








ComNet Transmission & Connectivity solutions

Protecting People, Property and Assets

ComNet is a major provider of transmission and network communication solutions.

Comnet is an industry leading, global provider of intuitive communication solutions for some of the most demanding operational requirements, many in challenging non-conditioned environments. We provide Ethernet (IP) and legacy interface (Audio, analogue video, contact closure and RS Data) interfaces over copper, fiber and wireless mediums.

PRODUCT SCOPE

				
Hardened Ethernet	Commercial Ethernet	Retrofit Extended Ethernet	Wireless	Media Converters

PRODUCTS THAT MAKE SOLUTIONS

Ethernet

Ethernet-based security networks perform a critical role in security. Therefore, the highest level of control and management must be achieved to keep the network functioning optimally. No matter whether it is the network infrastructure, or the devices connected to it – the cameras, switches, servers, and more – that are the nodes on the network, reliability is critical.

ComNet has a complete line of environmentally hardened Ethernet transmission equipment. These include:

- ✔ Electrical to optical media converters.
- ✔ Managed and unmanaged switches.
- ✔ Standard twisted pair to coaxial cable/UTP media converters to increase distances or utilize existing transmission media as Ethernet transmission media.
- ✔ Wireless Ethernet products.
- ✔ Cellular radio Ethernet products.

ComNet also offers RS-232, RS-422, and RS-485 data to Ethernet and contact closure to Ethernet industrial edge server devices.



Systems demand continuous, dependable network functionality. ComNet is so confident in the performance of our Ethernet products that we can back them with a no-questions-asked Limited Life Warranty.

LEGACY FIBER OPTIC TRANSMISSION SOLUTIONS

Analog Video

ComNet fiber optic video products can transmit up to 32 individual video feeds over one optical fiber plus camera control data. ComNet offers multiple models from economical AM modulated video to high-quality digital video. The main benefits to video over fiber include longer distances, immunity from EMI/RFI, as well as bandwidth to transmit multiple video feeds over a single optical fiber.

RS Data

ComNet fiber optic data transmission products are used to transport RS-232, RS-422, and RS-485 serial data that is commonly used for many access control systems. Some of the many benefits to serial data over optical fiber include increased distances and immunity to EMI/RFI. Products for these applications include serial data (RS-232/RS-422/RS-485) point-to-point, linear add-drop/point-to-multipoint, and self-healing ring transmission equipment.

Audio

ComNet offers fiber optic audio transmission products that can transmit balanced line-level 24-bit digitally encoded audio. The product line includes two bi-directional audio channels with contact closure and four-channel audio with bi-directional contact closure models.



The switch line includes five to twenty-eight port managed Ethernet switches with and without Power over Ethernet (PoE). A range of industry-unique, light managed switches focusing on edge cybersecurity and reducing physical size. ComNet also offers a line of unmanaged four up to eight-port switches to provide connectivity for any application.

Contact Closure

Contact closure circuits still form a fundamental building block in some of the most safety-critical systems and networks globally. ComNet provides a range of optical interfaces to support the transmission from 1 up to 24 contact closure signals over a single optical fiber.

SOLUTIONS FOR VERTICALS

Security & Surveillance

All IP based security and surveillance networks demand transmission equipment that will perform reliably over the lifetime of the installation and with the lowest possible life-cycle costs to the owner of the system. ComNet designs, builds, and tests this equipment to exceed the industry-accepted standards and provide innovative features that enhance the operability and performance of the system. For hardened network equipment, cybersecurity features that protect the integrity of the network in unconditioned and potentially unsecured environments are essential. Along with that, the ability to provide high PoE levels over the full operating temperature range of the equipment is a must for operators and integrators.



ComNet has spent many years furnishing the security and surveillance market with transmission equipment that is fit for purpose. This long relationship puts ComNet in a position to understand the needs of the various edge equipment and to provide transmission solutions that complement the operational requirements of those multiple devices.



Industrial Ethernet Networks

The industrial automation and process control industry utilizes specialized communications and networking equipment designed to operate reliably in extremely difficult environments. These include:

- ✓ Wide variations in operating temperature.
- ✓ High humidity.
- ✓ High levels of vibration and mechanical shock.
- ✓ Voltage transient conditions.
- ✓ EMI/RFI
- ✓ Exposure to airborne and particulate matter.



These environments demand communications equipment that is specially designed for the task at hand, including highly robust design and construction, to ensure the network remains as reliable as possible.

Many Industrial Ethernet applications mandate the requirement for security provisions to ensure that the network remains safe from any possible intrusion. Most ComNet managed switches include SSH (Secure Shell), SSL (Secure Sockets Layer), and IPV6 protocols to ensure the security of the network.

Oil & Gas Production, Pipelines, and Transmission

A key concern amongst petrochemical refining, distribution, and oil and natural gas exploration companies is the reliable and uninterrupted flow of products at all stages of the production process. Ethernet has been widely adopted as the networking technology of choice for nearly all SCADA (Supervisory Control and Data Acquisition) systems deployed in this market, for the control and monitoring of high-volume refining and pipeline/distribution applications.



USP BOX: Port Guardian features:

- An industry-first design to give your network extra protection at the edge.
- Works at the physical layer 1 level as opposed to the more traditional layer 2 or 3 methods.
- When a port is disconnected, the switch will shut down that port and send an alarm to the control room.
- The network administrator can only re-enable the port.
- This prevents spoofing of the same MAC/IP address.
- All user-configurable depending on the level of security required.

QUESTION: WHAT IS THE DIFFERENCE BETWEEN HARDENED AND COMMERCIAL GRADE SWITCHES?

- Hardened: -40° to +75°C, Limited Life Warranty.
- Commercial: 0° to +50°C, 5 Year Warranty.

DID YOU KNOW?

ComNet design their hardened industrial products to be thermally efficient. That stops the ComNet product from heating up the products it is co-located with.

We care for our environment!

an **ACRE**[™]
brand

comnet.net

@ComNet_Inc

ComNet

Vanderbilt International (UK) Ltd.
Unit 9A2Y, Castlegate Business Park
Caldicot | South Wales | NP26 5AD

+44 (0)2036 300 670