About Altice Labs

Delivering key telecommunications technologies and services since 1950, following a vocation that has spanned both the analogue and digital ages.

Altice Labs is an innovation and transformation catalyst. Through technology, we work every day to improve people’s lives and the ways in which companies do business.

Wide range of knowledge in the design and deployment of FTTx networks
Altice Labs provides consultancy services and FTTx Project Coordination/Management. Based only on the best practices, our team is responsible for making field surveys and is also able to conceive and implement FTTx projects. We know the importance of up-close follow-up on the field work and, as top professionals, we provide the registry of all physical and logical resources.

The success in these several projects has been demonstrating the high level capacity of Altice Labs in adapting to different clients and markets.

Who benefits from it?

Telecom Operators

Civil construction (condominiums)

Contractors

Telecom Companies

FTTx infrastructures

GPON IN-A-BOX includes solutions that offer optimized management of the whole network. The active ONT equipment, designed to interoperate with numerous other manufacturers, and the RF Overlay function, built into the OLT itself, are two further features which dramatically increase the efficiency of GPON IN-A-BOX solutions.
As described, Altice Labs has experience in all process phases related to FTTx networks, therefore we provide the following range of complementary services.

### The architecture

**OLTIT0**
- 8GPON interfaces in a stand-alone unit with 4 x 10GbE or 4 x GbE

**Central office**
- Indoor high density rack
- Sliding 19" or 21/23" mount
- Capacity for 2592 terminations
- Controllable curve radius r=35mm
- Cascadable

**Outdoors for active equipment**
- Universal S/M/L
- Increase capacity of existing curbs
- Encapsulation Cabinets

**Fusion and splitter box from 8 to 432 Optical Fibre. It can implement dropping for local customers and splitters**

**OLTIT1 and OLTIT2**
- OLTIT1 is a modular low entry OLT
- GPON and OLT 1T2 is an OLT GPON

**OLTIT3**
- Reliable high density OLT equipment, specially designed for fiber network infrastructures

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**TRAINING COURSES**

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Technical consulting
Altice Labs is able to provide consultancy services which consist in the subsequent steps:
• Analyze architectures and network topologies that fit in the several markets and operators’ reality and suggest new network solutions (natural or disruptive evolutions) with respective implementation programs;
• Request of Proposal’s prep for project, supervision and deployment;
• Support in FTTx material analysis and selection implementation programs.

FTTx project coordination/management
Altice Labs has a specialized team for FTTx Project Coordination/Management that can assume this kind of responsibilities:
• Update and communication of the financial and operational deployment indicators;
• Identify and/or set processes, entities and critical activities concerning FTTx network roll-out;
• Definition of network survey, construction, supervision and acceptance procedures.

Survey
As Altice Labs aims only for the best practices, our team is responsible for making field surveys as described:
• On field survey of all needed information to execute FTTx networks project, such as existing infrastructures, households accounting and building/housing’s characteristics;
• Careful preparation and planning guarantying all information required is obtained in first attempt;
• Geographic information’s record of buildings/housings in a pre-charged cartography;
• It is crucial to obtain the maximum revenue as possible from survey investment.

Deployment & supervision
• Previous to deployment analysis: supplied material validation, project inconsistencies, etc.;
• Deployment control and follow-up: provision of the project as-built, report of non-compliance and occurrences, among others;
• Network’s acceptance: execution of optical tests (connectivity, optical losses and return loss), validation of cables’ length launches, mappings, boxes, etc.;
• Licenses/authorizations management;
• Assess installation technicians and audit build process to identify and characterize bottlenecks and optical test to validate and certify the network.

Inventory
As top professional, we provide registry of all physical and logical resources as described:
• Registry system imputing of resources related to infrastructures (ducts, man/hand-holes, poles, etc.), over geo-referenced maps and of all physical and logical network levels;
• Fulcrual for O&M network and automatic fault detection tools;
• On-line information available to all company with real time updates.

Clients’ statements

“Excellent professionals that carry out its duties and stay focused despite the enormous constraints that arise throughout the process. They always strive for the training, execution, honesty and quality of the work during and after execution.”

Adolfo de Sousa - Field and Delivery Services Director of Angola Telecom

“The competence and commitment of the PTI professionals, with transfer of knowledge to our team, allowed that Algar Telecom reached high levels of quality in services to its clients.”

Ho-Chi-Min Branco - FO/OSP National Coordinator of Algar Telecom

“In our first FTTH project we have the promptness and competence of the Altice Labs team which ensured in performing a job with high quality, cooperation and innovation.”

Celso Ribeiro de Andrade - Telecommunications Engineer of Algar Telecom

“With the knowledge acquired from the partnership between Angola Telecom and Altice Labs all the obstacles were overcome in the complexity of the telecom universe, it were exceeded barriers and built a solution for the problem.”

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• Careful preparation and planning guarantying all information required is obtained in first attempt;
• Geographic information’s record of buildings/housings in a pre-charged cartography;
• It is crucial to obtain the maximum revenue as possible from survey investment.

Project
Wide range of network topologies and materials available to adopt into FTTx projects depending on clients strategy, including low-cost approach. Typical deliverables:
• OSP project: define geographic cells, trace feeder and distribution routes, estimate optical budget, connection tables, etc.;
• ISP project: racks dimensioning and location, OF cables and patchcords, splitters, splices, etc.;
• Material and services quantification;
• Primary goals: HW optimization, Pay-As-You-Grow and Future-Proof;
• Different network topologies depending on population density, penetration rate target, etc.

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### The architecture

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What is FTTx services?

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Telecom market is constantly growing

Operators, in order to keep the competitiveness, have to be innovative and adopt technologies which allow them differentiation against the competition. Many of these technologies require high speed network infrastructural support, obtained through the deployment of FTTx networks.

Altice Labs has a high range of knowledge and skills proven in the field of FTTx and acts in all process phases in constructing FTTx networks. This experience is set on its involvement in several small to large scale projects in the most various countries, such as Brazil, Cape Verde, Namibia, Portugal, São Tomé and Príncipe, Colombia, among others.

The success in these several projects has been demonstrating the high level capacity of Altice Labs in adapting to different clients and markets.

Who benefits from it?

- Telecom Operators
- Civil construction (condominiums)
- Contractors
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FTTx infrastructures

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Outdoors

From 144 to 648 fiber termination can manage splitters with point-to-point topologies.

Indoor Optical distribution points for GPON or point-to-point can include GPON splitters or/and drop cables and supports multi operator.

GPON-ONT - Triple Play GbE 10/100/1000, VoIP and Video Overlay

Drop cable with 657 B3 Fiber for all applications

An infrastructure component designed for GPON networks with FTTH and FTTB topologies

Outlet combine 2 fibre 2 coax and 1 RJ45 cat6

OLT1T3

Reliable high density OLT equipment, specially designed for fiber network infrastructures

OLT1T1 and OLT1T2

OLT1T1 is a modular low entry OLT GPON and OLT 1T2 is an OLT GPON.

Central office

Indoor high density rack sliding 19” or 21/23” mount

Capacity for 2592 terminations

Controlled fibre curves r=35mm

Cascadable

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Encapsulation Cabinets

Fusion and splitter box from 8 to 432 Optical Fibre. It can implement dropping for local customers and splitters
About Altice Labs

Delivering key telecommunications technologies since 1950, Altice Labs has been shaping the future of technology, enabling Communications Service Providers and Enterprises to offer advanced and differentiated services to their customers and users.

Altice Labs is an innovation and transformation catalyst supported on a strong and dynamic Innovation Ecosystem. Through technology, we are committed to improve people’s lives and the way in which companies do business.