

OPTICAL TRANSCEIVERS

UNDERSTANDING QUALITY OPTICS IN THE THIRD-PARTY WORLD

Smith supports many North American third-party optics distributors with the quality products they need. Most of these distributors are memory or hard drive companies that are now selling optics. In many cases, we will provide private-label products for these companies, or they will simply label the optic and extend our warranty through the computer channel. These are brands that know that ensuring quality is a top priority.

Unfortunately, some third-party brands will 'fill in' or source low-quality modules that are off-spec, which can be very dangerous in a critical environment and have caused considerable concern around third-party optics.

Generic SFPs

Laser leads hardwired to PCB, leaving solder joints exposed



Capacitor arrays and voltage regulators used to save on component cost

Low-cost plastic laser enclosure



Smith Optics

MSA-spec passive used

Aluminum laser enclosure

1000BASE-LX SFP

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Pictured above left is an off-spec/off-AVL product that was produced by a non-certified contract manufacturer in Asia. This kind of product is dangerous, with typically high failure rates, and usually contains repeat serial numbers with unverified or nonexistent algorithms that the switch operating system (OS) looks for. This commonly results in port failure.

Smith only partners with the exact CMs that major OEMs like Cisco, Juniper, Nortel, HP, Brocade, and others leverage for their own production. We use the same factories, and, in many cases, we share the same production runs as the brand-name OEMs.

Besides the Physical Module, Line Code, Algorithm, and Serial-Number Sequence Are Critical:

The operating systems of most OEMs (Juniper, HP, Cisco, Nortel, etc.) require that digits and algorithms are verified, along with non-repeat serial numbers within the network. Since the line code on the EEPROM/NVRAM is proprietary to the OEM, it must be recreated with strong engineering and testing in order to ensure full functionality in the device.

Smith invests heavily in this R&D effort. Not only do we maintain and apply the appropriate algorithm per platform, but we also apply a unique, non-repeating serial number to each individual transceiver to ensure that there is never duplication within the network. After that, every transceiver is tested in the specific platform and intended port. Our dedication to quality and the highest level of performance has led us to outfit our lab with the switch and router equipment to test across all platforms. Because of this, it is common for Smith to have a lower failure rate than branded OEM optics.

Driven by the needs of large telecommunication companies, network-operations centers, and internet-property customers, Smith's quality assurance and testing procedures exceed those of OEM router and switch network brands. We require rigorous verification procedures and quality assurance from our contract manufacturers. We then fully test every module in-house within its intended OS and machine and verify the line code, algorithm, and serial number sequence during this process. Our investment in the myriad of cross-brand and gigabit routers and switches needed to accomplish this supports our overarching dedication to quality. As a result of our intensive inhouse quality control procedures, Smith has fewer failures in production than the major OEM-branded optics.

Due to the master distributor agreements we hold with large North American companies and the substantial volume driven by our sizable value-added reseller and telecom customer base, Smith supplies the market with quality optics at prices smaller distributors can't offer. Since we began operating in this sphere, Smith has utilized a cost-plus pricing structure that allows us to regularly deliver the lowest cost for the highest-quality optics available.

Smith's optical transceivers are fully compliant with all OEM switch and router product lines. Our transceivers and DACs support the following brands:

3Com | ADTRAN | Alcatel | Allied Telesis | Arista | Aruba | Avaya | BLADE Network Technologies | Brocade | Calix Check Point | Chelsio Ciena | Cisco | D-Link | Dell | Delta | Enterasys | Extreme | F5 Networks | Finisar | Fluke Networks Force 10 | Fortinet Foundry | FTTX | Fujitsu | Gigamon | H3C | HP | Huawei | IBM | Intel | JDSU | Juniper | Linksys | Marconi Mellanox | Meraki MRV | NETGEAR | Nortel | Oplink | Overture | Palo Alto | Pannaway | Redback | Riverbed | Riverstone Sixnet SMC | Sunrise Telecom | Transition Networks | TRENDnet | Zhone | ZTE







Smith offers a full line of transceivers, cables, direct-attach cables (available in passive, active twinax, and active optical), and cable-management systems.

*All brand names above are property of their respective owners. MTP is a registered trademark of US Conec, Ltd.



