



Les
solutions
à vos
besoins
de services en
électronique

CORDON NETWORKS PRESENTATION

CRESITT 2019

IDENTITY CARD OF THE GROUP

The company was created in 1989 by Mr. Serge Cordon (CEO)

■ Historical activity:

Industrial repair of electronic products.
Strong orientation in value-added services since 2007.

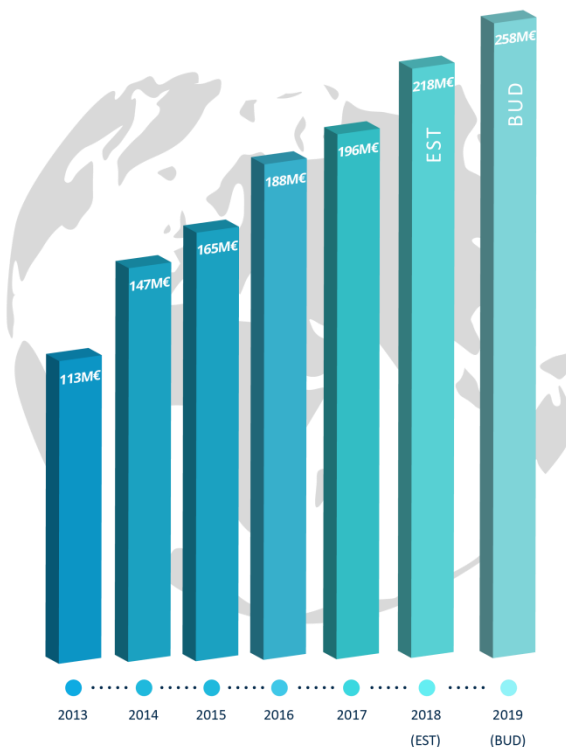
12 industrial sites in France
8 international subsidiaries



2800
employees



218 M€ estimated
turnover for 2018
(Bud 2019 : 258M€)



A more international Group

A more innovating Group

A more technological Group



BUSINESS UNITS

Professional

Business EMS

Production of micro components

Network Board repair

Security & Defence contracts



Networks & Telecommunications, broadcasting & energy



Security & Defence

CPE

Repair and/or refurbish of Gateways & STB

Development & installation of test benches



Decoders & Internet box

Telephony

Repair of mobile phones & DECT

Mobile phones Logistics Platform/DECT

Second Life services

Mobile Apps

Management of shops



Smartphones & Tablets



Residential Telephony

Consumer Products

On-site LCD TV repair

Multimedia & IT

Home appliances

Spare parts management

Call centre



Home appliances



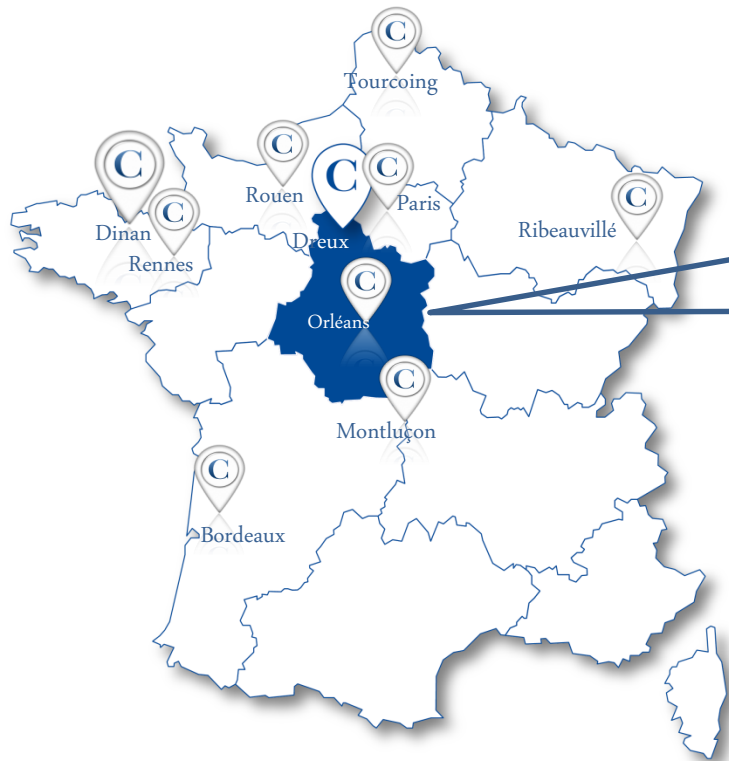
Multimédia



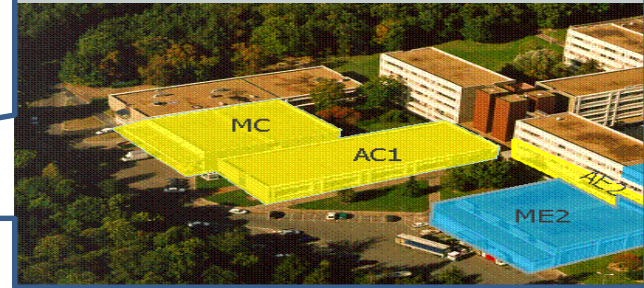
TV

14,8 million products handled per year

SERVICES : Logistics



Located in Ormes (near Orléans)
3,500 sqm for repair activities:



Located in Ormes, our repair centre is a **key location** in France, at the heart of an important logistic area (several transport companies).

Present in our centre, our logistic partner, Softlog, ensures a **daily shuttle to Charles de Gaulle airport**. They also perform all our logistic activities with customs clearance if needed.

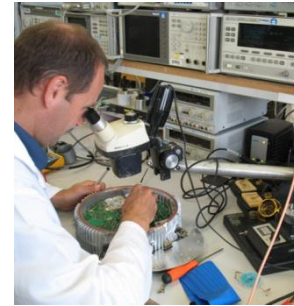
We have the possibility to extend our operational surfaces (square meters available) depending of your needs.

Our IT system manages all the products flows to ensure they follow the different process.

PRODUCTS AND TECHNOLOGIES

Wireless Microwave system

- High Capacity Backbone transport
- PDH, SDH , Hybrid, IP
- Frequency range : 6GHz up to 38GHz
- Configurations : 1+0, N+1
- Modulations QPSK, 16QAM à 256QAM



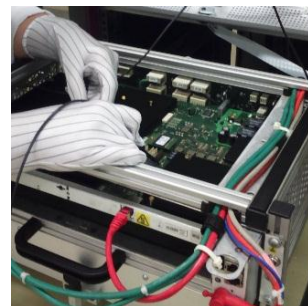
38GHz ODU Repair Station



IDU Final Test

Wireless Technologies

- TRX 2G, 3G and 4G repair capacity.
- RRH screening and repair
- Radio and control boards skills
- Integration and commissioning
- Repair of OEM modules (TRDU, MCPA..)



4G control board



OEM TRDU under repair



3G control board

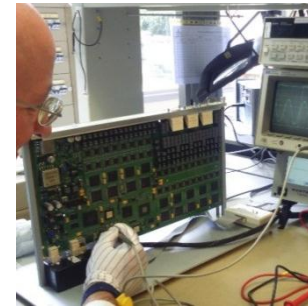
PRODUCTS AND TECHNOLOGIES

Wireline Technologies

- All ADSL test
- Pots tester and simulator
- GPON & VDSL trouble shoot
- Tester development



ADSL Functional tester



VDSL trouble shooting



Integration & test

Optical Technologies



OMSN functional tester



10Gbits submarine transponder repair



Optical screening platform

- Manufacturer of submarine equipment
- WDM technology on 10G and 40G (196 wavelengths)
- Repair of all optical technologies (OMSN, Metro, ROADM, WDM...)
- Optical splices
- Integration

PRODUCTS AND TECHNOLOGIES

Wireline Technologies

- **Converters**



- **Power Supply Units**

Range 25A to 125A



- **UPS**



- **Energy Smart Management**



AMONG OUR PARTNERS



SERVICES: Integration and Re-configuration



We have the capacity and the skills to integrate different types of equipment (node B, microwave, ADSL, WDM...):

- Realize integration of equipment
- Perform the commissioning
- Test the boards unitary

We can also propose training on these equipment for the technical team in charge of the installation.

SERVICES: Screening



Optics screening solution



FH screening solution



2G / 3G solution

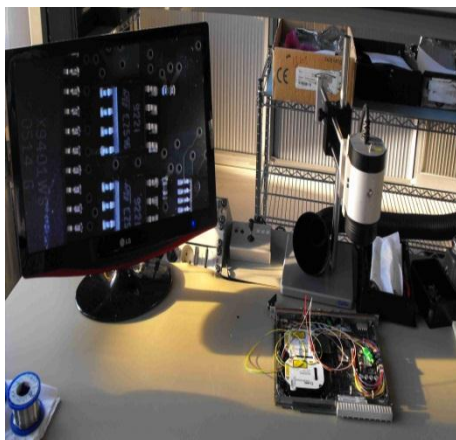
Our experience:

- We have a volume of screening at around 10 000 per year in our facility.
- The average NTF (No Trouble Found) rate is 37% (ie = functional boards where repair is not needed)

The savings:

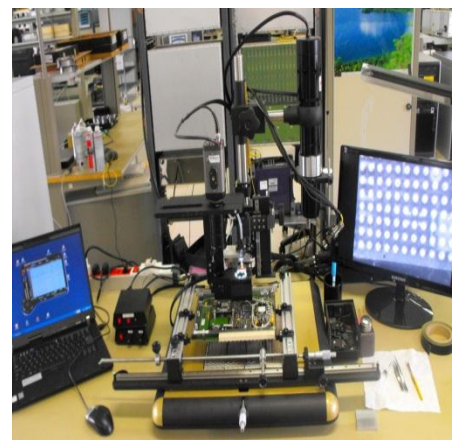
- Huge reduction of Turn Around Time (TAT) for the NTF part , only few days.
- Reduction and optimization of spare stock.
- Cost reduction on logistic and custom fees.
- Cost reduction on the repair for NTF boards.

SERVICES: Repair capabilities



Thermal camera

- Diagnostic support by camera to detect failed component by over heating.
- Especially used on board with optical fiber wrapping which require dismantle caution

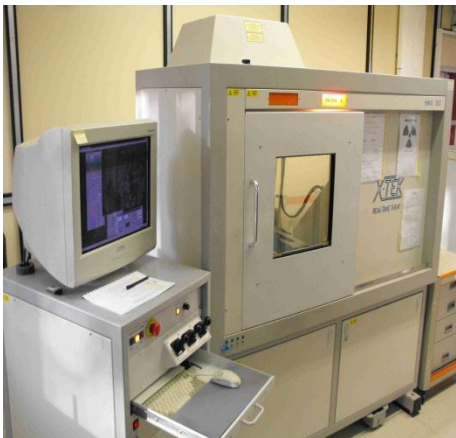


Soldering Station

- Preheating the area by infrared.
- Implementation and pre-emption of components.
- Adjusting table on 3 dimensions.
- Automatic definition of unsoldering profile with remote temperature control.
- BGA & μ BGA alignment.

Each year, we repair about **40,000 products (96% of repair on time)** split among three process in tree different areas with the following skills:

- "Easy repair " are characterized as a cost optimization. With a good knowledge of the issue and the correction, we realize directly the replacement of the components without diagnosis.
- Complex repair require a large panel of accurate tools to detect the faulty and change the components: Thermal camera and soldering station. We have also tools to qualify the repair : climatic chamber and X-Ray machine.



X-Ray Machines

- Control machine on component soldering quality like BGA.
- X & Y axes possible move.
- Power : 160 kV.



Climatic Chamber

- Several baking machine to perform accelerated aging boards and electronics equipment tests.
- Used in qualification phase, upgrade and repair.



CORDON NETWORKS

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FRANCE



Orléans Train station

1h10 from Paris



1h45 from Paris

20 min from Orléans train station



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