



Revision 03 - October/2022. Photos for illustration only. The products may be changed without prior notice. Always ask you Furukawa reseller.



Ensure excellence in education and prepare your network for what lies ahead:

**Hybrid
Education**

**Virtual
Reality**

**Augmented
Reality**

**Artificial
Intelligence**

CRM

Chatbots

Gamification

**Collaborative
Tools**



Education 4.0

Preparing students for the *future* requires having the best network infrastructure *now*.

The exchange of information is the essence of organizations working within the educational sector whether they are universities, schools or research institutions.

With major technological and connectivity trends also arriving in the educational area, it has evolved in many interesting forms, thus this revolution being named Education 4.0. The way we deal with educational processes has undergone a substantial disruption, which has changed the way knowledge is acquired and disseminate. One clear example of this new era is the **hybrid education, which combines online and face-to-face classes, alternating ways to interact and innovating on ways to present content, such as virtual reality, augmented reality, artificial intelligence, gamification and collaborative tools.**

Educational institutions must integrate these new technologies to completely change the current educational scenario. Moreover, these institutions also face common challenges, as any other business, such as operational and energy costs or the need to optimize their physical space.

Among the points to be considered in this convergence of technologies in the educational area, it is a fact that, in addition to educational services, there is a link to other areas. Administrative areas, property security, automation and several others must all converge into one single network.

Education 4.0 faces various challenges which are presented to IT managers:

- + How to provide quality connection across the institution?
- + What is the best network solution that allows you to support current and future applications?
- + How to have a flexible solution that allows prompt changes or changes with minimal operational impact?
- + How to combine sustainability, space reduction and energy savings, alongside the need to offer more and more network resources?
- + How to provide more resources with less investment?


To meet these needs and at the same time provide solutions aligned with the Education 4.0 model, it is important that these systems work in convergence with the organization's technological infrastructure.





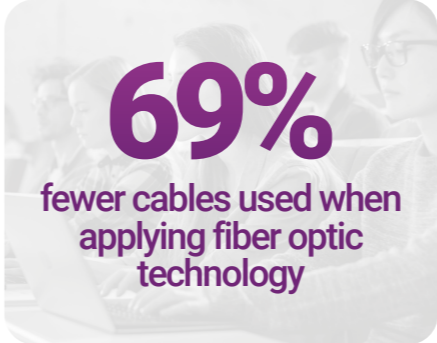

Furukawa Laserway Solution: enabling Education 4.0 with an enhanced solution


Laserway technology utilizes a single-mode, fiber-optic based network topology with an extremely high transmission rate. A combination of high technology, optical transmission and optical splitters allows a single fiber to serve many network users, with full control by the IT manager. In addition, it also eliminates the need for access and distribution network switches, which have high energy consumption and require special infrastructure and precautions.

Laserway solution meets the demands for hyper-connectivity in all types of educational institutions:

	Increases and centralizes network control		Reduces the impacts caused to the environment
	Frees up space occupied by the technical rooms		Ensures high performance
	Reduces CAPEX and OPEX costs		Quick optical network infrastructure deployment




Benefits of using Laserway technology

	33% less occupancy per connection rack		Ranges of up to 20 km
	69% fewer cables used when applying fiber optic technology		70% less energy consumption



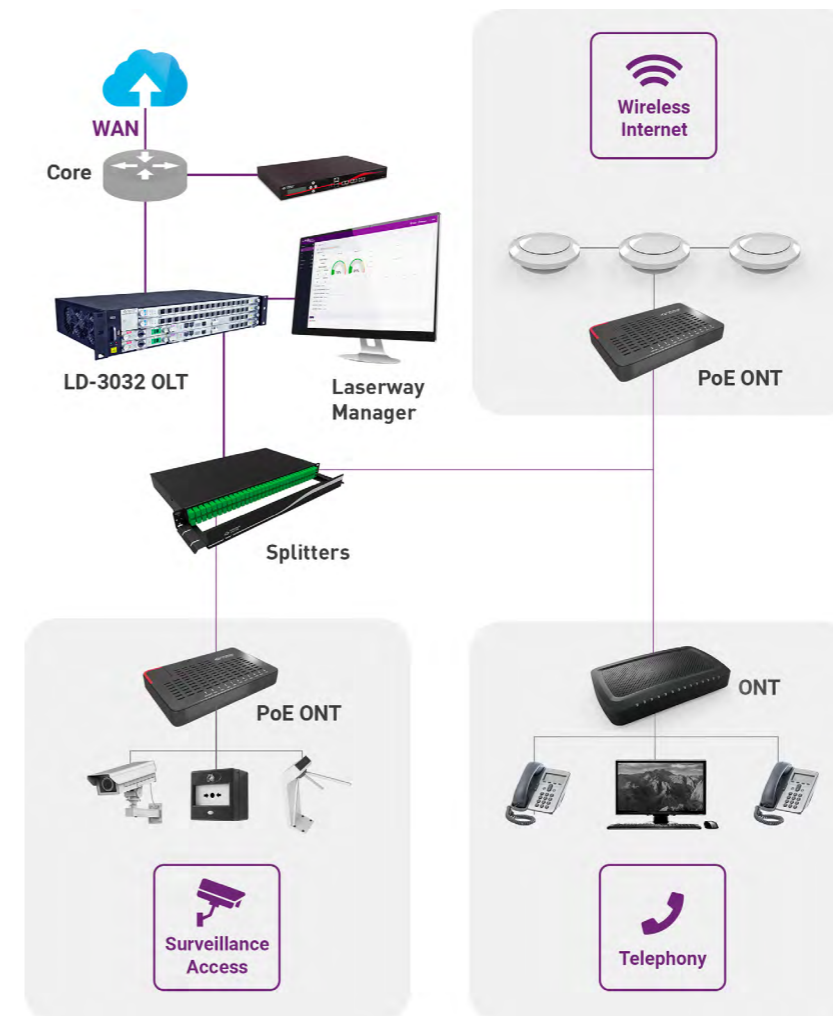
Educating for the future starts with a cleaner and more sustainable network: **Laserway ensures 87% less plastic consumption.**

Duct occupancy simulation:

	Traditional Network 240 CAT. 6 cables Cable mass: 42 kg/km Each 100 m = 1,008 kg
	Laserway Network - Distribution Cabling 60 D1F SC Pre-terminated Optical Patch Cords 87% less occupation Cable mass: 10 kg/km Each 100 m = 60 kg (94% less)
	Laserway Network - Backbone Cabling 5 12F Pre-terminated MPO Cables 97% less occupation Cable mass: 40 kg/km Each 100 m = 20 kg (98% less)

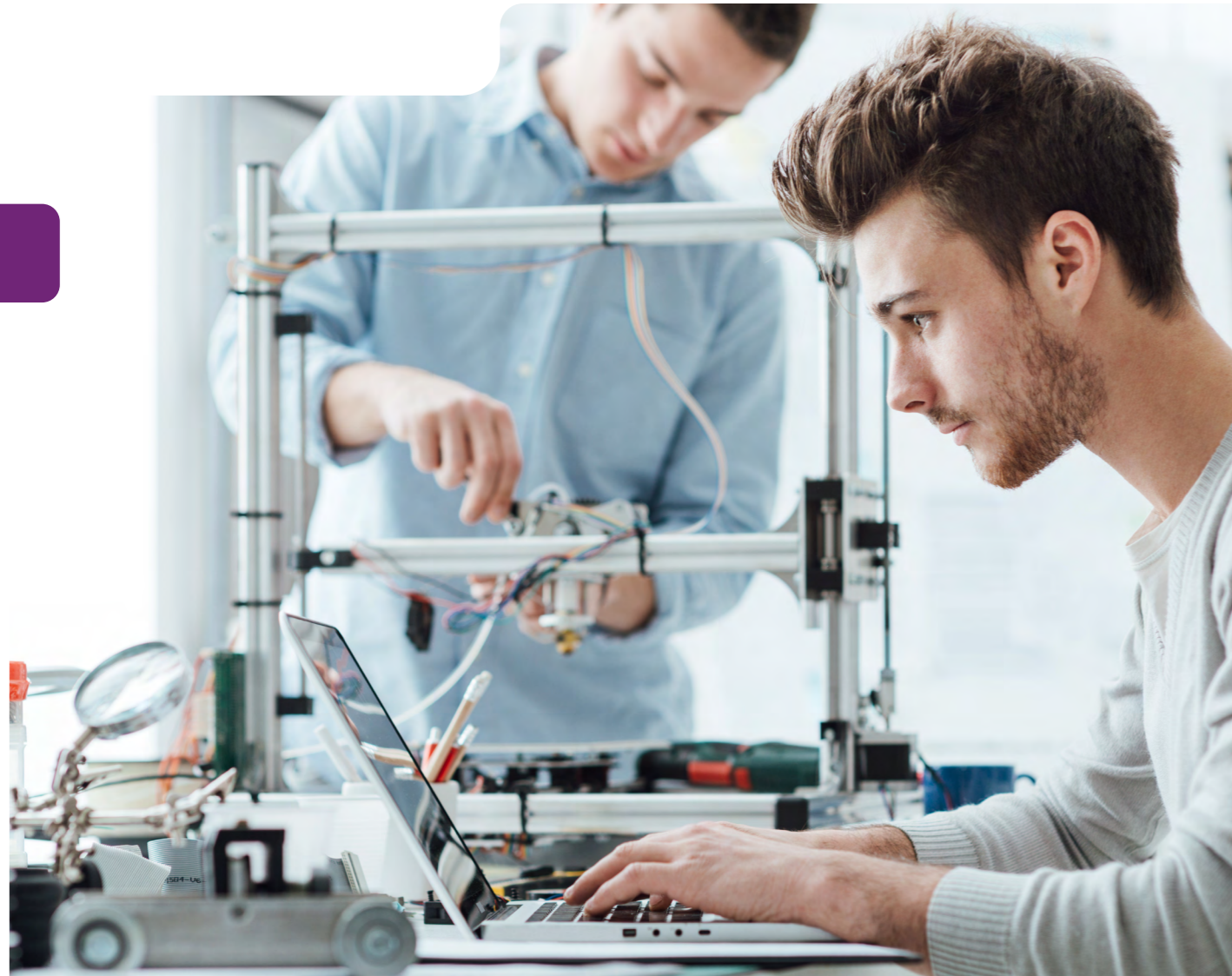
Optical networks for high-rate transmissions

See how Laserway can be applied to your business.

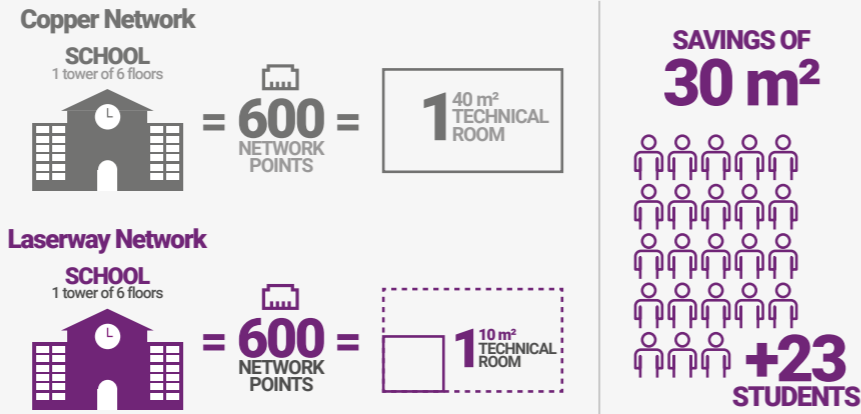


- University campuses
- School buildings
- New facilities

- +Security and reliability**
- + Bandwidth and accesses**
- + Agility in communication**
- +Technology and consistency**



Check out this simulation based on a Public University to better understand how it can suit your business:



Laserway follows all major technical standards internationally:

- ✓ ANSI/TIA-568.0-E – Generic Telecommunications Cabling for Customer Premises
- ✓ ANSI/TIA-568.1-E – Commercial Building Telecommunications Infrastructure Standard
- ✓ ANSI/TIA-568.3-E – Optical Fiber Cabling And Components Standard
- ✓ ANSI/TIA-606 – Administration Standard for Commercial Telecommunication Infrastructure
- ✓ ITU-T G.984 – Gigabit-capable passive optical networks (GPON): General characteristics
- ✓ TDMM 14 - Section 1: Horizontal Cabling Systems - Chapter 5: Horizontal Distribution Systems PASSIVE OPTICAL NETWORKS (PONs)

Services and Warranty

- Consultative sales and projects
- Start-up
- Extended warranty
- Furukawa Institute of Technology
- 24x7 Premium Support



Educational institutions adopting the Laserway Solution receive a quality label, guaranteeing a high-performance network that respects the environment.



Check out some institutions that are already taking advantage of the Laserway Solution:

- Brazil Colégio São Luís • Universidade de São Paulo - USP •
- Ecuador ISM - International Scholastic Model • Chile Universidad Andres Bello •
- Mexico Universidad Panamericana • Paraguay Universidad del Pacifico Privada