FAQ

Why the Aprisa XE delivers a high-performing cost-effective alternative to VSAT

The Aprisa XE is the perfect replacement for opex-draining VSAT links. With high capacity and low latency over a long distance, it virtually eliminates operational expenditure and delivers a rapid return on investment. Here are 4RF's ten most frequently asked questions about how the Aprisa XE compares to VSAT, together with a real-world deployment scenario:

1. **Can the Aprisa XE really replace some of my VSAT links?**

   Yes: VSAT is not the only technology that can reach remote locations. The Aprisa XE can reach distances of up to 250 kilometres with a single link, ideal for reaching rural and remote locations, usually much more cost-effectively than VSAT.

2. **How does the Aprisa XE's operational expenditure compare to VSAT?**

   The monthly rental cost of VSAT links varies considerably depending upon the country of operation and the capacity required. The Aprisa XE virtually eliminates operational expenditure and the return on investment for the capital expenditure can be typically counted in months rather than years.

3. **What about the costs for data capacity?**

   Data costs with VSAT very quickly become prohibitive as capacity requirements are increased. With the Aprisa XE, up to 65 Mbit/s of capacity is provided as standard with a single link, suitable for even high bandwidth applications.

4. **How does the Aprisa XE's deployment time compare to VSAT?**

   Where rapid deployment is critical, VSAT can be a compelling choice, but this advantage is outweighed by longer term cost implications. Some of 4RF's customers have deployed Aprisa XE links in less than a day. This is due to the sheer ease of its deployment, as discussed below.

5. **What about the ease of deployment?**

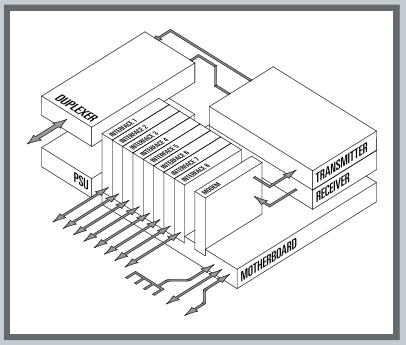
   While VSAT deployment is 'easy' because it uses a third party operator, the Aprisa XE is itself straightforward to deploy, with minimal site acquisition and civil requirements. Its lightweight antenna maximises location options, unlike VSAT where the need for a clear view of the sky complicates deployment options. Its performance benefits greatly outweigh this initial deployment overhead.

The Aprisa XE in brief

- Highly flexible point-to-point microwave link
- Accommodates all data, voice and IP traffic requirements on a single future-proof platform
- Industry-leading platform: goes the greatest distance, delivering the greatest capacity
- Technically and financially outperforms VSAT

Aprisa XE

More about the Aprisa XE



- Frequency bands from 300 MHz to 2.7 GHz
- Channel sizes from 25 kHz to 14 MHz
- Capacity from 72 kbit/s to 65 Mbit/s
- Flexible interface options: E1 / T1, 2 and 4 wire analogue, multiple data options, 10 / 100Base-T Ethernet

6. What is the management overhead of the Aprisa XE compared to VSAT?

While the management overhead of a VSAT link is minimal, as it is provided by a third party operator, an Aprisa XE link is actually very easy to manage, with its web-based element management software and in-built cross-connect for configuration. A network of Aprisa XE links can be managed with any SNMP-compliant network management system, for ease of integration with other infrastructure. The advantages for a customer in being able to own, manage and control their communications infrastructure without any dependence on a third party provider by far outweighs the minimal management overhead required.

7. Does the Aprisa XE deliver carrier-class availability?

Yes, absolutely. Whereas VSAT operators typically do not commit to greater than 99.5% availability due to the impact of environmental conditions, the Aprisa XE is much less affected by climatic conditions, and is able to provide a consistent, dependable 99.999% availability, for true carrier-class service.

8. And what about service level agreements?

Because of its carrier-class performance, the Aprisa XE is hugely dependable and enables its users, such as telecommunications operators, to build guarantees and service level agreements into their service offerings. The Aprisa XE can also be configured for complete redundancy if desired.

9. How low is the Aprisa XE's latency?

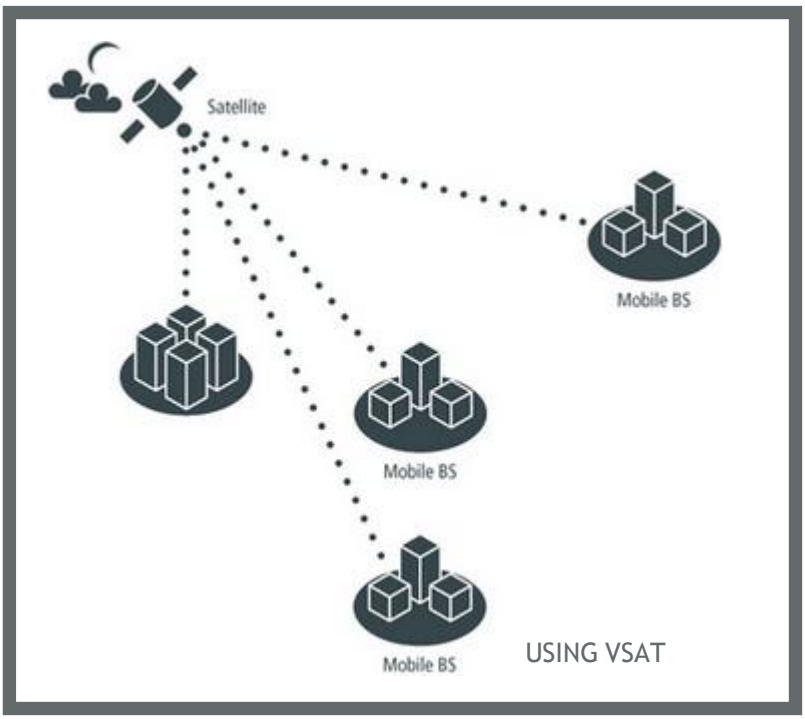
The exact latency in an Aprisa XE link depends upon the channel size and modulation scheme being used. However, the Aprisa XE is a terrestrial solution and its latency is significantly lower than VSAT links. This makes it a much more appropriate technology choice for teleprotection and latency-dependent or mission-critical applications.

10. What about the impact of environmental conditions?

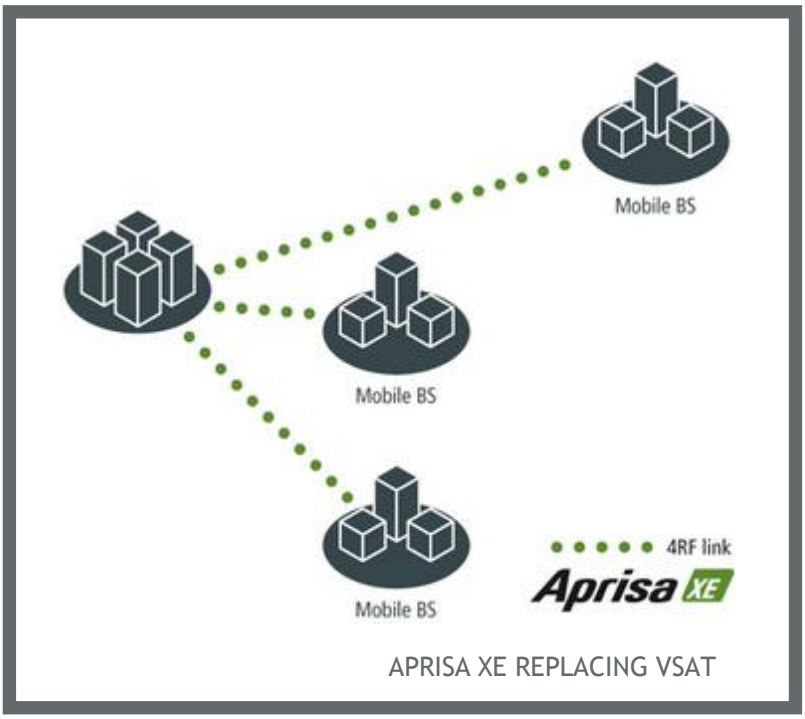
The Aprisa XE is much less impacted by environmental conditions than VSAT. Whereas weather conditions and solar activity can cause VSAT signals to fade significantly, the fact that the Aprisa XE uses microwave frequency bands below 3 GHz means that the impact of environmental conditions is minimal. This means that it can be depended upon to reliably maintain the required link, even over long distances.

Deployment scenario

For a 4RF customer in Indonesia, the monthly rental costs for a VSAT mobile backhaul service were undermining the economic viability of the mobile base stations. 4RF deployed a network of Aprisa XE links to replace the VSAT services. As a result, the customer's operational expenditure was virtually eliminated and the network rapidly paid for itself, with a return on investment time of less than six months.



USING VSAT



APRISA XE REPLACING VSAT

Aprisa XE

In conclusion

While the use of VSAT services enables a relative simple network configuration, the problems of acquiring roof rights, high latency, susceptibility to environmental conditions and spiralling data costs frequently undermine the economic viability of this option.

4RF has deployed many VSAT replacement links in excess of 100 kilometres, providing greater throughput, better availability and significantly reduced system latency, with a superior business case and rapid return on investment.

THE ISSUE	VSAT	APRISA XE
Remote locations	Possible	Up to 250 km links
Operational expenditure	Varies but expensive	Virtually eliminated
Increasing data capacity	Becomes prohibitive	65 Mbit/s as standard
Deployment time	Third party-dependent	Can be rapid
Ease of deployment	Site location issues	Very easy
Management overhead	Third party-dependent	Easy network management
Carrier-class availability	Not usually achieved	99.999% availability
Service level agreements	Not usually offered	Easy to incorporate SLAs
Latency	High	Significantly lower
Environmental impact	Signal fades	Minimal impact

ABOUT 4RF

Operating in more than 130 countries, 4RF provides radio communications equipment for critical infrastructure applications. Customers include utilities, oil and gas companies, transport companies, telecommunications operators, international aid organisations, public safety, military and security organisations. 4RF point-to-point and point-to-multipoint products are optimized for performance in harsh climates and difficult terrain, supporting IP, legacy analogue, serial data and PDH applications.

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