

# Pushing the Limits and Optimizing Uptime

Case Study: Going the distance in a stressed network



## Summary

Customer	<ul style="list-style-type: none"><li>• International high capacity transport provider</li></ul>
Challenge	<ul style="list-style-type: none"><li>• A stressed network that was burning through optics</li><li>• Waning OEM bias</li><li>• Availability of quality optics</li></ul>
Solution	<ul style="list-style-type: none"><li>• A head-to-head test between the incumbent OEM and Integra Optics</li></ul>
Result	<ul style="list-style-type: none"><li>• Integra's optics worked flawlessly at the limit, and then some</li><li>• Achieved 3 to 4 dBs more sensitivity than the OEM</li><li>• Replaced critical optics with Integra's optics</li></ul>
Equipment Used	<ul style="list-style-type: none"><li>• 80KM XFP</li><li>• 10KM SFP+</li></ul>

## Optics and Athletes, Pushing the Limits

Operating under a stressed network while trying to optimize uptime is no small task. One of the keys to success is having optics that can go the distance and perform at, and beyond the limit. Think of the optic as a competitive athlete; they push to the absolute limit everyday, and when it counts, they defy the odds and perform above 100 percent capacity. To most, this seems like an impossible feat, but to the one percent of the world's best athletes, thriving under pressure is what they do.

When a customer came to us needing optics that would not only perform well, but surpass industry standards in a stressed network, we knew it could be done. Through an exhaustive test environment, Integra was able to prove that its optics were made to go the distance and excel under pressure.

Technical drawings of the 1000 Series Locking Bolt in three views: front, side, and top. The front view shows a locking bolt with a handle and a locking mechanism. The side view shows the bolt's profile. The top view shows the bolt's base and mounting holes. Dimensions are provided in inches and millimeters.

View	Dimension	Value (inches)	Value (millimeters)
Front View	Overall Length	10.8	271
	Handle Length	12.4	315
	Handle Width	0.2	5.1
	Locking Mechanism Width	0.63	16.0
Side View	Overall Length	10.8	271
	Locking Mechanism Width	0.63	16.0
Top View	Overall Length	22.5	567.5
	Overall Width	11.4	290
	Handle Width	0.79	20.0
	Locking Mechanism Width	7.5	190.5

Our customer found Integra's optics to be three-to-four dBs more sensitive than the OEM in every test scenario, resulting in significantly longer transmission reach. While the OEM barely made the distance, Integra 80KM XFP maintained a reliable 10G connection up to 101km and the SFP+ 10km maintained a reliable connection up to 21km, far surpassing expectations. The difference in reach allowed our customer to turn the underutilized link up to almost full capacity without a single problem.

Manager, Engineering

# Excelling Under Pressure

Integra starts with only the best raw materials, codes, and triple-tests every optic in-house to ensure quality and predictable performance, similar to athletes who train their bodies to endure stress and consistently perform above capacity. Integra's optics thrive under pressure when it counts.