

#smartconnection



Fibre To The Office

**Helping you safely make  
the most of IT healthcare**

[www.aginode.net](http://www.aginode.net)



## Current challenges for healthcare

Today, pressure on healthcare providers continues to grow as a result of several trends: more people are living with chronic disease, global population is growing and people in many regions are living longer. At the same time, global healthcare faces budget constraints. Hospitals need to provide more care services, with fewer resources.

Care and clinical outcomes are being improved, while costs are tightly managed, through innovations such as non-invasive treatment, remote diagnostics, bedside diagnostics, personalized medicine and new therapies. However, these developments are placing growing demands on hospital technology and IT.

Digitalisation in healthcare provides solutions, enabling new clinical approaches and technologies to optimise processes and resource usage.

### Equipment in the medical environment

Increasing reliance on digital data and applications means that the network and connected equipment are the backbone of the entire hospital. With this in mind, it's important to realise that extremely stringent safety regulations govern installation and operation of electrical equipment and systems in environments where powered devices operate in the vicinity of patients.

There are special requirements for medical devices and systems. Standards such as IEC 80001 and IEC 60601-1 require professional risk management in hospitals with a focus on implementation and management of IT networks with integrated medical devices and systems. The IEC 60601-1 standard defines general requirements for the safety and security of medical electrical equipment and systems in the hospital network.



This standard classifies the network connection between a medical device and the Ethernet network as a potential source of danger. A galvanic isolation for both components is mandatory.

## Aginode Switches

### Flexibility, cost efficiency and network interoperability to meet current and future network requirements

Aginode is helping today's healthcare professionals meet escalating requirements in bandwidth, wireless connectivity, power, and support for multiple applications over the LAN network.

Aginode switches offer advanced redundancy support and security functions.

With LANactive Manager, a larger number of switches can be managed and monitored at the same time. LANactive Manager allows automatic distribution of master configurations and firmware updates.

### Aginode Medical Switches

Our medical switches meet the infrastructure requirements of today's medical facilities and are equipped with built-in isolators according to IEC 60601-1. The integrated network isolators have minimum voltage strength of 4kV and 2 MOPP, in line with this standard. They prevent unwanted voltage differentials occurring between devices on the network cabling and provide the necessary safety protection for the entire system.

The LANactive Medical switch is a standards-compliant solution that fully corresponds to IEC / EN 60601-1 and enables secure connection of digital medical devices. It can be installed within 1.5 m of the patient and guarantees maximum security and safety to patients and equipment, while staying within procurement, management, service and maintenance budgets. The switch has an insert and surface that is very easy to disinfect, so it can be used without restriction in operating rooms and intensive care units.

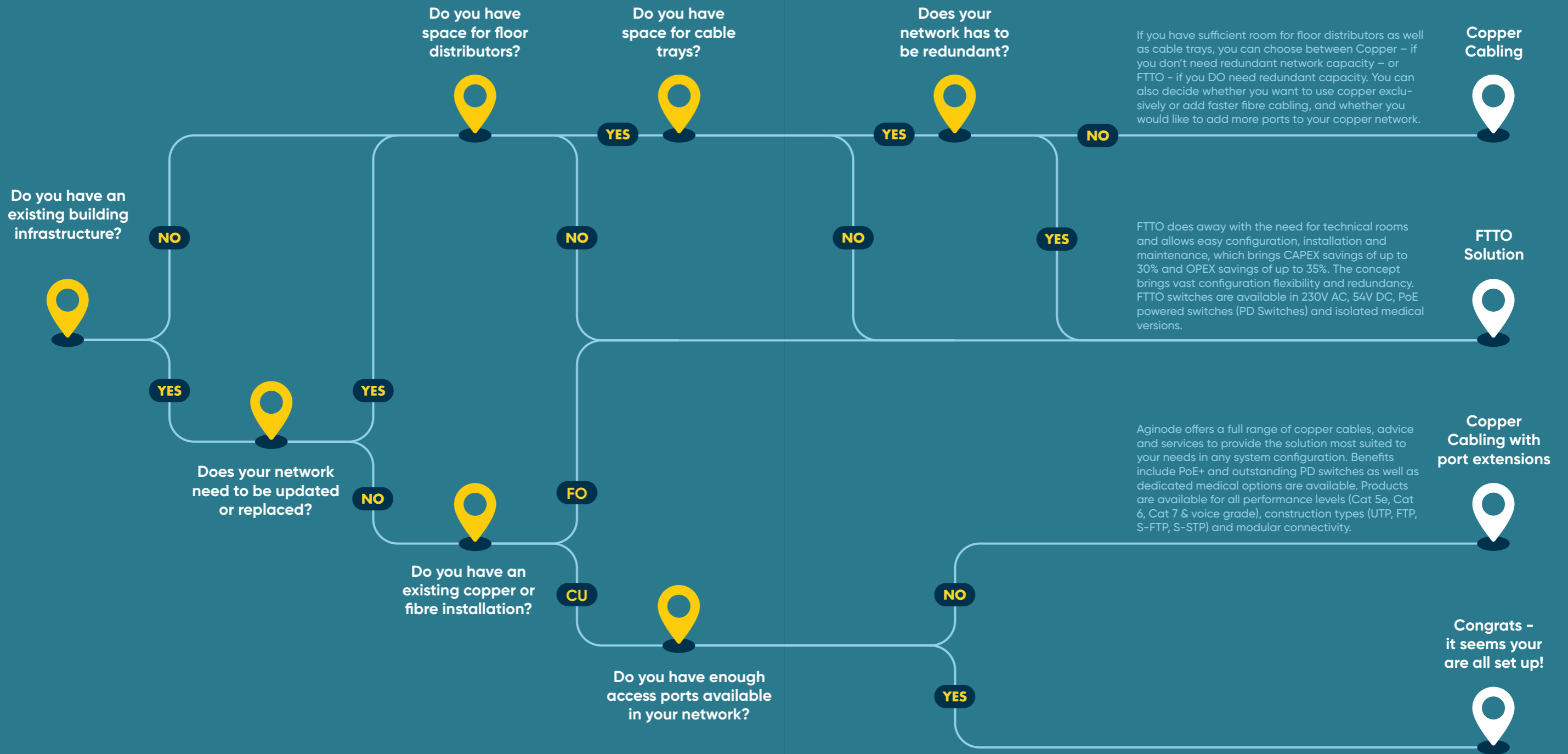
One switch backs up to four connected devices, so non-medical equipment may be operated in a network with medical equipment.

The switch has four integrated galvanic passive isolators (one per port) for electrical separation of medical and technical data networks, preventing transmission of unwanted voltages and currents between parts of a medical electrical system. Isolators are connected directly to the network interface, where power sources and current leakage may occur. The switch provides surge protection, is noiseless and enables smooth Ethernet communication without packet loss and jitter in a highly sensitive environment.

The LANactive Medical switch ensures a safe and cost-effective connection of the digital medical equipment (such as ECG, patient monitoring systems, infusion pumps, blood glucose meters, vital data monitors and other vital electronic devices) to the hospital's data network.

It offers proven interoperability with the systems of leading medical hardware manufacturers and manufacturers of network components. The hospital benefits from drastically reduced administrative costs and the high level of flexibility offered by the solution.

# Choosing the right solution



## FTTO: flexible digital infrastructure for the challenges of today and tomorrow

- Significant cost benefits for new builds as well as refurbishments
- Less space needed for active equipment cabling / zone distribution, technical rooms
- Data throughput better than traditional copper networks
- Fibre isn't prone to electromagnetic disturbance
- Configuration and management from one point: track and repair faults or errors fast
- Power over Ethernet (PoE/PoE+) powers devices directly from the switch
- Can accommodate increasing PoE wattages (IEEE 802.3at and IEEE 802.3af)
- Grows with needs and accommodates new technologies and applications
- Long operational life expectancy of fibre protects your investment
- Meets current and foreseeable network requirements in terms of flexibility, cost efficiency and network interoperability

Efficient Energy Management

Up to 3 Uplink Ports

Aginode FTTO Switch

Efficient Energy Management

Up to 3 Uplink Ports

Aginode medical Switch with galvanic isolation



Memory Card optionally

4 User Ports with full Power over Ethernet (PoE+)

Efficient Energy Management



Memory Card optionally

4 User Ports with full Power over Ethernet (PoE+)

Efficient Energy Management

## Helping you keep up today and prepare for tomorrow!

Explosive growth in bandwidth demand will continue, along with wireless technology evolution and a threefold increase in power transmitted through IP networks. Infrastructure design and technology must accommodate these demands and the complex requirements of a converged environment need to be taken into account.

Aginode integrated products and services offer higher performance over longer distances. Our expertise and far-reaching involvement in the development of new protocols and standards means we always find the right solution. These exceed all relevant standards, ensuring your network performs better and more reliably.

Aginode is happy to share decades of experience and help define the best solution for your needs. We can help determine specific requirements for the network, as well as energy consumption, maintenance, installation and administration, so that you can determine the optimal, most cost-effective solution. Our experts can help decide how much redundancy you need to build in to maximize availability without overspecifying. Feel free to contact us anytime!



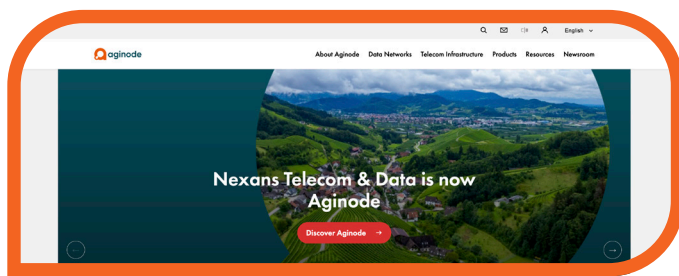
Aginode FTTO Switches as well as the medical Switch with galvanic isolation are available with a rotatable head by default



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