

Optical Transceivers

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Contents

Carritech Optical Transceivers	3
Our Products	4
100G QSFP28	5
40G QSFP+	6
25G SFP28	7
10G SFP+	8
SFP	9
XFP	11
CFP	12
Quality Assurance	13
Ordering from Carritech	14



Carritech Optical Transceivers

Introduction

Optical transceivers are a very important tool in modern network architecture. They provide a cost-effective solution to increase the technical flexibility of network equipment and allow products to move forward with an overall system's evolution.

About Our Products

At Carritech, we are committed to improving our client's productivity across their projects, including with the use of optical transceiver products such as SFP's, GBIC's and XENPAK. For that reason, we have focused on supplying the best performing, highest quality products that are suitable across data center, cloud computing,

metro network, access network and wireless network environments.

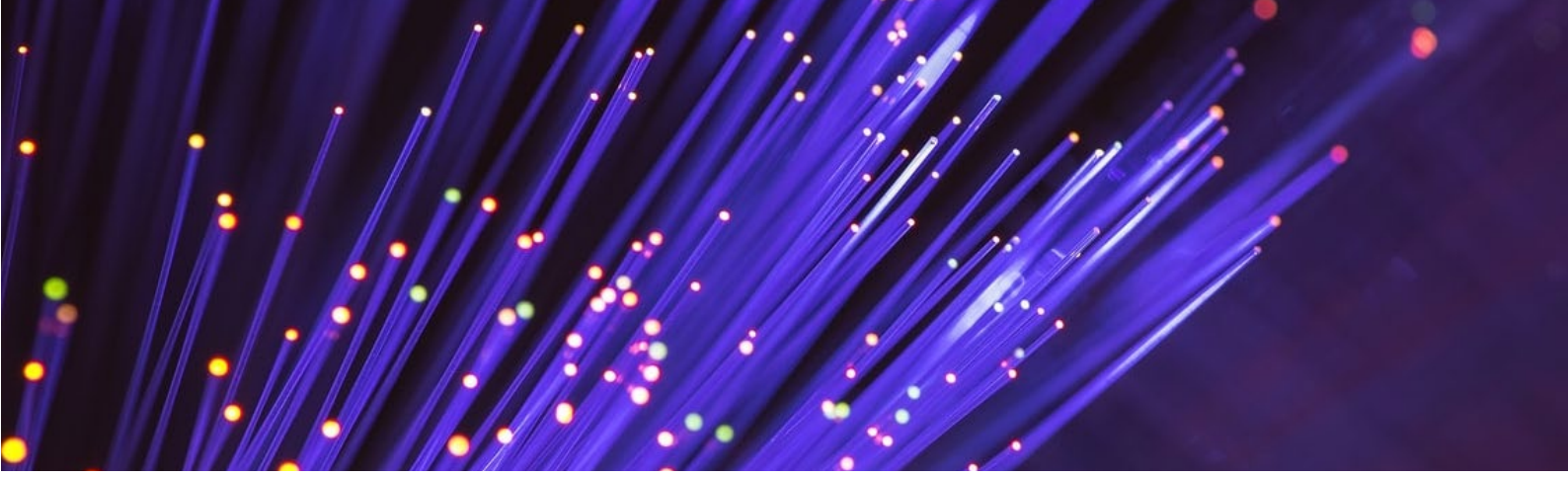
We understand that customer needs vary, and so we have ensured that we are stocking a range of products which support a wide variety of manufacturers, network sizes, distances and environments.

Compatibility

Our range of optical transceivers are fully compatible with the industries major equipment manufacturers. This includes Cisco, Juniper, HP and Ericsson network equipment.

Our products are tested upon manufacturing to ensure they are in working order before being sold and sent to our customers.





Our Products

At Carritech, we supply a wide range of optical transceivers for network, server and storage systems.

See below a list of all the technologies that we have available and ready to ship.



100G QSFP28 Transceivers



40GB QSFP+ Transceivers



25GB SFP28 Transceivers



SFP+ Transceivers



WDM Transceivers



BIDI Transceivers



SFP Transceivers



Copper Transceivers



XFP Transceivers



XENPAK Transceivers



GBIC Transceivers



Attach Cabling



100G QSFP28

There are a number of form factors that can be used for 100G links, which include CFP, CFP2, CFP4 and CXP, but the most popular choice are QSFP28 products.

There are different types of QSFP28 transceivers with varying characteristics, providing a choice of product depending on the specifications and requirements of your network.

QSFP28 Transceiver Specification

Name	Wavelength	Interface	Max Data Rate	Max Distance	DOM
QSFP28-SR4-100G	850nm	MTP/MPO-12	103.1Gbps	100m over MMF	Yes
QSFP28-PIR4-100G	1310nm	MTP/MPO-12	103.1Gbps	500m over SMF	Yes
QSFP28-IR4-100G	1310nm	LC duplex	103.1Gbps	2km over SMF	Yes
QSFP28-IR4-100G	1310nm	LC duplex	103.1Gbps	2km over SMF	Yes
QSFP28-LR4-100G	1310nm	LC duplex	103.1Gbps	10km over SMF	Yes
QSFP28-ER4-100G	1310nm	LC duplex	103.1Gbps	40km over SMF	Yes

Direct Attach Copper (DAC) and Active Optical Cables (AOC)

Name	Connector Type	Cable Type	Max Data Rate	Temperature	Cable Length
QSFP28-100G-DAC	QSFP28 to QSFP28	Passive Copper Cable	100Gbps	0 to 70°C	Up to 5m
QSFP28-4x25GDAC	QSFP28 to QSFP28	Passive Copper Cable	100Gbps	0 to 70°C	Up to 5m
QSFP28-100GAOC	QSFP28 to QSFP28	Passive Copper Cable	100Gbps	0 to 70°C	Up to 5m

All QSFP28 transceivers are fully tested ensuring that they meet industry standards and provide a high performing, cost efficient solution for your network needs.



40G QSFP+

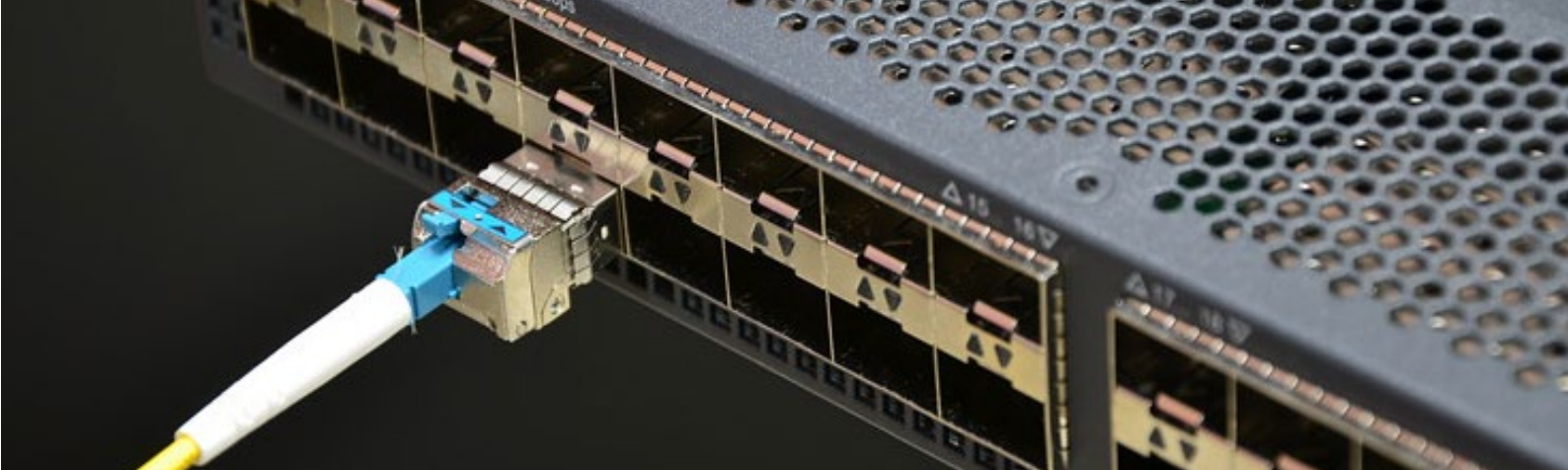
Carritech's QSFP+ transceivers for 40GbE range from short reach (SR) to long reach (LR) and extended long reach (ER). All QSFP+ products are fully compatible, tested and quality assured.

QSFP+ Transceiver Specification

Name	Wavelength	Interface	TX Power	Receiver Sensitivity	Max Data Rate
QSFP-SR4-40G	850nm	MTP/MPO	-5.6~3dBm	< -5.4dBm	40Gbps
QSFP-CSR4-40G	850nm	MTP/MPO	—	—	40Gbps
QSFP-BD-40G	832nm -918nm	LC duplex	—	—	40Gbps
QSFP-PIR4-40G	1310nm	MTP/MPO	—	—	40Gbps
QSFP-LX4-40G	1310nm	LC duplex	—	—	40Gbps
QSFP-IR4-40G	1310nm	LC duplex	—	—	40Gbps
QSFP-LR4-40G	1310nm	LC duplex	-7~2.3dBm	<-11.5dBm	40Gbps
QSFP-PLR4-40G	1310nm	MTP/MPO	-7~2.3dBm	<-11.5dBm	40Gbps
QSFP-ER4-40G	1310nm	LC duplex	-3.7~+4.5dBm	<-20.2dBm	40Gbps
CFP-LR4-40G	1310nm	LC duplex	-13.7~2.3dBm	<-9.6dBm	40Gbps

Direct Attach Copper (DOC) and Active Optical Cables (AOC)

Name	Connector Type	Cable Type	Max Data Rate	Temperature	Cable Length
QSFP-40G-DAC	QSFP+ to QSFP+	Passive Copper Cable	40Gbps	0 to 70°C	Up to 7m
QSFP-4SFP10GDAC	QSFP+ to 4 SFP+	Passive Copper Cable	40Gbps	0 to 70°C	Up to 5m
QSFP-40G-DAC	QSFP+ to QSFP+	Active Optical Cable	40Gbps	0 to 70°C	Up to 10m
QSFP-4XFP10GDAC	QSFP+ to 4 XFP	Passive Copper Cable	40Gbps	0 to 70°C	Up to 2m
QSFP-40G-AOC	QSFP+ to QSFP+	Active Optical Cable	40Gbps	0 to 70°C	Up to 100m
QSFP-4SFP10GAOC	QSFP+ to 4 SFP+	Active Optical Cable	40Gbps	0 to 70°C	Up to 30m
QSFP-8X-AOC	QSFP+ to 4 duplex LC	Active Optical Cable	40Gbps	0 to 70°C	Up to 100m



25G SFP28

Built with high speed and high density, Carritech's 25G SFP28 products provide high performance for major servers and switch interconnections within a network.

They allow for bandwidth within the network to be scaled cost-effectively, in support of next generation server and storage solutions within cloud and web-scale data center environments.

SFP28 Transceiver Specification

Name	Compatible Brand	Wavelength	Interface	TX Power	Receiver Sensitivity	Max Distance
SFP-25G-SR-S	Cisco	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF
QFX-SFP-25GSR	Juniper	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF
E25GSFP28SR	Intel	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF
SFP28-25GSR-85	Generic	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF
SFP28-25GSR-85	Brocade	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF
SFP28-25GSR-85	IBM	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF
SFP28-25GSR-85	Dell	850nm	LC duplex	-8.4~-2.4dBm	<-10.3dBm	100m over OM4 MMF

Direct Attach Copper (DOC) and Active Optical Cables (AOC)

Name	Connector Type	Cable Type	Max Data Rate	Temperature	Cable Length
SFP28-25GDAC	SFP28 to SFP28	Passive Copper Cable	25Gbps	0 to 70°C	Up to 5m
SFP28-25GAOC	SFP28 to SFP28	Active Optical Cable	25Gbps	0 to 70°C	Up to 30m



10G SFP+

SFP+ optical transceivers are the smallest transceiver with the lowest power output for 10G Ethernet. They allow increased density within enterprise and data center applications and for that reason they are extremely popular in modern networks.

10G SFP+ Transceiver Specification

Name	Wavelength	Interface	TX Power	Receiver Sensitivity	Max Data Rate
SFP-10GSR-85	850nm	LC duplex	-7.3~-1dBm	< -11.1dBm	300m over OM3 MMF
SFP-10GSR-85	850nm (Dual-Rate)	LC duplex	-7.3~-1dBm	< -11.1dBm	300m over OM3 MMF
SFP-10GLRM-31	1310nm	LC duplex	-7.3~-1dBm	< -11.1dBm	300m over OM3 MMF
SFP-10GLR-31	1310nm	LC duplex	-6.5~-0.5dBm	< -8.4dBm	220m over MMF 300m over SMF 2km over SMF
SFP-10GLR-31	1310nm	LC duplex	-8.2~0.5dBm	< -14.4dBm	10km over SMF
SFP-10GLR-31	1310nm (Dual-Rate)	LC duplex	-8.2~0.5dBm	< -14.4dBm	10km over SMF
SFP-10GLR-31	1310nm (Dual-Rate)	LC duplex	0~5dBm	< -16dBm	40km over SMF
SFP-10GER-55	1550nm	LC duplex	-1~4dBm	< -16dBm	40km over SMF
SFP-10GER-55		LC duplex	-1~4dBm	< -23dBm	80km
SFP-10GZRC-55		LC duplex	-1~4dBm	< -25dBm	100km
SFP-10G-T	—	RJ-45	—	—	30m over Cat6a/7
SFP-10G-BX	1270nm-TX/1330nm RX	LC simplex	-2~3dBm	<-14dBm	20km over SMF
SFP-10G-BX	1330nm-T/1270nm RX	LC simplex	-2~3dBm	<-14dBm	20km over SMF
DWDM SFP-10G-C	C17-C61, total 89	LC duplex	-1~3dBm	-24dBm	80km over SMF
CWDM SFP+	1470-1610nm 1270-1610nm	LC duplex	—	—	80km 10/20/40km
DWDM SFP+	C17-C61(100GHz Grid) C17-C61(50GHz Grid)	LC duplex	—	—	40/80km



SFP

SFP transceivers offer a simple way to link switches and routers to the network. At Carritech, we stock both optical and copper SFP models, which include 1000BASE-T, 1000BASE-SX, 1000BASE-LX/LH, 1000BASE-EX, 1000BASE-ZX, 1000BASE-BX10-D/U and 1000BASE CWDM&DWDM SFP for different applications.

1000BASE SFP Transceiver Specification

Name	Wavelength	Interface	TX Power	Receiver Sensitivity	Max Distance
SFP-GB-GET	—	RJ-45	—	—	100m over Cat 5 (10/100/1000BASE-T)
SFP1G-SX-85	850nm	LC duplex	-9.5 ~ 3dBm	< -17dBm	550m over OM2 MMF
SFP1G-SX-31	1310nm	LC duplex	-9.5 ~ 3dBm	< -17dBm	2km over MMF
SFP1G-LX-31	1310nm	LC duplex	-9.5 ~ 3dBm	< -23dBm	10km over SMF
SFP1G-LX-31	1310nm	LC duplex	-9.5 ~ 3dBm	< -23dBm	20km over SMF
SFP1G-LH-31	1310nm	LC duplex	-5 ~ 0dBm	< -24dBm	40km over SMF
SFP1G-EX-55	1550nm	LC duplex	-5 ~ 0dBm	< -24dBm	40km over SMF
SFP1G-ZX-55	1550nm	LC duplex	-2~3dBm	< -24dBm	80km over SMF
SFP1G-EZX-55	1550nm	LC duplex	0~5dBm	< -32dBm	100km over SMF
SFP1G-EZX-55	1550nm	LC duplex	0~5dBm	< -32dBm	120km over SMF
SFP1G-ZXC-55	1550nm	LC duplex	0~5dBm	< -35dBm	160km over SMF
CWDM SFP	1270-1610nm	LC duplex	—	—	20/40/80/100km
DWDM SFP	C17-C61 (100GHz)	LC duplex	—	—	40/80km

100BASE SFP Transceiver Specification

Name	Wavelength	Interface	TX Power	Receiver Sensitivity	Max Distance
SFP-FB-GE-T	—	RJ-45	—	—	100m over Cat 5 (10/100/1000BASE-T)
SFP-100FX-31	1310nm	LC duplex	-15~-8dBm	< -32dBm	2km over MMF
SFP-GE-100FX	1310nm	LC duplex	-15~-8dBm	< -32dBm	2km over MMF

SFP-100LX-31	1310nm	LC duplex	-15~-8dBm	< -32.5dBm	10km over SMF
SFP-100LX-31	1310nm	LC duplex	-15~-8dBm	< -32.5dBm	15km over SMF
SFP-100LX-55	1310nm	LC duplex	-15~-8dBm	< -32.5dBm	15km over SMF
SFP-100LX-31	1310nm	LC duplex	-15~-8dBm	< -32.5dBm	20km over SMF
SFP-100EX-31	1310nm	LC duplex	-5~0dBm	< -32.5dBm	40km over SMF
SFP-100ZX-55	1550nm	LC duplex	-3~2dBm	< -34dBm	80km over SMF
SFP-FE-BX	1310nmTX /1550nm-RX	LC Simplex	-14~-8dBm	<-30dBm	10km over SMF
SFP-FE-BX	1550nmTX /1310nm-RX	LC Simplex	-14~-8dBm	<-30dBm	10km over SMF



XFP

Carritech XFP optical transceivers are equipped with an LC fiber connector type, which is used to achieve greater density, and encompasses all variants of XFP in terms of reach and fiber type including SR, LR, ER and ZR. BiDi, CWDM and DWDM transceivers are also available.

XFP Transceiver Specification

Name	Wavelength	Interface	TX Power	Receiver Sensitivity	Max Distance
XFP-10GSR-85	850nm	LC duplex	-3.5~5.3dBm	<-13dBm	300m over OM3 MMF
XFP-10GLRM-31	1310nm	LC duplex	-6.5~0.5dBm	<0.5dBm	220m over OM3 MMF
XFP-10GLRM-31	1310nm	LC duplex	-6.5~0.5dBm	<-8.4dBm	2km over SMF
XFP-10GLR-31	1310nm	LC duplex	-6~0dBm	<-14.5dBm	10km over SMF
XFP-10GER-55	1550nm	LC duplex	0~4dBm	<-16dBm	40km over SMF
XFP-10GZR-55	1310nm	LC duplex	-5 ~ 0dBm	<-24dBm	80km over SMF
XFP-10GZRC-55	1550nm	LC duplex	—	—	100km over SMF
XFP-10G-BX60	1270nmTX /1330nmRX	LC simplex	1~5dBm	< -20dBm	60km over SMF
CWDM XFP	1470-1610nm 1270-1610nm	LC duplex	—	—	80km 20/40km
DWDMXFP	C17-C61 (100GHz)	LC duplex	—	—	40/80km

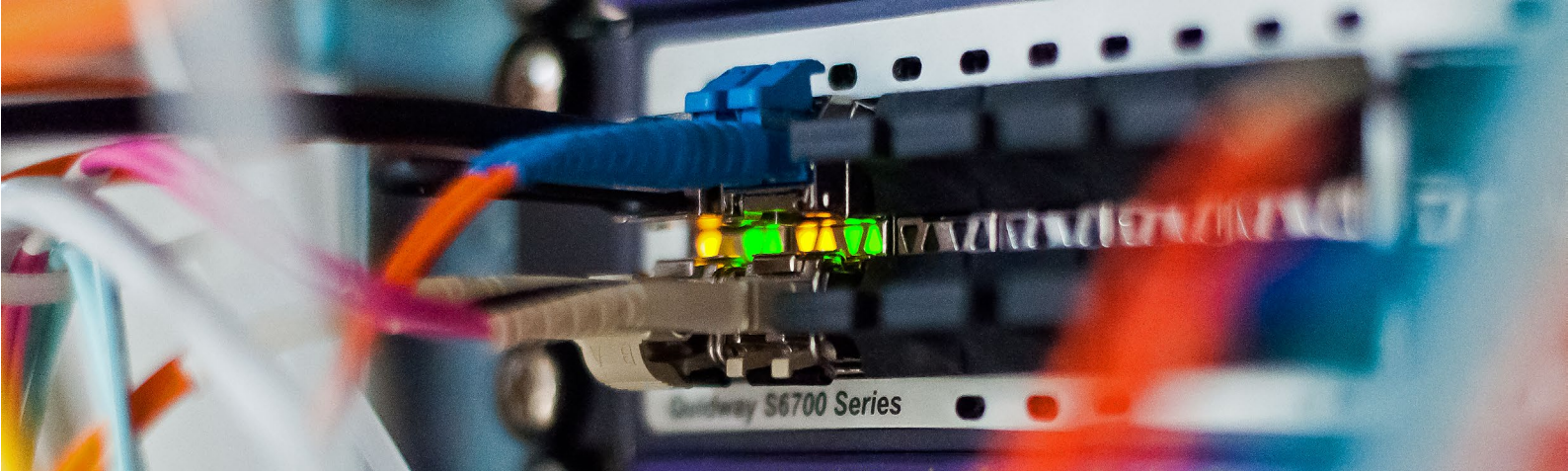


CFP

CFP, CFP2, CFP4 modules are widely used in the transmission of high-speed signals for 100 Gigabit Ethernet (100GbE), enabling ultra-high traffic density within and between data centers. All CFP transceivers support DOM function.

CFP Transceiver Specification

Name	Wavelength	Interface	Receiver Sensitivity	Max Distance
CFP-SR10-100G	850nm	MTP/MPO-24	103.1Gbps	150m over MMF
CXP-SR10-100G	850nm	MTP/MPO-24	120Gbps	100m over OM3 150m over OM4
CFP-LR4-100G	1310nm	LC duplex	112Gbps	10km over SMF
CFP2-LR4-100G	1310nm	LC duplex	112Gbps	10km over SMF
CFP4-LR4-100G	1310nm	LC duplex	112Gbps	10km over SMF
CFP-ER4-100G	1310nm	LC duplex	112Gbps	40km over SMF



Quality Assurance

Our Testing Standards

Wherever possible, our equipment is tested to ensure that it is in full working order before it leaves the manufacturing facility.

Any test reports that are produced are made available upon request.

We pride ourselves on providing the highest quality of products to our customers at all times.

Compatibility

All the manufacturer branded transceivers that Carritech supply are compatible with the manufacturer switches, including brands such as Cisco, Juniper, HP and Marconi.

Professional Service

At Carritech, we pride ourselves on our industry knowledge and professional service.

You can be assured that our dedicated account management team will assist you with your requirements to ensure that you receive your products as quickly as possible, on time and within budget.

Our experience in the industry, our partners and over 40 years of combined technical knowledge means we are the **go-to** supplier for your networking needs.

ISO Accreditations

Carritech are accredited with ISO:9001 Quality Management and ISO:15001 Environmental Management certifications.

ISO:9001

The ISO 9000 family of quality management systems standards is designed to help organizations ensure that they meet the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to a product or program.

ISO:14001

ISO 14000 is a family of standards related to environmental management that exists to help organizations minimize how their operations negatively affect the environment, comply with applicable laws, regulations, and other environmentally oriented requirements; and continually improve in the above.





Ordering from Carritech

We have made ordering from Carritech as easy as possible.

Our dedicated team of account managers are on hand to assist you with your order, help you with any questions and ensure that all the information you require is available to you.

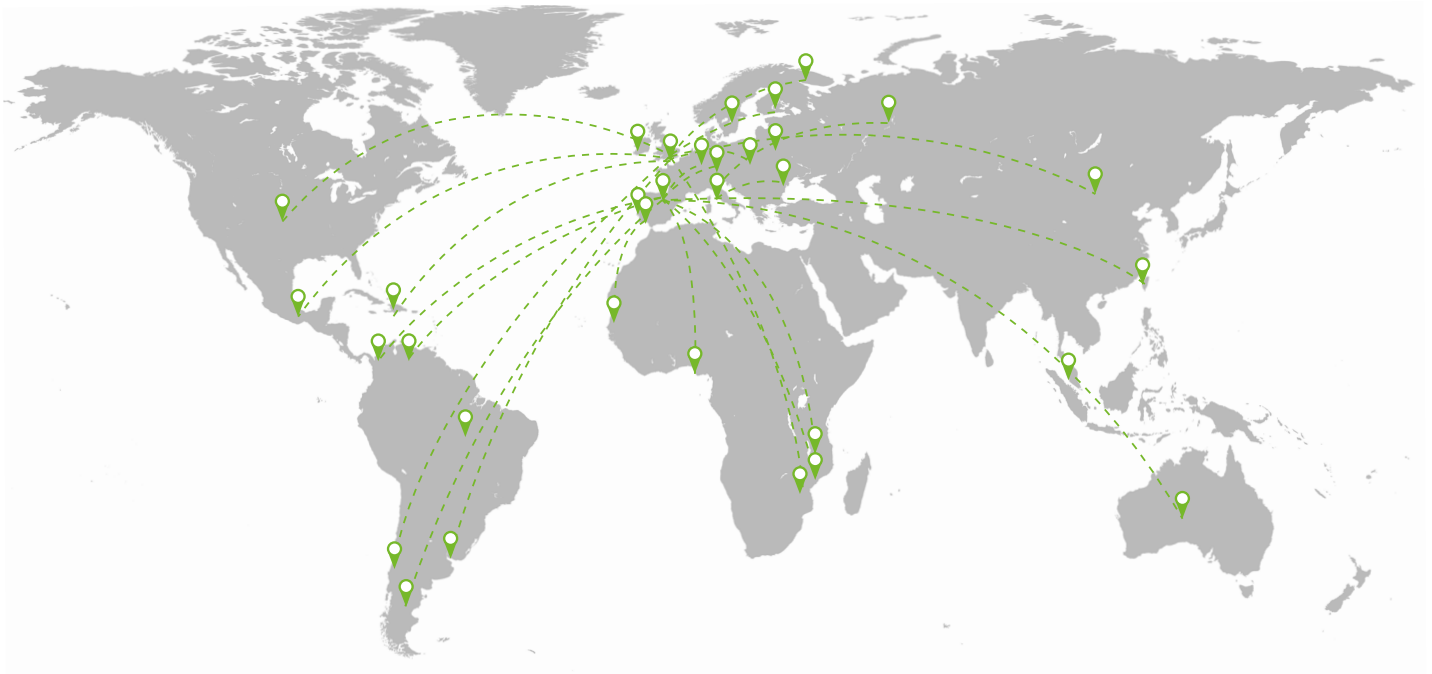
Worldwide Distribution

We send our products to locations all around the world, and although shipping costs may vary

depending on your order, almost all products are available to send out on the same day as your purchase order is received.

Packaging

We are determined to lower waste packaging in our industry and we source as many recycled and reusable materials when packing any of our equipment, without cutting back on the safety and security of goods in transit.



For further information or to enquire about any of the services detailed within this document, contact us today.



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Carritech is a global technology partner, specialised in the lifecycle management, maintenance and repair of fixed and mobile telecommunications equipment.

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