

# B-Spectrum: High-speed, high-capacity connectivity for the Middle East's AI future



With AI driving unprecedented demand for bandwidth, data-intensive organisations in the Middle East, consumers are looking for connectivity that's flexible, scalable, and high-capacity. That's where **B-Spectrum**, Batelco's managed spectrum solution, comes in. Managed spectrum offers a smart middle ground between leasing wavelengths and owning fibre infrastructure—giving customers more control, without the complexity of building and operating their own network. Let's dive in to why managed spectrum with B-Spectrum is an ideal way to meet today's capacity demands and growth opportunities.

## AI drives further demand for network and data centre capacity

One of the buzzwords at [this year's Capacity Middle East conference](#) was hyper-decentralisation. As demand grows for real-time AI, data centres need to be brought closer to consumers of AI services. That's spurring more hyperscalers to build in the Middle East, and GCC countries in particular. A key challenge for those new builds is connectivity. With AI set to add to already-rising demand for streaming services, cloud services and IoT-based applications, hyperscalers, neo-clouds, 'babyscalers' and data centre operators are going to need capacity—and lots of it. Not just to transport the huge datasets required for model training, but also to connect localised inference clusters running in different data centres. Buying multiple 100G or 400G wavelengths—or investing in dark fibre—are potential ways to get the capacity required, but for companies with their sights set on the Middle East's **\$320 billion AI opportunity**, a more flexible and economical solution may be managed spectrum.



## What is managed spectrum and how does it work?

Managed spectrum is a way of buying network capacity that offers a 'halfway house' between buying wavelengths from a service provider and owning and operating one or more fibre routes. It provides a slice of spectrum within a service provider's fibre pair that can be used in any way the customer chooses. With a managed spectrum offering like Batelco's B-Spectrum, the service provider owns and manages the fibre, the line system and the transponders, meaning the customer doesn't have to purchase and install equipment or recruit specialist optical expertise. One key difference is that the transponders are purchased for the customer, and ringfenced for their exclusive use. That means the spectrum can be exploited up to its capacity limit by attaching transponders as required, avoiding the need to buy wavelengths in increments and thus offering economies of scale.



## An ideal solution for bandwidth-intensive organisations

A managed spectrum solution like B-Spectrum is an ideal way of getting the capacity needed to handle AI and other very high-bandwidth workloads, flexibly and quickly, without becoming the owner-operator of a fibre network. In that sense it's most suited to hyperscalers and other organisations that need high-bandwidth, low-latency connectivity into a primary data centre and/or between distributed data centres and edge nodes. The default choice for bandwidth-intensive organisations are 1.6T per wavelength, managed spectrum offers the flexibility to increase capacity whenever required, without fresh capital outlays or repeated procurement cycles. It can also be lit quickly, accelerating time to value for new data centre investments.

## What to look for in a managed spectrum provider

While managed spectrum can be a highly attractive solution for hyperscalers and other large data centre operators, it requires an experienced partner. Spectrum requires specialist skills to provision and manage, particularly since the dedicated slice must be protected from other users of the same fibre pair. An experienced partner can ensure privacy and security on the channel, using appropriate guard bands, and provide security guarantees. Finally, an understanding of customers' needs and pressures, and a partnership approach to collaboration, is a must. Look for a provider with experience of managing spectrum for hyperscalers and other high-capacity customers—whether they're already established in the Middle East or preparing to expand into the region.

## Talk to us about managed spectrum in the Middle East

If you'd like to explore the potential for managed spectrum in the Middle East, let's talk. Batelco is a technology group born in Bahrain with more than 40 years' experience in the provision of public and private communications infrastructure. By partnering with **Ciena** for the latest optical technologies, we offer businesses in the region more choice in meeting the demand for high bandwidth services—including with our terrestrial managed spectrum offering, **B-Spectrum**.

To find out more, get in touch with us at [globalsales@btc.com.bh](mailto:globalsales@btc.com.bh).