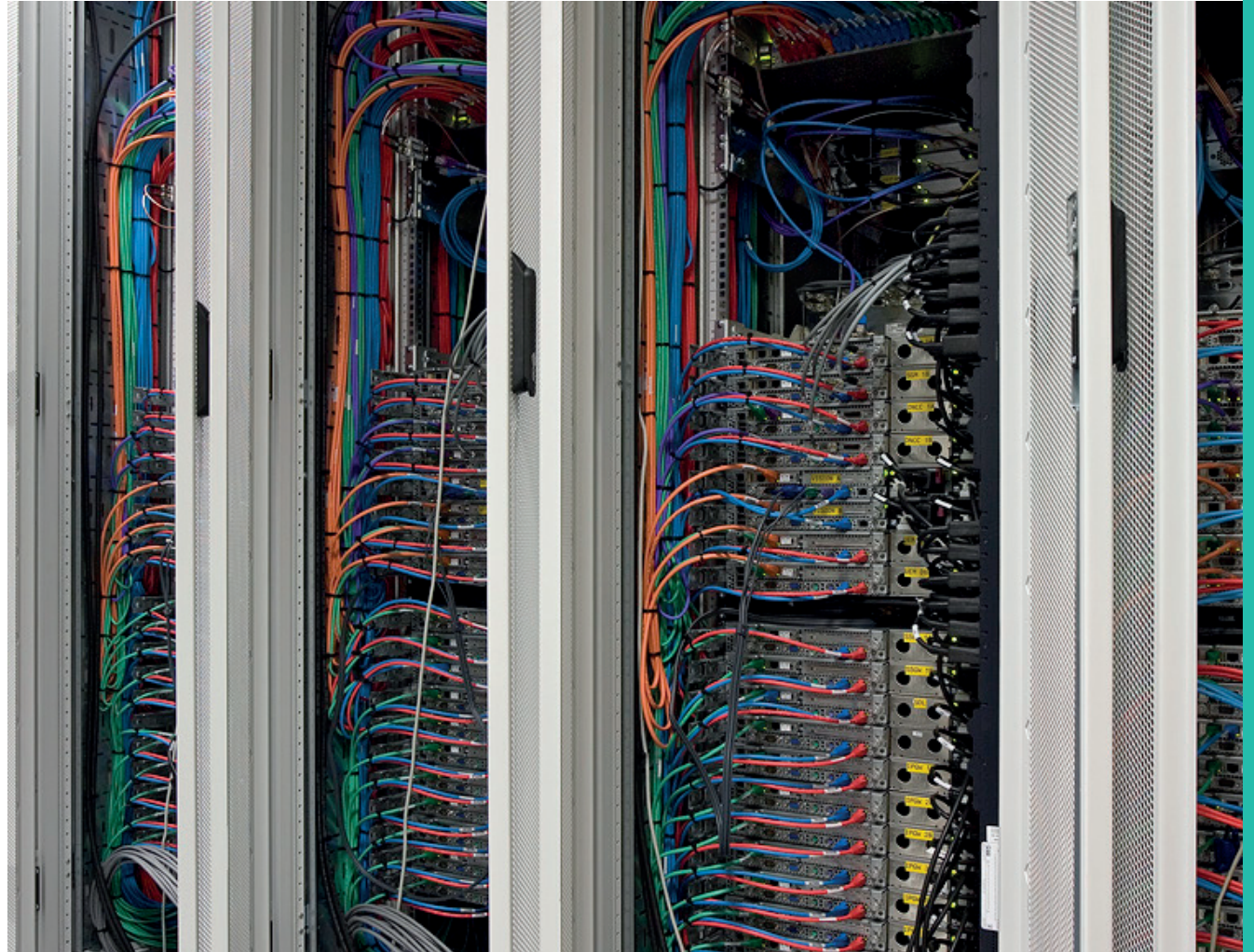


# Integration into your Network Architecture

Our highly experienced engineers and solutions architects work with your teams and customers to build a scalable and robust network architecture.

## We will ensure:

- Alignment with your chosen Radio Access Network (RAN) vendor
- Alignment with your chosen power vendor
- Recommendation of proven and tested network architecture
- Documentation of technical overviews and diagrams with support demarcation points
- Assistance with MNO integration (established secured multiple network paths into Africa's largest providers)
- Recommendation of bandwidth plans for the network
- Availability of multiple Point of Presence (PoPs) across Sub-Saharan Africa in major international hand off points





# Local Experts



Proven distribution network across the African continent with offices located in South Africa, Nigeria and Kenya.

- Modems delivered to convenient logistical customer destinations.
- Comprehensive training programme designed to customer's requirements.
- Avanti goes the extra mile to accredit and measure your installer's performance through ongoing quality assurance checks at point of installation and rating individual installers
- Avanti Mobile Assist – (AMA) is an innovative smartphone app to streamline the provisioning and commissioning process to enable efficient deployment of terminals whilst ensuring capture of relevant reporting data.

## **Dedicated Rural Deployment Team assisting customers through the on boarding process:**

- Customer support processes for new and in-life sites
- Technical training programme for assessment and accreditation
- Online portal training
- Joint roll-out planning
- VSAT equipment logistics support
- Billing support

# Customer Usage Driven Pools or Bandwidth Packages

**Hybrid solution for optimal cost management while boosting your revenue per site.**

Pre-defined bandwidth packages per site or region taking into account 2G/3G and 4G requirements.

- No need to buy large pools of satellite spectrum eliminating high upfront costs
- You can start with a small pool and increase as the need arises
- No resources needed to manage a satellite spectrum
- Billing is on a per site basis for ease of managing costs
- Option to choose managed pool-based capacity
- Low capital expenditure VSAT modems and dishes



# 24/7 Support – Expert Services

Supporting a SATCOM and cellular network - designed to cover multiple countries – requires a dedicated team of highly skilled engineers. Avanti ensures that, through its dedicated Network Operation Centre (NOC), the customer's network is monitored using a multitude of data points ensuring the optimal network performance.

- Support desk operates 24/7 – 365
- Pro-active monitoring
- Site up/down Status/Availability
- Real time signal strength monitoring
- Traffic throughput alerts
- Email and telephone support for logging tickets
- SLA-based ticket resolution
- New site – health check performed
- Feedback and advice on all issues identified

# Management Dashboard for Network Insight

Easy access to key metrics from provisioning to network performance data. The reporting portal allows data analysis, creating a joint action plan to improve network performance to resolve issues. In conjunction with the Avanti technical teams, a value-added service is provided with advice on how to ensure optimal network performance.

## Reporting Provision:

- Per site network utilisation shown per VLAN
- Site signal strength
- Per site throughput statistics
- Site availability
- Latency
- Modem temperature
- Overview of sites deployed





# Why Avanti for rural expansion?

Avanti delivers the most customer-centric carrier service within the SATCOM industry.

Our customers are the heart of Avanti's business and we understand how to deliver. We have been providing connectivity services across Africa for more than a decade.

Avanti has a rich experience of both Satellite and Carrier services. Avanti's management team comes from the carriers industry. We understand the importance of customer satisfaction and provide ultra-reliable Quality of Service.

More than 70% of Avanti's HYLAS fleet coverage is over Africa.

Avanti is the No. 1 high throughput Ka-band satellite company in Africa. As an organisation, 75% of Avanti's investment is in Africa, totalling \$897 million.

Avanti will manage all your satellite services, gateways and hubs. No need for investment in dedicated Satellite support. Ultimately minimising your risk and capex exposure.



Be More.

