IP wireless fibre optic

KBC
data delivered

IP, Wireless & Fibre Optic Transmission Products

www.kbcnetworks.com

IP wireless fibre optic

Transmission for Industrial & Commercial Networks

KBC transmission products are installed worldwide in security and surveillance, site management, intelligent transport networks, remote data applications and industrial control systems. Our products drive video, voice and data over wireless links, Ethernet and IP, mobile, 3G / 4G / LTE and fibre optic networks.

- We collaborate with other manufacturers to ensure that our products are compatible with theirs
- We consult integrators and installers to make our products straightforward to install and easier to manage
- We work with a network of trusted partners and representatives

The KBC range includes both commercial and industrial grade units. Our industrial products are built to perform in non-conditioned environments, featuring wide operating temperatures and hardened casings.

Applications

CCTV & surveillance
Security
Intelligent Transport Systems (ITS)
Telemetry & SCADA
Industrial control
Access control
Remote video, voice & data transmission
Building & site management

Verticals

Town & City Centre
Transportation
Banking
Critical National Infrastructure
Petrochemical
Power & Utilities
Government Agency
Military & Counter-terror
Emergency Services
Commercial & Retail
Data centres

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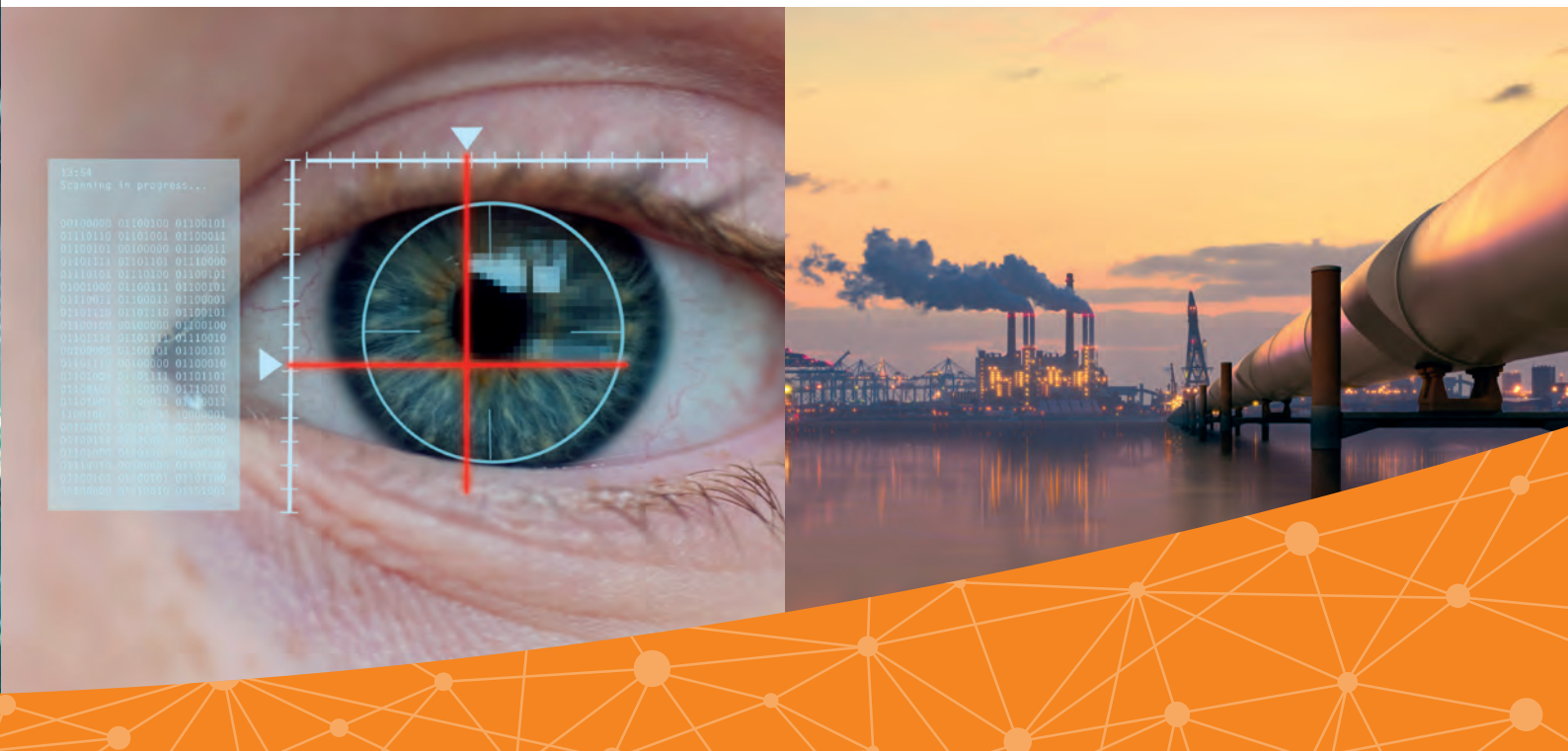
HT

ThruLink



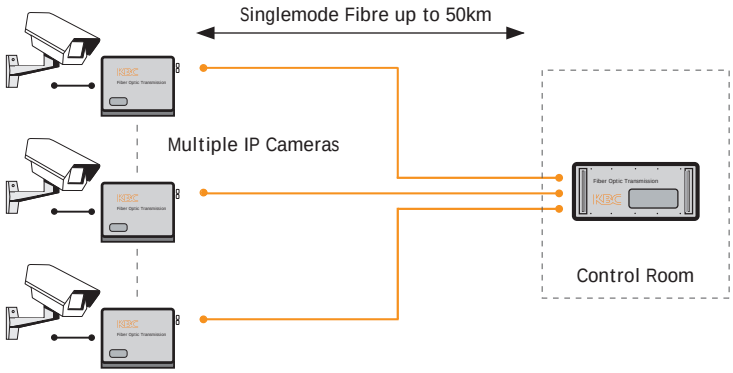
IP Transmission

Media Converters

Our Ethernet media converter range includes single and dual fibre, 10/100 and Gigabit modules plus PoE and non-PoE devices. For ultimate flexibility and minimal stock-holding, choose our SFP unit.

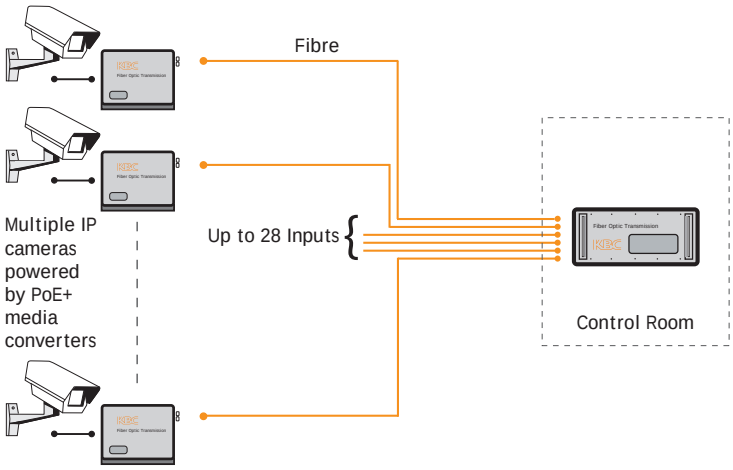
- 10/100 & Gigabit
- PoE & non-PoE
- SFP unit
- Multimode & singlemode
- Single & dual fibre modules
- Compact solutions at the camera & control room

Extend Transmission Distance



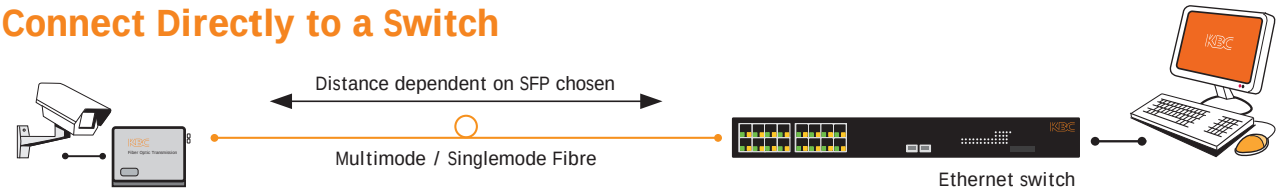
By using singlemode fibre from the cameras, transmission distance is extended up to 50km using standard KBC units.

Simplify Power with PoE



PoE+ media converters supply power to the IP cameras making the task of powering the cameras much simpler. Compact, wall-mount media converters are installed at the camera end. At the control room chassis card versions of the media converters complete the space-efficient solution.

Connect Directly to a Switch



By simply changing the SFP module, the media converter can be changed from multimode to singlemode with varying optical budgets and transmission distances up to 80km. Please see page 4 for details of our SFP modules.

Ethernet Switches

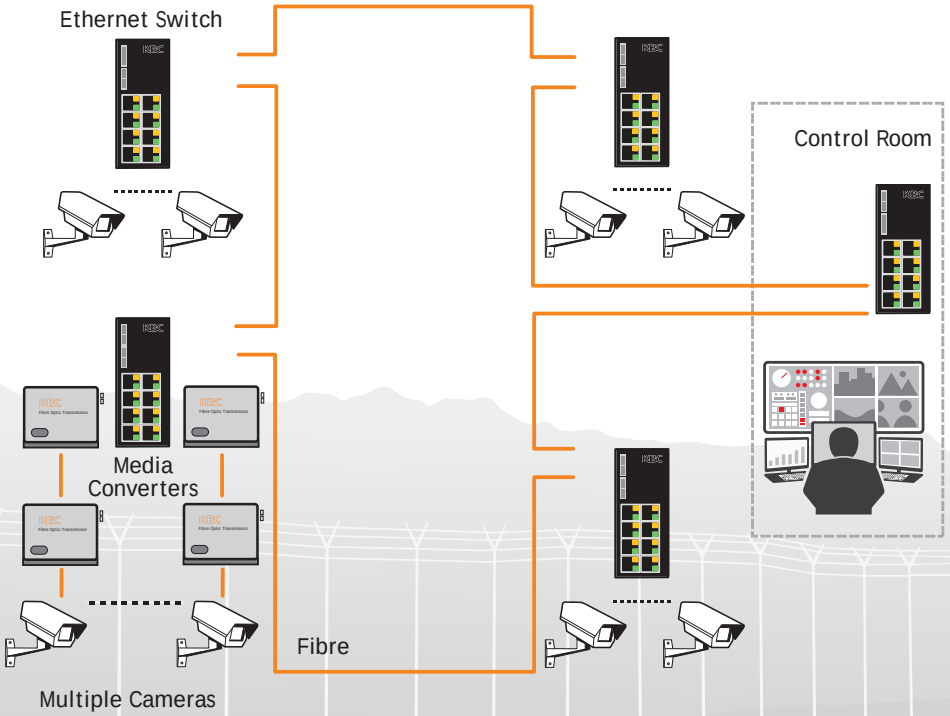
The KBC Ethernet switch range includes commercial and extended temperature, layer 2, managed and non-managed devices.

- Managed & un-managed switches
- Up to 28 ports
- PoE & non-PoE devices
- 10/100 copper & fibre, Gigabit, SFP & combo ports
- Redundant ring devices

- Low power units
- Commercial grade & extended temperature, industrial grade
- No fans or forced air cooling
- IP30 & IP40 cased units
- MDI/MDIX: ports automatically configured
- Dual, redundant power inputs
- Alarm outputs
- DIN rail & wall-mount configurations

Provide Connectivity for Fence Line Security

An 8 port, ESML8P-PC2 switch is used to create a redundant optical backbone on a fence line surveillance system. 8 x 10/100 copper IEEE802.3af PoE ports provide connections to local units and a Gigabit backbone is configured using SFP modules.



Encoders & Decoders

KBC Networks encoders convert an analogue video camera signal to IP using the H.264 compression algorithm. If the analogue signal is required back at the head end, a decoder unit is required and MPEG-4 compression is used. The units are fully-compatible with our wireless and Ethernet switch ranges.

Extended Ethernet

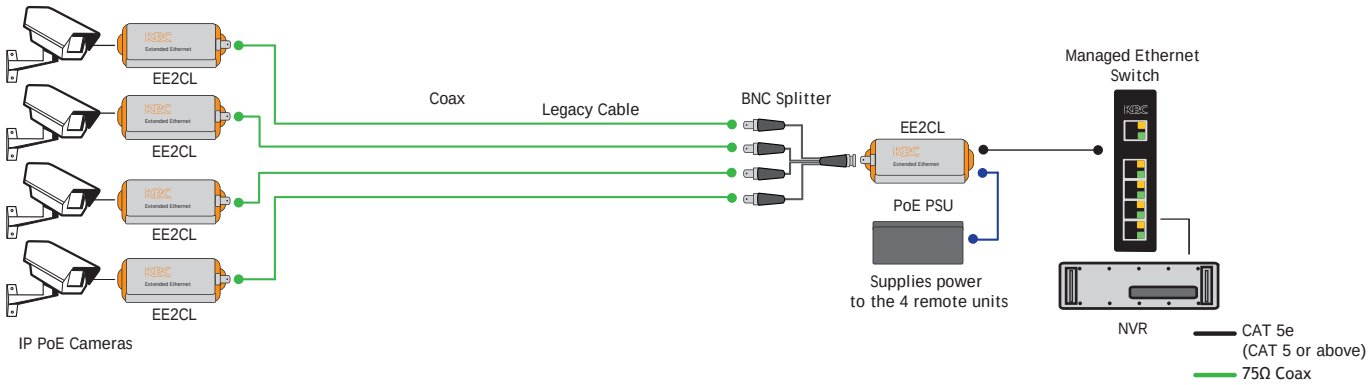
Ethernet-over-Coax / Twisted Pair with PoE

KBC's Extended Ethernet products go beyond the IEEE standard to enable fast and cost-effective upgrades from legacy coax and twisted pair to IP with minimal disruption.

Extended Ethernet 200 Series

With its 4:1 system, the Extended Ethernet 200 Series allows you to reduce the cost of upgrades even further. The KBC Extended Ethernet 200 Series is a 10/100 Ethernet line driver with IEEE 802.3af /at compliant PoE. It provides connectivity for one to four 10/100Mbps Ethernet channels over a 75Ω coaxial or a 2-wire cable interface allowing new IP technology to pass over existing, legacy cable. The series is available in a compact, wall-mount format that fits inside most camera housings or a 19" rack unit. Using a BNC splitter, up to four KBC EE2CL, slave units can be supported. The 200 Series PoE+ device also allows you to transmit 4 IP cameras over 1 coax cable without needing edge power.

Upgrade Analogue Cameras to IP over Legacy Coax



SFP Modules

The KBC SFP module range provides true flexibility to the KBC range of SFP-based industrial Ethernet switches. Modules are available for twisted pair and multimode and singlemode optical fibre.

Details of our full range of SFP modules can be found at www.kbcnetworks.com

- Twisted pair
- Multimode & singlemode fibre
- 100Mbps & Gigabit
- Single & dual fibre
- Transmission distances from up to 100m to up to 80km

ThruLink™
Secure Transmission over Public Networks

ThruLink Standard / Standard Plus, Wall-mount Unit & High / High Capacity Plus 19" Rack Unit

ThruLink allows secure, real-time, video, voice and data to be transmitted over public networks such as the internet or 3G/4G/LTE. The secure, hardware VPN utilises a number of encryption techniques to enable users to take full advantage of public infrastructure, whilst protecting their data.

ThruLink offers simple, secure and cost-effective connectivity for security and surveillance, retail banking, transportation, remote data, emergency services, military and counter-terror networks. With no licensing costs, no IP expertise requirements to install, and its failover and auto-re-boot features, users are able to benefit from secure and low cost transmission that operates over fixed and mobile networks.

- ✔ Stream secure, live video, voice & data over 4G/LTE networks
- ✔ Replace leased lines with secure connections over the internet
- ✔ Send encrypted video, voice & data to remote sites
- ✔ Build scalable point-to-point and mesh networks

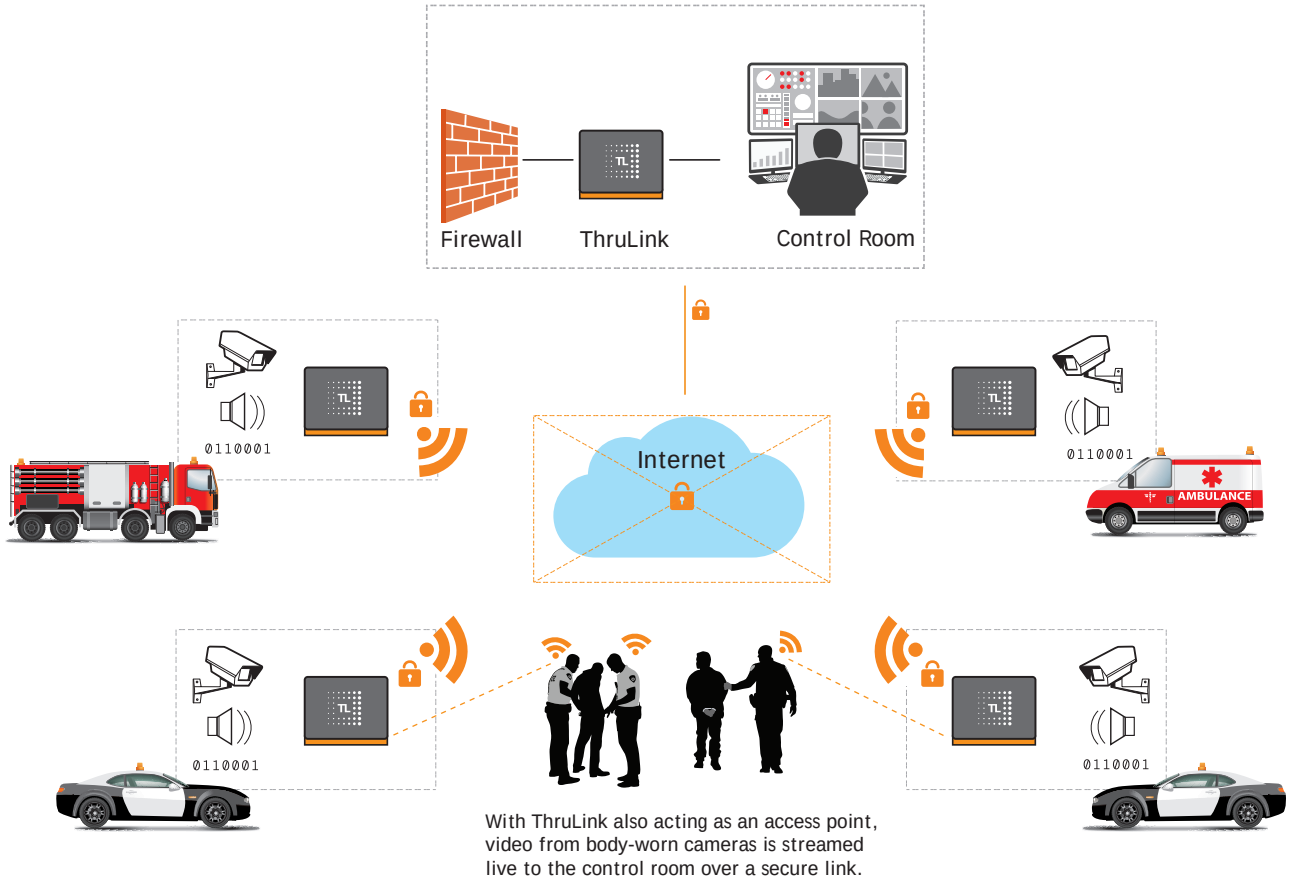
- AES, Blowfish & Camellia encryption up to 256bit
- Embedded 4G / LTE versions
- Supports point-to-point & mesh networks
- Simple setup, minimal maintenance
- Web-based GUI
- Multiple failover
- Auto re-boot after a network failure
- Optimises channel for maximum throughput
- No licences
- Family of products to suit capacity requirements

ThruLink

Provide Secure, Live Video, Voice and Data over 4G/LTE Networks

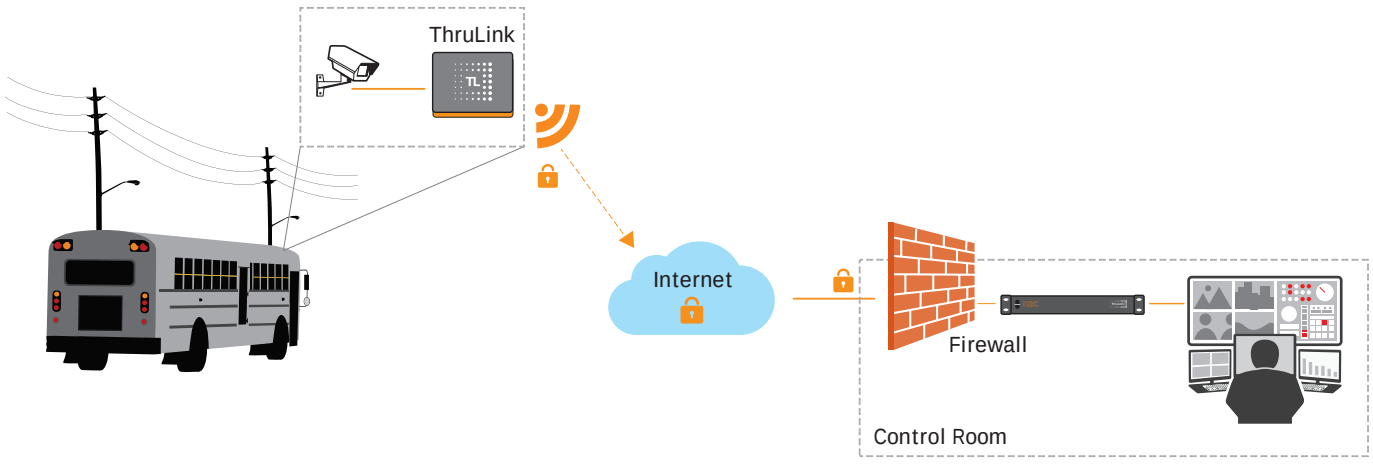
Emergency services, Major Incident: Secure Video, Voice & Data over 4G (Meshed)

The mesh network enables secure communication between each of the emergency vehicles and the control room as well as between each vehicle.

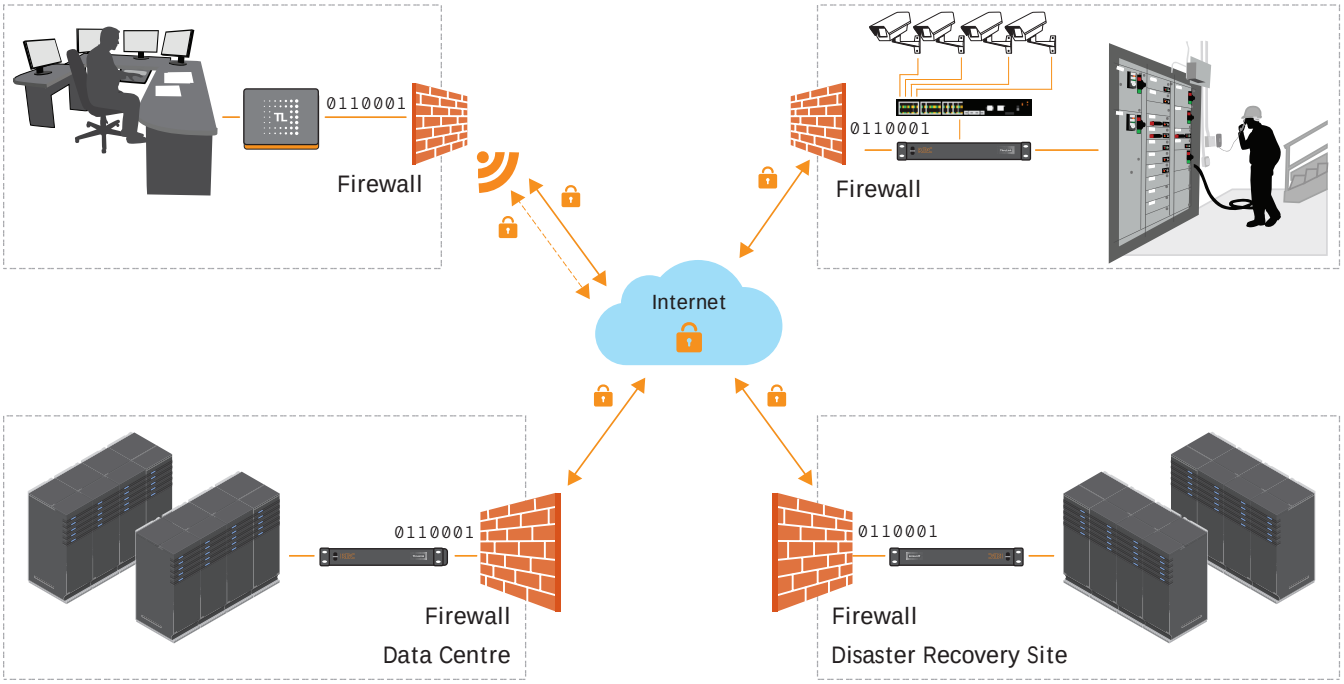


With ThruLink also acting as an access point, video from body-worn cameras is streamed live to the control room over a secure link.

Stream Secure, Live Video over 4G

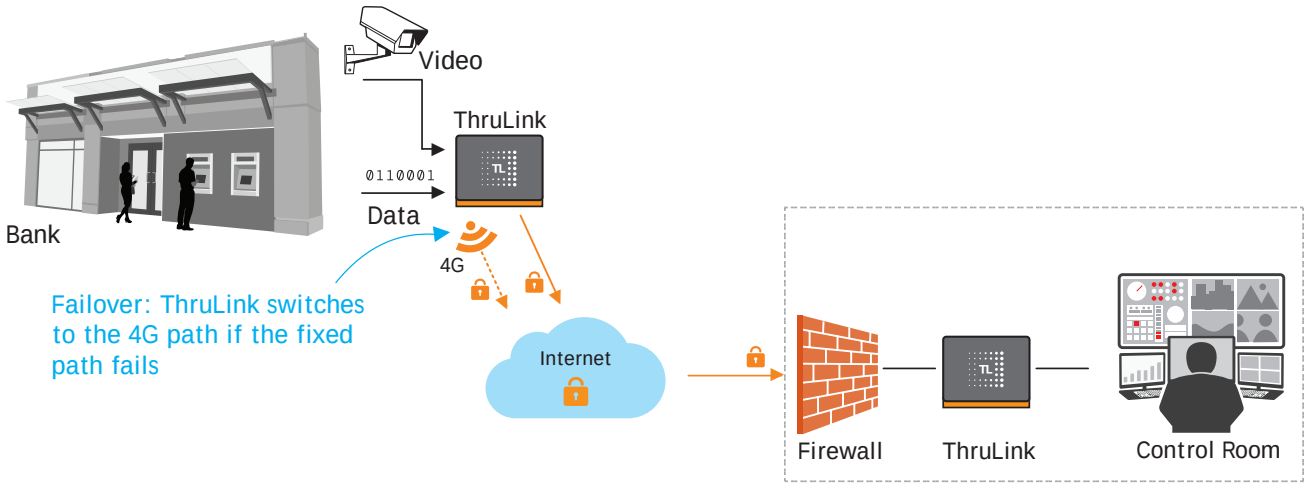


Provide Secure Connectivity for Remote Data Applications



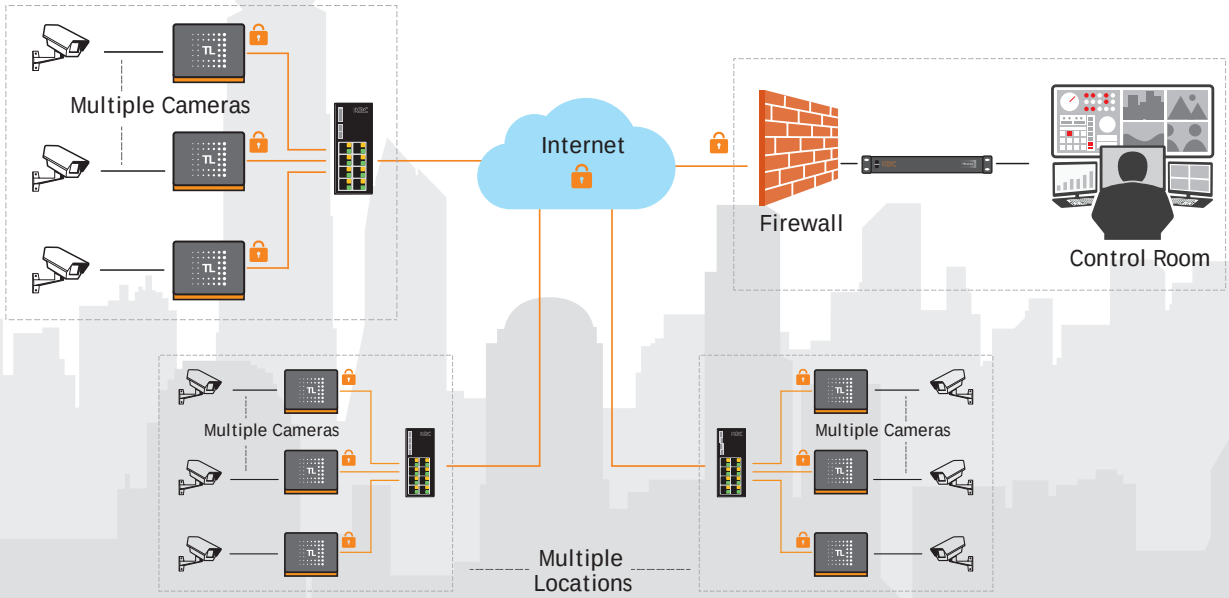
Deliver Secure Video and Data Transmission with Failover

ThruLink delivers fault tolerant transmission, providing failover at the network level and within the unit. If the primary, DSL line fails or is taken out, ThruLink switches to a secondary, 4G connection. ThruLink can either poll the connection and automatically re-connect to the primary path or be manually reset once the connection is re-established - either remotely or on site.



Provide Secure Connectivity for Large-scale Surveillance Systems over Public Networks

In this cost-saving application, ThruLink enables leased lines to be replaced by secure connections over public networks.



ThruLink Product Series

Standard Capacity	Standard Plus	High Capacity	High Capacity Plus
15Mbps	30Mbps	100Mbps	200Mbps
2 x RJ45 10/100/1000 standard DSL 4G option	Standard DSL or high bandwidth fibre 4G option	Standard DSL or high bandwidth fibre	Standard DSL or high bandwidth fibre
Wall/vehicle mount	Wall/vehicle mount	19" rack	19" rack
Ideal for mobile surveillance	Ideal for higher throughput applications	Ideal for large-scale surveillance (control room)	Ideal for large-scale surveillance (control room)

*Throughout depends on network capacity.

Secure:

AES, Blowfish and Camellia encryption up to 256bit
Unique, two-way, independent authentication process

Straightforward:

Straightforward setup
Minimal maintenance
No specialist IP expertise required

Economical:

Replace leased lines with secure connections over public networks
No licencing costs
Failover & auto-reconnect – fewer visits to site
Embedded 4G for remote sites

Wireless Transmission

Wireless transmission is ideal for fast and flexible deployments and where it's not practical or cost-effective to run cables such as city centres, campuses, residential, commercial, cultural and historical sites.

The KBC networks wireless ranges operate in the licence-free 2.4 and 5GHz bands to deliver secure and stable video, voice and data transmission for a range of IP devices including Megapixel / HD cameras, DVRs, encoders and decoders and webservers. The wireless units are provided in hardened casings that can be wall or pole mounted.

Standard and High Throughput Ranges

The standard throughput, WES3 wireless unit delivers up to 99Mbps and replaces the WESII series. It comes in a compact format and with enhanced, user-selectable firmware. The firmware is configurable for client, single-point host or multipoint host, to make system installation easier and more flexible, and to reduce stock-holding and cost. WES3 enables you to create a simple point-to-point wireless bridge, a more complex point-to-multipoint wireless network or mixed configurations, all with one common unit. The HT range is available in point-to-point, point-to-multipoint and dual redundant ring formats. The HT range includes a Gigabit port and delivers throughputs of 230Mbps (400Mbps aggregate). The WESII, WES3 and HT ranges are fully compatible.

- IEEE802.11a/b/g/n/y/ac compliant
- 2.4, 5 & 4.9GHz(1)
- Gigabit port on HT ranges
- Passive mid-span compliant and PoE versions
- ETSI DFS & TPC compliant
- MIMO technology
- WPA2: AES or TKIP encryption
- Suitable for long range deployments
- Extended operating temperatures
- Hardened casings
- Range of antennas to suit applications

Straightforward Setup & Configuration

KBC wireless units feature a built-in site survey tool to assess local, in-band noise to allow an appropriate transmission frequency to be selected. In addition, an antenna alignment tool allows the signal strength to be checked at the client end (camera) to identify the optimal position for the antennas.

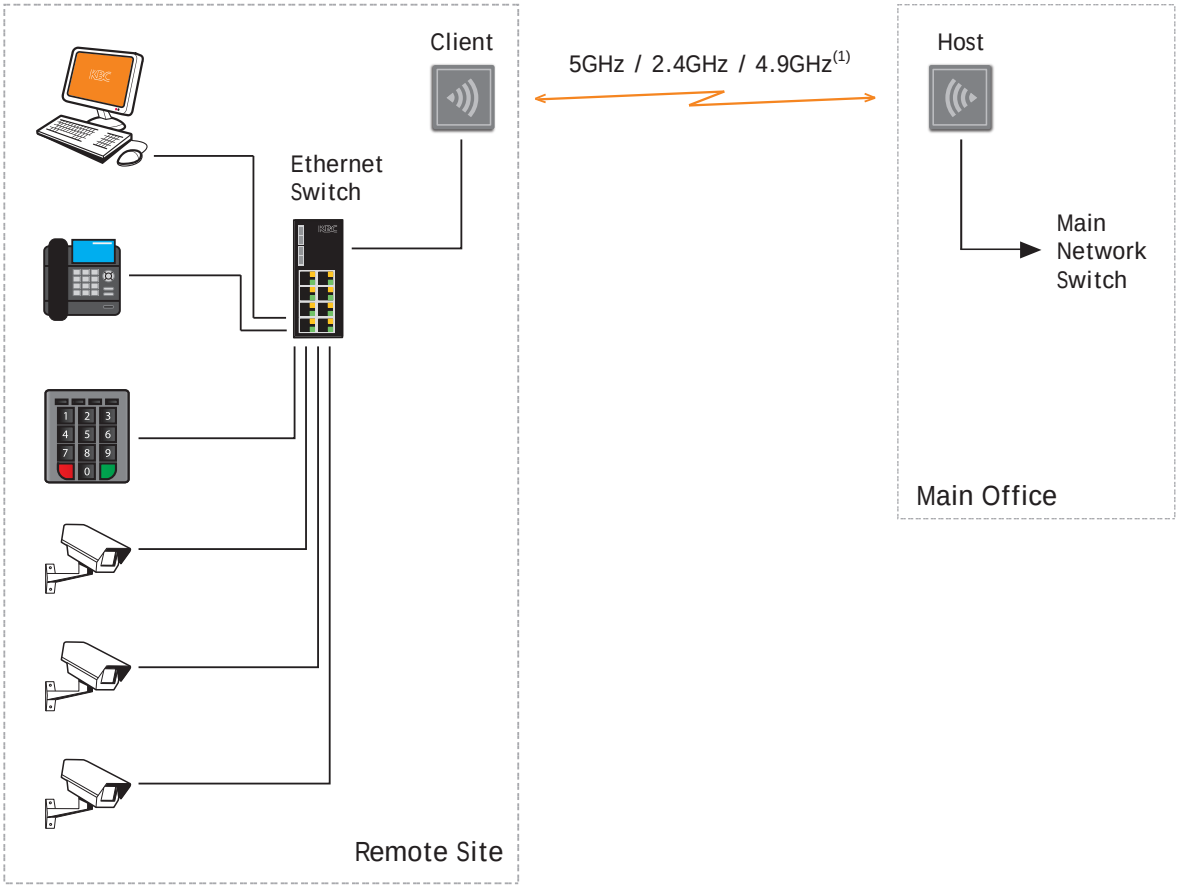
Accessories

To complete the wireless transmission system we can supply additional power supplies, alternative antennas and encoders to convert an analogue output to IP (please see Pg4).

(1) 4.9GHz public safety band units are only available for the USA & Canada. Throughput figures assume an ideal RF environment.

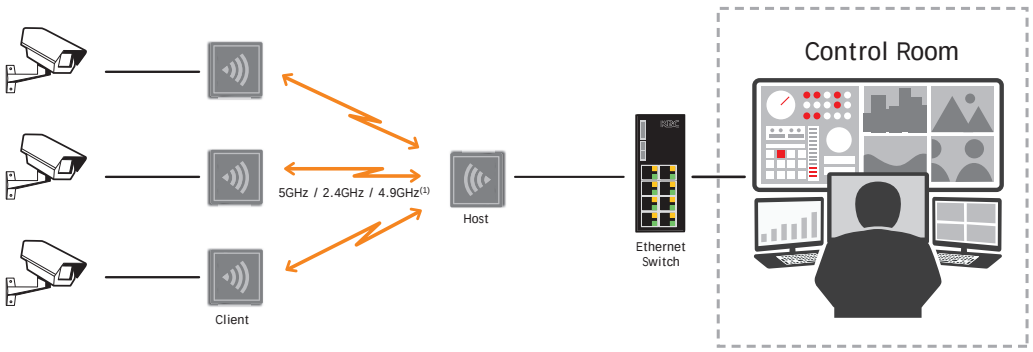
Point-to-Point

Deliver Multiple Connections over a Point-to-Point Wireless Link.



Point-to-Multipoint

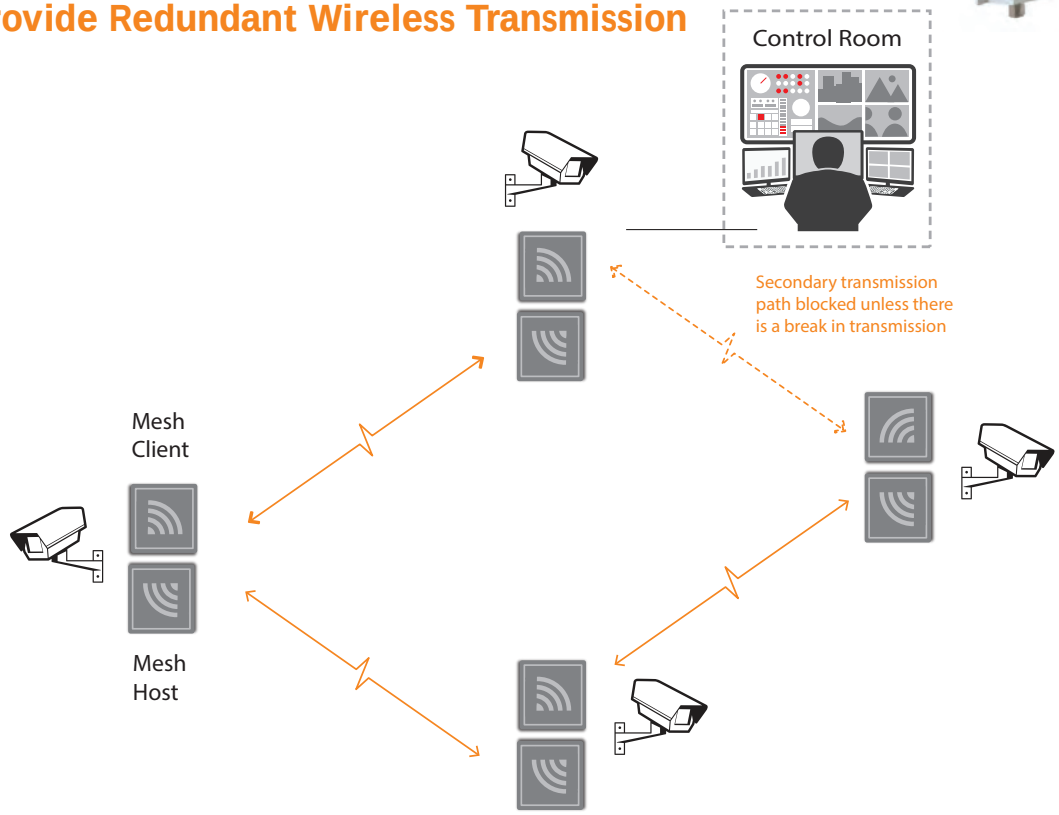
Provide Wireless Connectivity From Multiple Buildings



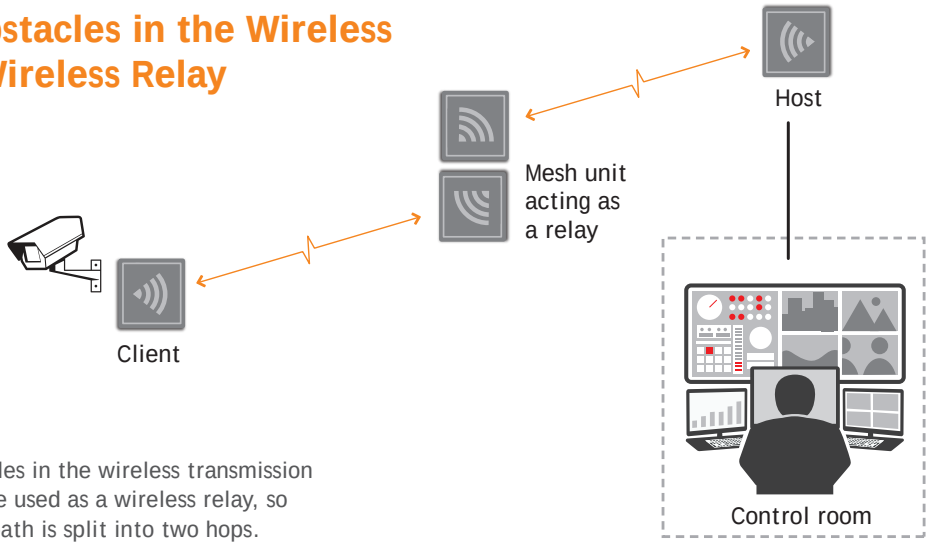
Dual Redundant Ring Mesh

The dual redundant wireless Ethernet system is ideal for providing system redundancy or wireless relays where line-of-sight is not possible between transmission points. Units are supplied as a base unit with four N-type connectors and four omni-directional 5dBi antennas. Higher gain, directional, patch antennas are also available. The mesh units are IEEE802.3af compatible but are supplied with power injection modules for applications where PoE power is not available.

Provide Redundant Wireless Transmission



Overcome Obstacles in the Wireless Path with a Wireless Relay



When there are obstacles in the wireless transmission path, Mesh units can be used as a wireless relay, so that the transmission path is split into two hops.

Fibre Optic Transmission

Digital Standard Fibre

The essential building blocks for point-to-point fibre optic transmission, KBC Digital Standard products offer multimode and singlemode solutions for: static and PTZ cameras; industrial data systems; single channel contact closure and Ethernet media conversion (including PoE+).

Single Fibre Transmission

For straightforward system design and faster installation, single fibre transmission has the potential to cut passive infrastructure requirements by half.

Uncompressed Digitally-Encoded Video

All KBC products (including our entry-level units) feature 8- or 10-bit digitally-encoded video transmission. This improves performance and provides excellent signal to noise ratio.

Compact Field Units and High Density Chassis Configurations

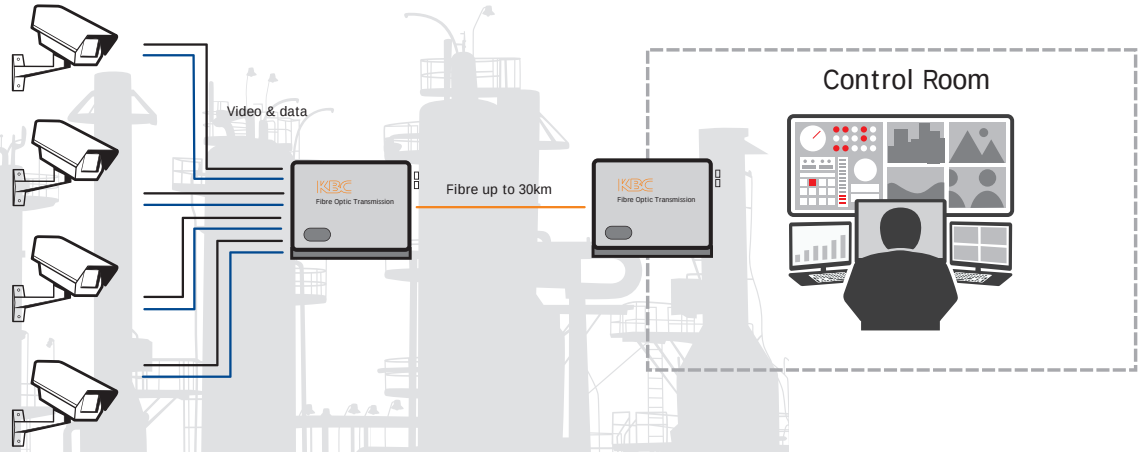
The digital standard range is designed to maximise product density within the chassis unit.This allows cabinet space requirements at the central monitoring location to be minimised.

Broad Input Voltage

Compact and wall-mount units are supplied with 12-24 Vac/dc inputs.

Product Configurations

- 3U chassis card
- Wall-mount
- Compact wall-mount
- DIN rail



ASFOM
(Application Specific Fibre Optic Modems)

Modular build means we can have ASFOM products to site in no time at all

video - audio - data - Ethernet - contact closure - telephone

ASFOM is a unique solution that gives you the flexibility to specify the exact number and mix of channels required within a fibre optic modem.

ASFOM is ideal for situations where fibre is limited, or where there is a number of common or mixed electrical signals.

- Multi interface
- Custom designed
- Multimode or singlemode
- Point-to-point
- Bus
- Optional redundant optical path configuration
- Dual redundant power connections

With millions of possible configurations, ASFOM products support video, audio, data, Ethernet, telephone and contact closure in various permutations with provision for up to 128 real-time video images plus other signals in one fibre.

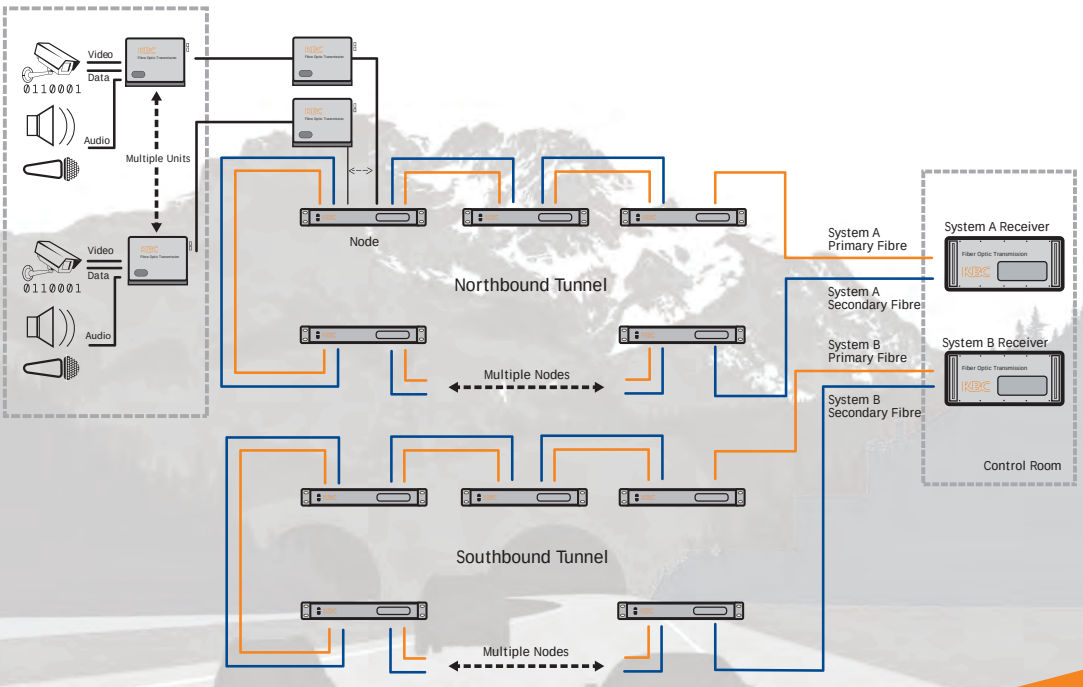
Designing an ASFOM unit is simple

Using the KBC Configurator - a software-based tool - simply input the type and quantity of electrical interfaces needed; the choice of multimode or singlemode fibre and the local power connector type. The Configurator will then work out the product code and produce a product description and drawing.

Even though each ASFOM solution can be unique, ASFOM's modular design and construction mean that delivery for ASFOM units can meet our other product delivery timescales.

ASFOM products are available in all of our form factors

Provide Redundant Fibre Transmission



In this road tunnel surveillance system, two separate fibre rings operate independently of each other. Electrical splitting achieves greater resilience than optical splitting

KBC
data delivered

No matter how good your endpoint technology is, the way you get your signals from A to B will ultimately decide whether your system works the way you need it to. We design and deliver trusted and reliable transmission solutions to get your signals from A to B … and C and beyond.

Integrity

Maintaining close, individual relationships with our customers and partners is our top priority. Everything we do as a company—and as individuals—is handled with complete integrity and respect.

Service

Superior service and support is a critical component of our business. We believe that successful network and system performance rely on accurate design and correct installation, so our technical and sales teams provide product support throughout the lifecycle of every project. Please contact us for customised pre-sales and technical support.

Quality

Reliability and high performance are at the core of our design, engineering and manufacturing processes. KBC is proud to offer products and services that go above and beyond recognized international standards.

More Products

We've included our major product groups in this brochure. For further detail about of the complete range, please visit our website: www.kbcnetworks.com, or call your local agent.

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