



2022 Product Catalog

Fiber optic network components: transceivers, meters, passives, jumpers, and uptime tools

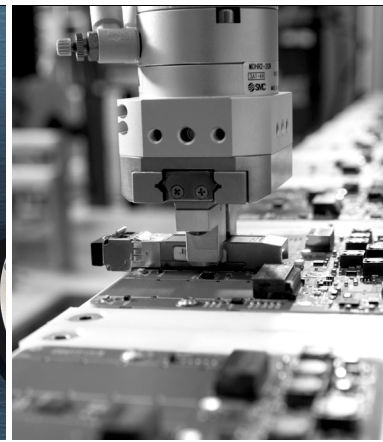


**integra
optics®**

an INFINITE brand

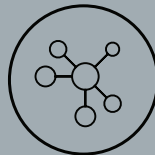
100% focused on uptime

We understand that your business and residential end users expect their internet and phones to work 100% of the time. That's why Integra Optics is 100% focused on uptime. It's our mission to ensure that customers can turn up services faster, build out the fiber networks they need to be competitive, and keep them up and running.



WE SHIP SAME-DAY

Integra carries a vast inventory of the parts our customers need today, so they can have them in their hands tomorrow -- rather than weeks or months -- to help manage their supply chain.



PLATFORM AGNOSTIC

Integra's optics are interoperable with over 80+ OEM platforms -- a perfect partner when juggling multi-platform networks. Paired with our Smart Coder, this helps reduce both CAPEX and OPEX, helping customers to future-proof their network, spare more efficiently and reconfigure optics from one platform to another..



RELIABLE AT SCALE

Integra utilizes both our human and robotics teams to ensure that all optics are triple tested before they leave our facility. We have a dedicated team ensuring that all optics are coded and tested so that they work correctly 100% of the time.

HOW TO ORDER

Phone:
+1.877.402.3850

Email:
integrabd@integraoptics.com

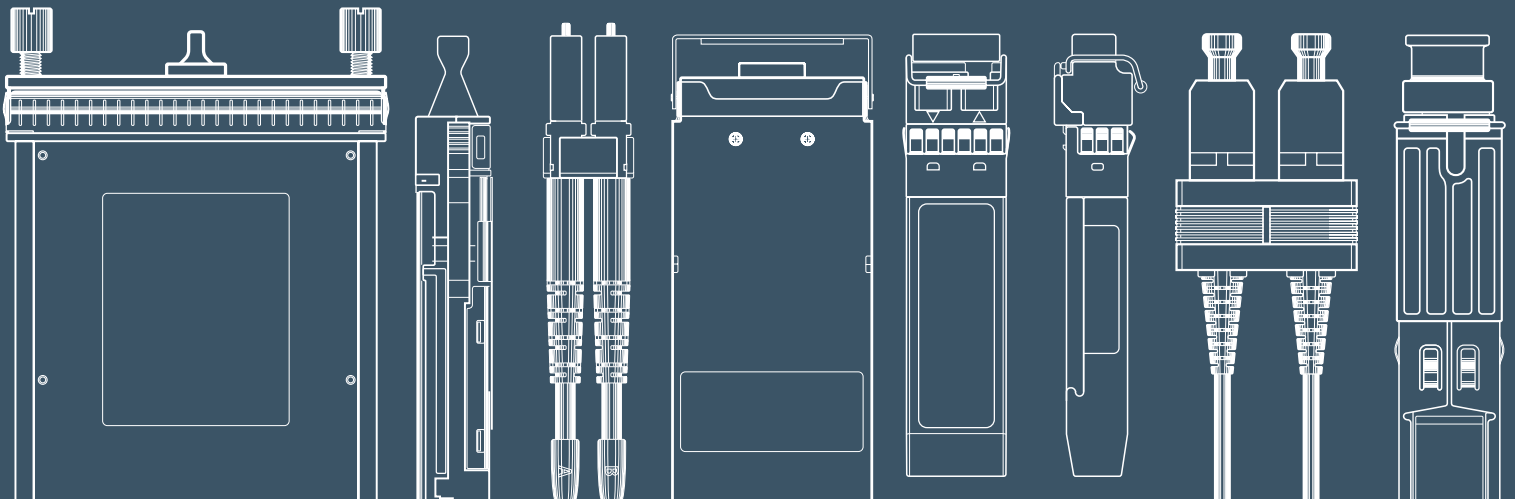
Online:
integraoptics.com



Serving telecom, cable, and data network industries

Integra Optics helps network engineers, designers and managers around the world build out new fiber optic networks, extend the value of their existing networks and maintain uptime with the most reliable transceivers and fiber optic components available. We're providing network solutions for over 300 organizations worldwide.

	Integra Optics	OEM optics	Other 3 rd Parties
Identically coded across all OEM platforms	✓	✓	✗
Engineering support 24/7	✓	✓	✗
Specifications beyond OEM offerings	✓	✗	✗
On-demand availability	✓	✗	✗
In-house platform specific coding and testing of all transceivers	✓	✗	✗
Engineered, triple-tested, and inventoried in the U.S.A.	✓	✗	✗
First quality materials and components for every product	✓	✗	✗



New solutions for a more predictable supply chain

Integra Optics was founded to answer the problems of reliability and availability. We're committed to making our transceivers not only better, but also more readily available than any other manufacturer in the industry. We maintain a large inventory of optics that are accurately coded, triple-tested, and ready to ship when you need them.

Why Integra?

We provide what the OEM does and **what they don't!**

Distance

OEM's don't always supply optics to support all distances commonly used in **service provider networks** today.

Wavelength

Integra is capable of hardware at **any wavelength for any platform**, for any transceiver!

Temperature

Operate in extreme temperatures?
Integra can provide optics for **challenging environmental conditions!**

Transport-Specific Optimizations

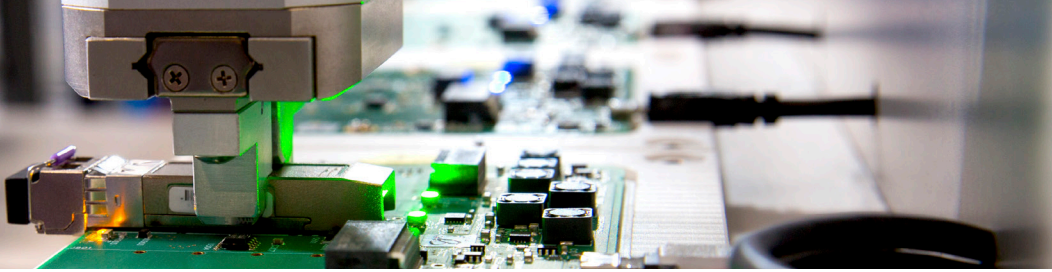
Some transport conditions require very specific transceiver technologies. Integra Optics **matches the situation** with the right transceiver and makes it **work in your platform!**



OEM Product Sampling

Adva	MikroTik	Ekinops	Palo Alto Networks
Arista	NetApp	EMC	Phrontier
Cisco	Tellabs	Enterasys	Planet Technology
Juniper	Zhone	Ericsson	Plexxi
Nokia	ZTE Corporation	EtherWAN	QLogic
Alcatel	Accedian	Extreme	Raisecom
Aruba	Actelis	Fiberblaze	Ruggedcom
Dell	Allen Bradley	Force10	Samsung
Huawei	Allied Telesis	Fortinet	Sandvine
Infinera	Avaya/Nortel Passport	Gigamon	Signamax
Intel	Aviat	Harmonic	Sonicwall
Ciena	BridgeWave	Hirschmann	Sonnet Tech
HP	BTI	Hitachi	Sonus
Fujitsu	Calix	IBM	Sorrento
MRV	Cambium	Ixia	Sun Oracle
MSA	Canoga Perkins	Keymile	Tejas Network
NetGear	Casa	KTI Networks	Telco
Ubiquiti Networks	Check Point	Lenovo	TELDAT
Adtran	Citrix	Linksys	Teleste
Arris	Commscope	Mellanox	TP-LINK
Aurora	Comnet	Metaswitch	Transition
Brocade/Foundry	Coriant	Microsemi	Transmode
Zyxel	Corning	Motorola	TrendNet
RAD	Cyan	MOXA	Turin
Ruckus	D-Link	NetScout	Viptela
F5	Dasan Networks	Occam	Westermo
Meraki	ECI	Omnitron	White Rock
Optelian	Edgecore Networks	Overture	Xtera

.... AND MANY MORE!



Transceivers 1G & 10G

Transceivers 25G

SFP 1G

Applications

- 1000Base-X, MetroE
- LAN/WAN, Backhaul



Features

- Copper, SM or MM interfaces
- Variable distance support, 100m-160km
- Bi-Directional, CWDM, DWDM variants available
- Optional C-Temp, E-Temp, I-Temp capable
- Up to 4Gbps

Protocol Support

- 10/100/1000Base-X, SONET/SDH, 1-4G Fibre

SFP+ 10G

Applications

- 10GBase-X, MetroE
- LAN/WAN, Backhaul
- Carrier Transport
- Data Center



Features

- Copper, SM or MM interfaces
- Variable distance support, 100m-100km
- Bi-Directional, CWDM, DWDM variants available
- Optional C-Temp, E-Temp, I-Temp capable
- Up to 11.1Gbps

Protocol Support

- 10GBase-X, SONET/SDH, Fibre Channel, CPRI & OTN

SFP28 28G

Applications

- 25GBase-X, MetroE
- LAN/WAN, Backhaul
- Carrier Transport
- Data Center



Features

- SM or MM interfaces
- Variable distance supported 100m-40km
- Bi-Directional, CWDM, DWDM variants available
- Optional C-Temp, E-Temp, I-Temp capable
- Up to 32Gbps

Protocol Support

- 25GBase-X, Fiber Channel & CPRI



Transceivers 40G

XFP 10G

Applications

- 10GBase-X, MetroE
- LAN/WAN, Backhaul
- Carrier Transport
- Data Center



Features

- SM or MM interfaces
- Variable distance support, 100m-100km
- Bi-Directional, CWDM, DWDM variants available
- Optional C-Temp, E-Temp, I-Temp capable
- Up to 11.3Gbps

Protocol Support

- 10GBase-X, SONET/SDH, Fibre Channel, CPRI, OTN with support for FEC

DWDM Tunable 10G

Applications

- 10GBase-ER/ZR
- Carrier Transport



Features

- SFP or XFP
- Link distance up to 80km
- Tunable range 1528.77-1566.72
- 50 and 100 GHz spacing
- Up to 11.3Gbps

Protocol Support

- 10GBase-ER/ZR, SONET/SDH, Fibre Channel, CPRI & OTN

QSFP+ 40G

Applications

- 40GBase-X
- Carrier Transport
- Data Center



Features

- SM or MM interfaces
- LC or MPO connectors
- Variable distance support, 100m-40km
- Quad lane 4x10G support
- Up to 56Gbps

Protocol Support

- 40GBase-X





Transceivers 100G, 200G & 400G

QSFP28 100G

Applications

- 100GBase-X
- LAN/WAN
- Backhaul
- Data Center



Features

- SM or MM interfaces
- Variable distance support, 100m-80km
- Quad lane 4x25G support
- Up to 112Gbps
- SR4, LR4, ER4, ZR4, CWD4/CLR4, PSM4 and Bi-Di variants available

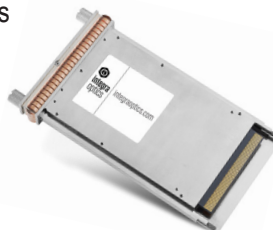
Protocol Support

- 100GBase-X & OTN

CFP 100G

Applications

- 100GBase-X
- LAN/WAN
- Backhaul
- Data Center



Features

- SM-LC or MM-MPO interfaces
- Variable distance support, 100m-40km
- 10x10G or quad lane 4x25G support
- Up to 112Gbps
- SR10, LR4 and ER4 variants available

Protocol Support

- 100GBase-X & OTN

CFP2 100G 200G

Applications

- 100GBase-X/200G Base-X
- LAN/WAN
- Backhaul



Features

- SM-LC interfaces
- Link distances up to 40km
- Quad lane 4x25G support
- Up to 212.5 Gbps
- LR4, ER4 and SR10 available

Protocol Support

- 100GBase-X & OTN



CFP4 100G

Applications

- 100GBase-X
- LAN/WAN
- Backhaul
- Data Center



Features

- SM-LC
- Variable distance support 100m-40km
- Quad lane 4x25G support
- Up to 112Gbps
- LR4 & ER4 variants available

Protocol Support

- 100GBase-X & OTN

QSFP-DD 200G 400G

Applications

- 200GBase-X/400GBase-X
- LAN/WAN
- Backhaul
- Data Center



Features

- SM-LC, SM-CS, SM-MPO, MM-MPO
- Variable distance support 70m-40km
- 200, 2x100, 8x50G, and 4x100G support
- Up to 425Gbps
- SR8, DR4, FR4, LR4, and ER4 variants available

Protocol Support

- 200GBase-X, 400GBase-X

Converters

CFP to QSFP28

Applications

- Converts a CFP interface to a QSFP28 interface
- Primary applications align with QSFP28 optical transceivers

Features

- Primary features align with QSFP28 optical transceivers
- Brings SR4 capabilities to your CFP interface

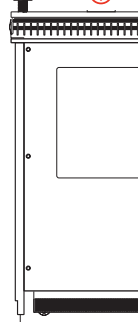
CFP2 to QSFP28

Applications

- Converts a CFP2 interface to a QSFP28 interface
- Primary applications align with QSFP28 optical transceivers

Features

- Primary features align with QSFP28 optical transceivers
- Brings SR4 capabilities to your CFP2 interface





Additional Transceivers

GPON OLT

Applications

- GPON
- FTTx

Features

- B+ or C+ compliant
- Variable distance support 100m-40km
- Up to a 1x64 split
- 1310nm receive, 1.244Gbps
- 1490nm transmit, 2.488Gbps

Protocol Support

- G.984 GPON



Direct Attach Transceivers

SFP+ TWINAX 10G

Applications

- Data Center
- SAN Networks

Features

- Direct attach copper
- Variable distance support 1m-15m
- Passive and Active variants available
- Up to 10.3Gbps

Protocol Support

- Ethernet, Fibre Channel



SFP+ AOC 10G

Applications

- Data Center
- SAN Networks

Features

- Direct attach OM3/OM4 optical fiber
- Variable distance support 1m-100m
- Optional C-Temp, E-Temp available
- Up to 10.3Gbps

Protocol Support

- 10GBase-SR, Fibre Channel



QSFP AOC 40G 100G

Applications

- Data Center
- Telecom

Features

- Direct attach OM3/OM4 optical fiber
- Variable distance support 1m-100m
- Optional C-Temp, E-Temp available
- Up to 40Gbps or 100Gbps
- 1x40G (QSFP-QSFP) and 4x10G (QSFP-SFP+) available or 1x100G (QSFP-QSFP) and 4X25G (QSFP-SFP28)

Protocol Support

- 10GBase-SR, 25GBase-SR, 40GBase-SR, 100Base-SR, Fibre Channel, OTN with support for FEC and OTU4



QSFP+ Copper 40G

Applications

- Data Center
- Telecom

Features

- Direct attach copper
- Variable distance support 1m-7m
- Up to 40Gbps
- 1x40G (QSFP-QSFP) and 4x10G (QSFP-SFP+) available

Protocol Support

- Ethernet, Fibre Channel



QSFP28 Copper 100G

Applications

- Data Center
- Telecom

Features

- Direct Attach Copper
- Variable distance support 1m-5m
- Up to 100Gbps
- 1x100G (QSFP-QSFP) and 4X25G (QSFP-SFP28)

Protocol Support

- Ethernet, Fibre Channel



Meters

CWDM Optical Analyzer

Applications

- MetroE
- WAN
- LAN
- Backhaul

Features

- 18 CWDM channels
- Wavelengths 1270-1610nm
- Ruggedized with color display
- Internal rechargeable lithium battery
- Auto or manual scan capable
- Measurement data storage function
- SC/UPC SM interface



DWDM Optical Analyzer

Applications

- MetroE
- WAN
- Backhaul
- Carrier Transport

Features

- Available with 50 or 100 GHz spacing
- Wavelengths 1527.99-1565.91nm
- Ruggedized with color display
- Internal rechargeable lithium battery
- Auto or manual scan capable
- Measurement data storage function
- SC/UPC SM interface



PON Power Meter

Applications

- FTTx

Features

- Wavelengths 1270/1310/1490/1550/1577
- PON pass through for simultaneous measurement of both upstream and downstream
- Capable of burst mode measurement of 1310nm/1270nm upstream
- Measurement data storage function
- SC/APC SM interface



Optical Power Meter

Applications

- FTTx
- WAN
- LAN
- RFOG

Features

- Wavelengths 850/1270/1310/1490/1550/1577/1610
- Measurement range (dBm) -50 ~ +26
- Measurement data storage function
- SC interface



Mini Optical Power Meter

Applications

- FTTx
- WAN
- LAN
- RFOG

Features

- Wavelengths 850/1270/1310/1490/1550/1577/1610
- Lightweight, portable, ruggedized design
- OLED display
- SC Interface



OTDR

Applications

- Single Mode Fiber Applications

Features

- 3.5inch, color LCD, touch screen
- Measures optical fiber parameters such as length, loss, and connection quality
- Accurate positioning of event and fault points
- Test range of 500m-80km
- Transmits at 1310/1550nm wavelengths
- High capacity lithium battery



... AND MANY MORE!



Fiber Jumpers

Multi-Mode

Applications

- Data Centers
- Metro-E
- LAN Systems



Features

- OM1 and bend insensitive OM3, OM4 and OM5
- Simplex and duplex and multicore versions
- Available in PVC (OFNR), plenum, indoor/outdoor ruggedized, low smoke zero halogen
- All types of connectors with all types of polish
- Distances ranging from 1-100m+

Single-Mode

Applications

- Data Centers
- FTTx
- Metro-E
- LAN/WAN Systems
- Backhaul
- Carrier Transport



Features

- Bend insensitive 9/125µm
- Simplex, duplex, and multicore versions
- Buffer Size: 1.2mm, 1.6mm, 2.0mm, 3.0mm, 4.8mm
- Available in PVC (OFNR), plenum, indoor/outdoor ruggedized, low smoke zero halogen, and more
- All types of connectors with all types of polish
- Distances ranging from 1-100m+

MPO Cables

Applications

- Data Centers
- FTTx
- Metro-E
- LAN Systems



Features

- OM3, OM4 Multi-Mode and Single Mode
- Method A, B and C
- 8, 12 and 24 fibers
- MPO-Male/Female and LC-UPC/APC breakout with further options available
- Distances ranging from 1-100m+

Passives

PLC Splitters

Applications

- FTTx
- LAN/WAN Systems
- CATV Systems



Features

- Low IL and PDL
- Wide operating bandwidth
- Wide operating temperature
- Telcordia qualified
- RoHS compliant

WDM Mux/Demux Modules

Applications

- CWDM System
- DWDM System
- Unidirectional Systems
- Bi-directional Systems
- CATV Systems
- FTTx



Features

- Low Insertion loss and high channel isolation
- High temperature stability
- Epoxy-free optical path
- Modular within rack mount chassis
- Custom Filter Solutions

Outside Plant Cassette

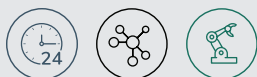
Applications

- CWDM System
- DWDM System
- Unidirectional Systems
- Bi-directional Systems
- CATV Systems
- FTTx



Features

- Low profile design
- Wide operating bandwidth
- Wide operating temperature
- Telcordia qualified
- RoHS compliant
- OSP (outside cabinet or splice enclosure)





Uptime Tools

Optical Inspection Scopes

Applications

- Optical Inspection

Features

- Precise focus control for instant detection
- Small and portable
- Video display
- Snapshot and video capable
- Over 10 adaptor tips to choose from
- Wireless Options
- Automatic fiber qualification



Mini Visual Fault Locator

Applications

- Single Mode Fiber

Features

- Dual mode operation, constant on or pulsed
- Quickly identifies damaged fibers
- Locates fiber breaks, faults, and bends
- Operates at 650nm
- Visibility up to 10Km



Cleaning Kit

Applications

- Optical Inspection

Features

- 1.25mm/2.5mm/MPO CleanClicker
- 1.25mm/2.5mm/MPO cleaning sticks
- 90 sheets of cleaning wipes
- Non-hazardous high-purity cleaning fluid engineered for precision optical components
- Portable flashlight
- Portable travel bag



Uptime Kits

Applications

- Headend/CO
- Field Technicians

Features

- Various case sizes
- Watertight, crushproof, dust resistant case
- Customizable
- Included products within a case can consist of a Smart Coder or Smart Coder+, a meter, jumpers, cleaning supplies, and a variety of transceivers.



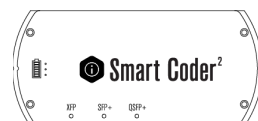
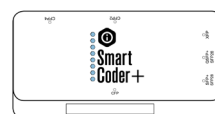
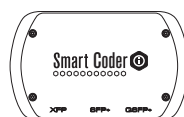
Suite of Smart Coders

Applications

- Field Technicians
- Central Staging Locations

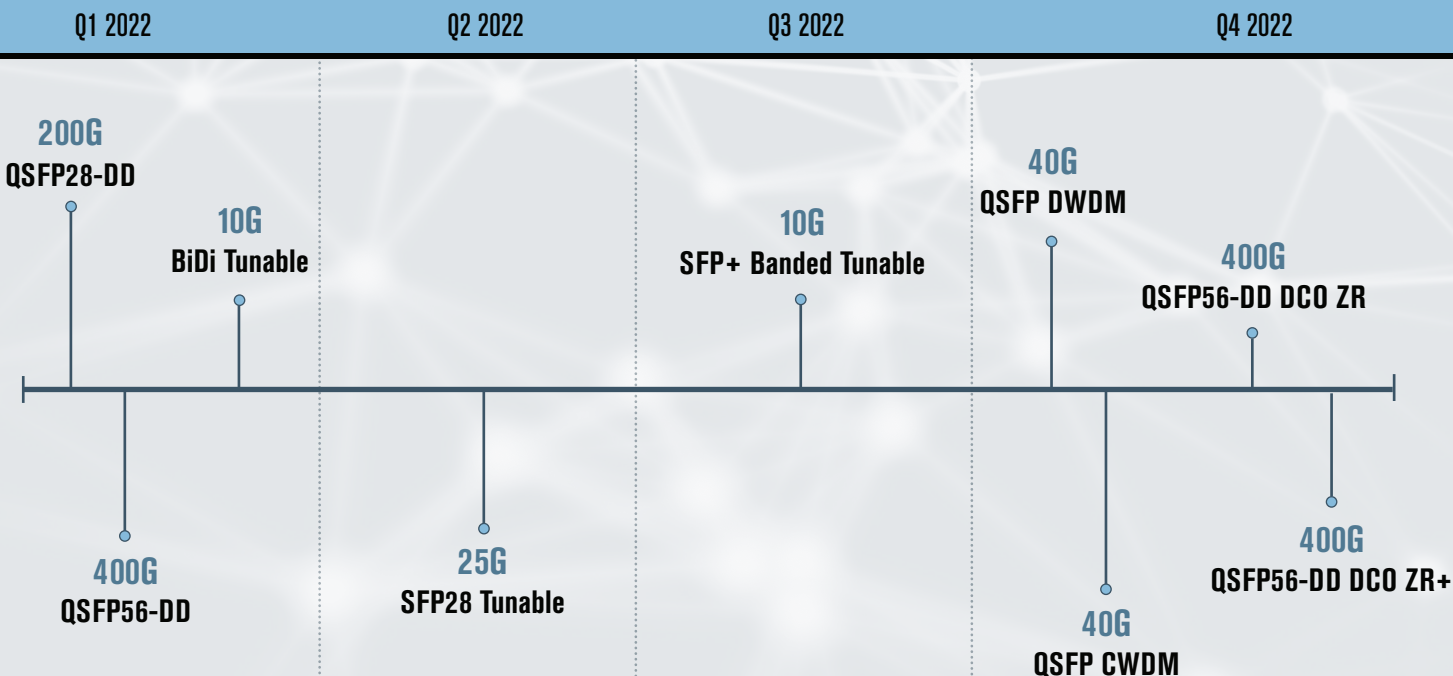
Features

- Allows users to rapidly reconfigure Integra's transceivers to a desired platform
- Smart Coder: Reconfigures SFP, SFP+, XFP, QSFP+ and QSFP28 optics
- Smart Coder+: Reconfigures SFP, SFP+, XFP, QSFP+, QSFP28, CFP, CFP2 and CFP4 optics
- Smart Coder²: Reconfigures SFP, SFP+, XFP, QSFP+, QSFP28 and QSFP-DD optics
- Remote support capable
- USB powered
- Intuitive App interface
- Displays diagnostic information





2022 New Product Timeline



2022 New Product Specifications

QSFP-28 DD 200G

Applications

- Data Center
- Enterprise Networking



Features

- QSFP28-DD-SR8 (100m distance, MMF)
- QSFP28-DD-CWDM4-CS (2km distance, MMF)
 - Duplex CS connector
- QSFP28-DD-LR4-CS (10km distance, SMF)
 - Duplex CS connector
- 200Gbps Data rate
- Commercial Temperature
- QSFP-DD MSA Compliant
- Digital Diagnostics

QSFP-56 DD 400G

Applications

- Data Center
- Enterprise Networking



Features

- QSFP56-DD-SR8 (100m distance, MMF)
- QSFP56-DD-DR4 (500m distance, SMF)
- QSFP56-DD-DR4+ (2km distance, SMF)
- QSFP56-DD-FR4 (2km distance, SMF)
- QSFP56-DD-LR4 (10km distance, SMF)
- QSFP56-DD-4xLR-MPO (10km distance, SMF)
- 400Gbps Data Rate
- Commercial Temperature
- QSFP-DD MSA Compliant
- Digital Diagnostics

BiDi Tunable 10G

Applications

- 1/10G Ethernet
- Telecom Networking
- Data Center Interconnect
- Compatible with existing passive filters



Features

- Distances up to 20km
- Supports 1.2 to 11.3 Gb/s
- CPRI Rates
- LC Connector, Simplex SMF
- Commercial, Extended, and Industrial Temperatures
- 40 dual-band bidirectional Point-to-
- Point links in 100GHz ITU grids
- SFP MSA Compliant
- Digital Diagnostics





2022 New Product Specifications

SFP 28 Tunable 25G

Applications

- Datacenter 25GbE
- Wireless 4G/5G fronthaul CPRI/eCPRI

Features

- Distance up to 15km (KR4 FEC on host)
- Dual rate: 24.33G (CPRI-10) and 25.78G (25GbE)
- 100GHz spacing, Full C-band tunable
- LC Connector, SMF
- Commercial & Industrial Temperature
- SFP28 MSA Compliant
- Digital Diagnostics



SFP+ Banded Tunable 10G

Applications

- 1/10G Ethernet
- Mobile Fronthaul
- CPRI 2-8 and eCPRI
- 1-10G FC
- 10G OTN

Features

- Distances up to 40km
- Supports 1Gbps to 11.3 Gbps
- LC Connector, Duplex SMF
- Industrial Temperatures supporting -40 °C to +85 °C
- 5 Band options 9 channels each covering ITU channels 20-60
- SFP MSA Compliant
- Digital Diagnostics



QSFP CWDM 40G

Applications

- 40G Ethernet
- Compatible with existing CWDM Passive Filters

Features

- Distance up to 10km
- 40G
- Fixed CWDM Wavelengths
- LC Connector, Duplex SMF
- Commercial
- QSFP MSA Compliant
- Digital Diagnostics



QSFP DWDM 40G

Applications

- 40G Ethernet
- Compatible with existing DWDM Passive Filters
- Telecom Networking
- Data Center Interconnect

Features

- Distance up to 80km (with DCM and EDFA)
- 40G
- Fixed wavelengths on 100GHz ITU Grid
- LC Connector, Duplex SMF
- Commercial
- QSFP MSA Compliant
- Digital Diagnostics



QSFP56-DD DCO ZR 400G

Applications

- Network Access
- Edge Apps
- Data Center Interconnect

Features

- Distance up to 120km
- IEEE 400GAUI-8 Ethernet compliant
- 75GHz or 100GHz, Full C-band tunable
- Commercial Temperature
- QSFP+ MSA Compliant
- Digital Diagnostics



QSFP56-DD DCO ZR+ 400G

Applications

- Network Access
- Edge Apps
- Data Center Interconnects

Features

- Distance up to 400km at 400G, 2000km at 200G, 5000km at 100G
- Multi-rate IEEE Ethernet
- Full C-band tunable
- Commercial Temperature
- Digital Diagnostics



Suite of Smart Coders

Now you can spare more efficiently and gain patented flexibility with Integra's suite of Smart Coder products. These powerful devices give network engineers and field techs the power to quickly reconfigure transceivers for any network hardware. Now with the SmartCoder2 you can save even more time! Our latest product features bluetooth connectivity with mobile app and is battery powered, leaving you the flexibility to code when and where you need to!

Features	Smart Coder	Smart Coder+	Smart Coder ²
Recode SFP/SFP/SFP28	✓	✓	✓
Recode XFP	✓	✓	✓
Recode QSFP/QSFP28	✓	✓	✓
Recode QSFP-DD			✓
Recode CFP/CFP2/CFP4		✓	
Recode DAC/AOC	✓	✓	✓
Coding from 1G to 100G	✓	✓	✓
Coding from 1G to 400G			✓
Offline Tuning Capabilities	✓	✓	✓
Remote Assist	✓	✓	✓
Bluetooth Connectivity			✓
Battery Powered (no need to plug in)			✓
Mobile App (iOS and Android)			✓

Package Options Include:



Additional Product Features:

- Recode transceivers as many times as needed
- Conduct diagnostic monitoring on both Integra and non-Integra brand transceivers (transmit power, receive power, temperature, and more)
- Recode cabled transceivers
- Recode frequently used platforms with our new "Favorites and Searching" functionality
- Quickly recode multiple components to the same platform/finished part with batch coding
- Plug in multiple Smart Coders to the same computer and recode optics in parallel
- Easily select parts and platforms with user-friendly interface





While other optics providers offer products that have the ability to recode optics, Integra's technology far surpasses other devices:

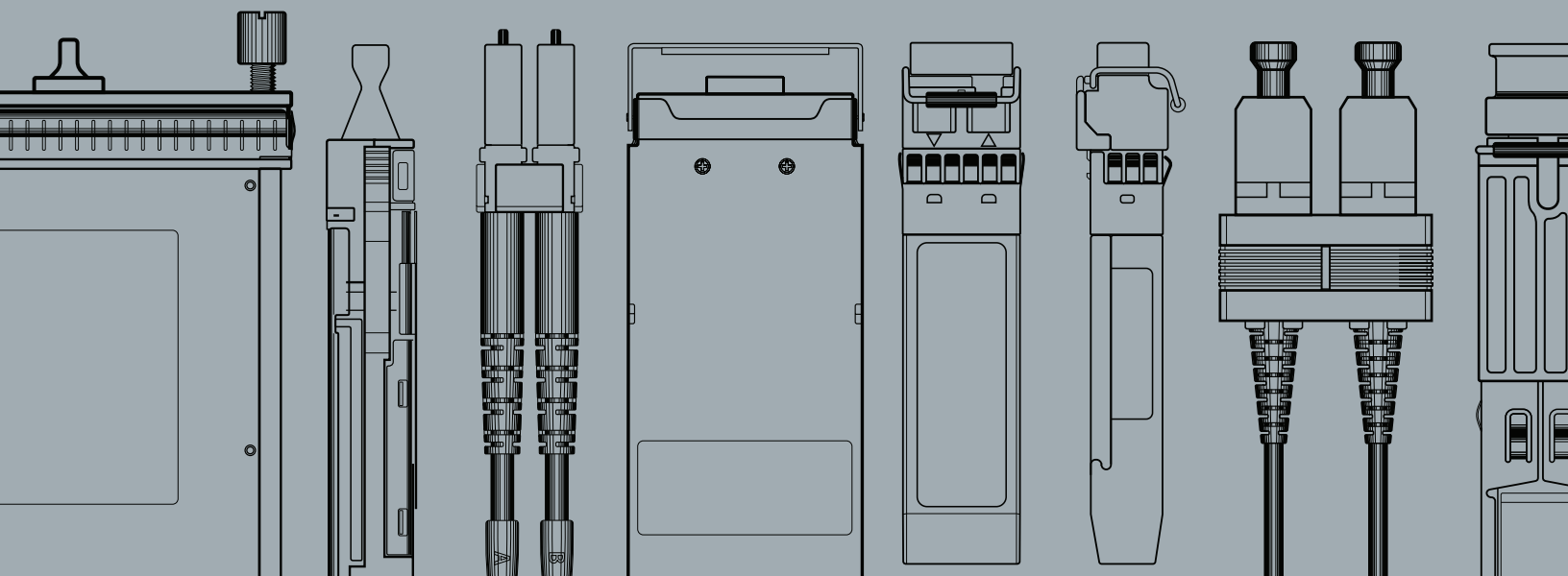
Features	Integra Optics	Competitor 1	Competitor 2
Supported Transceivers			
Recode SFP/SFP/SFP28	✓	✓	✓
Recode XFP	✓	✓	
Recode QSFP/QSFP28	✓	✓	
Recode QSFP-DD	✓		
Recode CFP/CFP2/CFP4	✓		
Recode DAC/AOC	✓		
Transceiver Features			
Code Optics to OEM Platform	✓	✓	
DWDM Wavelength Tuning	✓	✓	✓
Real Time Diagnostics	✓		
Software Features			
Favorites	✓		
Batch Coding	✓		
Remote Support	✓	✓	
Tuning Application	✓	✓	✓
Compatibility			
Windows	✓	✓	✓
Mobile App - Andriod	✓		✓
Mobile App - iOS	✓		✓
No AC Connection Required	✓	✓	✓
Offers Mutiple Coding Devices	✓		



While other optics providers may claim to have recoding devices, don't be afraid to put those claims to the test by asking them to recode a tunable to a 10G or 1G fixed channel, or recode an optic to another platform! Simple demonstrations will highlight product differences!



Integra has a solution for your 10G DWDM inventory issues! Integra's Tuner allows you to stock a single part without the interface complications of a tunable configured optic. It is as simple as downloading an additional application for the Smart Coder. The Integra Tuner allows you to tune specified DWDM optics to a specific channel before insertion; whatever platform you are using will recognize the optic as a fixed wave part, thus eliminating those interface complications a tunable brings to the table.



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