

# Repair & Replacement Services

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[www.carritech.com](http://www.carritech.com)







Our services help network providers ensure that their customers always stay connected.



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We Supply
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We Purchase
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We Repair
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We Manage
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We Support

- We are specialists in sourcing telecommunications equipment for operators and traders worldwide.**

Many of the parts that we have in stock are no longer manufactured, meaning we are able to offer specialist products to our customers which they would not otherwise be able to acquire.

We provide end-user warranties of up to 24 months to give peace of mind and confidence to our customers.
- We can purchase your surplus equipment outright including surplus spare parts and complete systems.**

As a provider of secondary telecommunications equipment, we are always interested in any products that may be available for purchasing.

We will happily discuss any opportunity to acquire complete systems or even just spare parts.
- We are a single source solution for your multi-vendor network maintenance needs including repair and testing.**

We repair equipment both on-site and via our partnering companies to ensure that parts are repaired, refurbished, restored and tested to full working order.

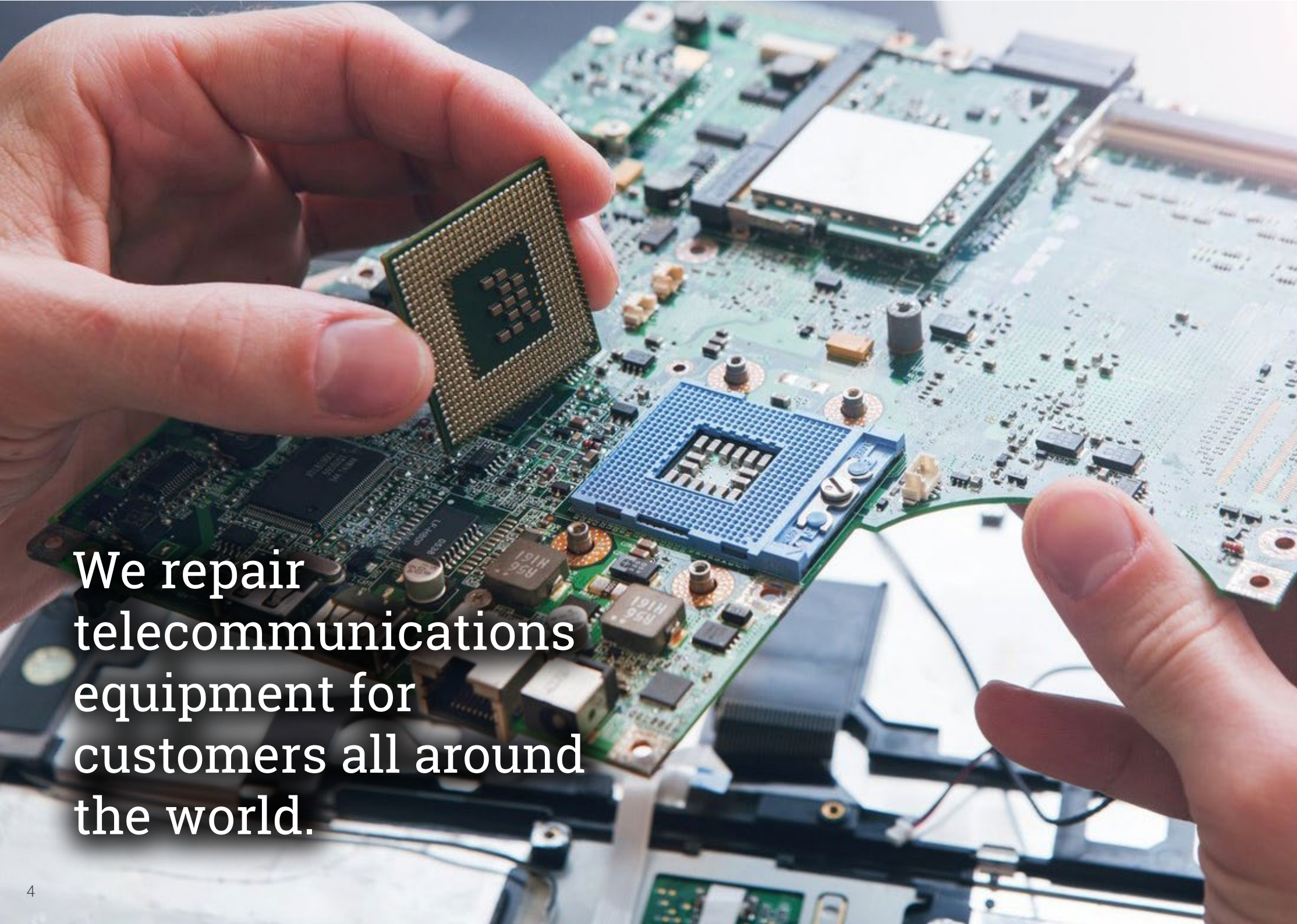
Our experience in the telecommunications industry means we are often able to diagnose equipment problems on site and offer a single source option for repair.
- We can manage your surplus assets for you and provide you with the maximum available return on your investment.**

Our sales team are able to negotiate the best possible price for your products, ensuring the maximum revenue is generated for you.

We have sophisticated ERP systems in place, including our client portal where you can keep track of your full inventory.
- We provide a support offering for fixed and mobile operators as an alternative to costly manufacturer support.**

Manufacturers will often provide an ongoing support service when you become their customer. However, they tend to focus on 'upgrades' or newer models instead of diagnosis and part replacement if anything goes wrong. At Carritech, we can provide the ongoing support service you require but will always aim to fix a fault with legacy parts and continue the quality of service from your equipment.





**We repair  
telecommunications  
equipment for  
customers all around  
the world.**

## Our Expertise



Our customers rely on our expertise, including over 40 years of combined experience in the industry, the quality of our repairs, our comprehensive warranties, technical capabilities, professionalism and our customer-focused approach to everything we do.

These core principals allow us to provide our customers with comprehensive network lifecycle management service support, including R&R for wireline and wireless networks.

We offer an unrivalled service, in quality, product range and turnaround time.

We work directly with your business to create a simple, clear and painless process that streamlines the efforts required for repairs, without taking away from the comprehensive and thorough work that is carried out by our team.

Our dedicated repair and refurbishment center repair a wide variety of equipment across our manufacturer range, focusing on SDH equipment from manufacturers including Alcatel, Ericsson, Marconi, Siemens and Coriant. Our skillset focuses on the ability to repair and maintain legacy equipment, some of which is decades old and still functioning as new, due to our care and repair programs.

That's because our team ensure that all equipment is fully tested and that any faulty parts are replaced but will also actively prevent further

failure by renewing any parts that show signs of deterioration or do not meet the exacting standards of our testing processes.

We have an international reputation for high quality, speedy services and in addition to our repair and refurbishing work, we offer an unrivalled advanced replacement service. This service minimizes downtime of your network by utilising our stock of over 45,000 spare parts.

Our constant procurement of new stock means that we are able to respond quickly to even the most unusual needs.

Maintaining legacy systems directly through the manufacturer has become a costly exercise for most operators; not only financially, but in time and resources.

Our repair centre has over 30 years' experience in the telecommunications repair and refurbishment industry. The team, made up of 25 highly experienced professionals, including 14 laboratory specialists, ensure that all repairs and refurbishment works are carried out to the highest possible standards and within the agreed timeframe.

In 2016 alone our repair center repaired a total of 7,526 telecoms cards.



# We Repair

**Our comprehensive service allows our customers to have one partner for their repair needs by delivering multi-vendor, multi-system repairs for a range of over 10,000 parts (wireless, wireline, optical transmission, and power equipment) from different manufacturers.**

Manufacturers continue to push service providers and operators towards later products and often decline support for older equipment; this can place the operator in an uncomfortable situation and increase the risk of service disruption. Carritech can help mitigate this risk through our comprehensive service of Repair and Replacement (R&R) covering most manufacturers.

Our repair center delivers an unrivalled service both in product range and turnaround time.

Equipment is repaired and tested in some of the most advanced, well equipped and sophisticated electronic repair workshops, ensuring superior electronics equipment repairs including software related

issues and highly technical repairs. We offer a minimum of 6 months warranty on all our repairs.

We have found that sometimes it can be more cost effective to replace certain modules rather than repair. Carritech work with each and every client to tailor a service that best fits their needs and will advise the best route to take for each item. This can also be dictated by the volume of parts available at the time of repair as it can be a volatile market and what is readily available as a replacement one month may not be the next. Carritech have a fully open approach to our customers' needs and can adjust our processes around our client's in order to ensure full compliancy also by tailoring a pricing model that best suits your budget and specific needs.



**We offer repairs across the spectrum of optical network technologies, including:**



TDM



SDH



DSLAM



WDM



Microwave



DC Power





Our repair process ensures our clients the very best possible service.

## Our Process

We ensure a methodical, systematic approach to guarantee high quality repair services.

- 1 Receiving Equipment**  
We match your purchase order to the equipment that we have received to ensure total accuracy. All discrepancies are forwarded to customer service for resolution with the customer.
- 2 Inbound Inspection**  
Our technicians will thoroughly inspect each unit and look for physical damage to ensure it can safely be installed into the appropriate shelf for testing.
- 3 System Level Testing**  
The system is provisioned for the specific card, and the card is installed. If the unit boots up properly, it is then tested using our properly cross connected in-lab network using state of the art test equipment, ensuring thorough, real work level testing. All testing is accomplished while running maximum traffic or load on the unit.
- 4 Repair**  
Our technicians will replace all failing components, then troubleshoot and repair the unit to manufacturers specifications.
- 5 Re-Test**  
All repaired units are tested again to ensure full operation.
- 6 Burn-In**  
Each repaired unit is left in the system under load or with traffic and is 'burned-in' overnight.
- 7 Final Test**  
After burn-in, each unit is tested once again to spot any thermal issues.
- 8 Quality Inspection**  
An inspector will perform a random sampling of each lot repaired. They inspect for cosmetic issues as well as quality of workmanship, and will retest the unit for proper operation.
- 9 Shipping**  
We can ship your units as complete orders or as they are repaired individually.



# Our Repair Capabilities



We offer repair and refurbishment services for the following Nokia/Alcatel-Lucent products:

1000 S12	1850-TSS 160/160H 1850-TSS 3, 5 & 40 1850-TSS 100 (ANSI, ETSI)
1000 E10	
ADM	1830 PSS/PSS32
ADM-NEW & OLD ADM 1664-SM ADM 1651/1661-SM ADM 1641-SM/DS	
1600 SERIES	
1640-FOX 1642-EMUX 1650-SMC 1660-SM R4/R5 1662-SM 1670-SM 1678-MCC	
TSS	ASAM ASAM-ATM A-7300 HD, XD & UD
1850-TSS-320/320H	
	ISAM ISAM 7302-XD & FD ISAM 7330-FX 8 ISAM 7360 -FX 4 ISAM 7356/FTTB onu ISAM 7353 CX
	IP/MPLS 7750 SR (Most chassis variants - AC and DC) 7450 ESS-7 7450 ESS-7 chassis (AC and DC) 7450 ESS-6 7450 ESS-6 chassis (AC and DC) 7705 SAR-8/SAR-18 7705 SAR-F/M/W/A/H



We offer repair and refurbishment services for the following Ericsson/Marconi products:

MINILINK	
MINILINK TN MINILINK E	
SMA	
SMA-1 SMA-1/4 SMA-16 3.1	
MSH	
MSH-11 MSH-11C MSH-11CP MSH-41 MSH-51 MSH-53 MSH-64	
	AXH AXH 600 AXH 600 E AXH 600 E EVO



We offer repair and refurbishment services for the following Siemens products:

EWSD	
SURPASS HIX	Surpass Hix 5630 Surpass Hix 5635 Surpass Hix 5750
SURPASS HIT	Hit 7025 Hit 7035 Hit 7060 Hit 7070 Hit 7080
	XPRESS LINK Xpresslink 5600
	SRA
	SRAL
	SRAL XD
	SRT1C



We offer repair and refurbishment services for the following Huawei products:

OPTIX PTN	OPTIX PTN 910 OPTIX PTN 950 OPTIX PTN 3900
OPTIX OSN	OPTIX OSN 6800 OPTIX OSN 8800 OPTIX OSN 7500 OPTIX OSN 1500 OPTIX OSN 1800 II OPTIX OSN 3500
OPTIX METRO	OPTIX METRO 5000 (10G) OPTIX METRO 6040 OPTIX METRO 1050 OPTIX METRO 3100 OPTIX SBS 2500+ (METRO 3000)
OPTIX BWS	OPTIX BWS 1600
BBU	BBU3900



We offer repair and refurbishment services for the following Nokia/Alcatel-Lucent products:

FSP	FSP-2000 FSP-3000 SL FSP-3000 R3 FSP-3000 R7
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We offer repair and refurbishment services for the following Nokia/Alcatel-Lucent products:

OPTERA	OPTera Metro 5200 OPTera Long Haul
TN SERIES	TN1-X TN4X-E TN-16XE
PASSPORT	Passport 15000 Passport 7000
PACKET OPTICAL PLATFORM	Packet Optical Platform 6500 Packet Optical Platform 6200
MULTISERVICE OPTICAL PLATFORM	Multiservice Optical Platform 6100
CN4200	
DELIVERY & AGGREGATION SWITCHES	3000 5000





# Certifications & Accreditations

Carritech are proud to have their quality management systems and environmental practices certified by SGS as being ISO 9001:2015 and 14001:2015 compliant.

These accreditations evidence the continual efforts of the staff and management teams at Carritech who are determined to provide the very best service to every customer, through organised, methodical processes that are environmentally sustainable.



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For further information or to enquire about any of the services detailed within this document, please contact us by any of the means listed above.



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