



Complete Network System Solutions

www.b3ft.com

B3 future technologies ... the complete **FTTx** solution

In a world where technological development never stands still it is essential to keep pace with constantly advancing parameters and the ever changing requirements of a highly demanding marketplace.

The future of our children's education, the physical health of the nation, communication between business, national and local security and the multi-faceted broadcast and entertainment industries all rely on the provision of world class optical fibre technologies.

B3 Future Technologies is an international and innovative manufacturer working at the forefront of optical fibre provision, offering complete solutions encompassing cabling and infrastructure products for all sectors - industry, commerce, education, healthcare and at home.



B3FT is one of the world's most established manufacturers and with a wide ranging network of operations is able to provide a first class service throughout Europe, Asia and the Middle East.

The future of communication technology is without doubt in optical fibre, B3FT are part of that future...**today**.





B3FT a global network of skills and experience

B3 Future Technologies is a world leader in the development of Communications Infrastructure. Many leading network owners and operators rely on B3FT for their strategic product design, development and supply.

From **'Backbone'** to **'In Building'** the B3FT product range combines to ensure the lowest whole life cost while delivering the highest level of integrated performance.



PROJECTS

B3FT is constantly delivering successful network solutions around the world. Some of the key milestone projects recently delivered are shown in the table below:

PROJECT TYPE	WHAT	WHERE
IN-BUILDING	7,000 Apartments	Gothenburg, Sweden
CITY NETWORK	1,000 km Multiducts	Athens, Greece
IN-BUILDING	8,000 Apartments	Stockholm, Sweden
BACKBONE	5,000 km blowing fibre	Croatia
IN-BUILDING	1,000 Apartments	Barcelona, Spain
IN-BUILDING	1,000 Apartments	Stockholm, Sweden

B3FT SERVICES

Design

B3FT expertise can also be used to assist in designing your network, whether a telecoms network operator, university campus or landlord, B3FT's experience can be used to deliver a truly tailored solution, whatever your goals.

Warranty

Fully warranted for 20 years, the B3FT network is a long life, high quality and cost effective asset to any prospective buyer and user.

Supply Chain

With inventory at key geographical locations, the B3FT supply chain adds real value to all stakeholders. Highly organised systems are in place to ensure products can be delivered at short notice directly to the customer, site or home.

Presence

B3FT has a truly global presence with offices and plants throughout Europe, the Middle East, China and the Far East providing the facilities and manpower to service and facilitate projects on any continent.



B3 future technologies ...

B3FT's manufacturing facilities in Europe and Asia are able to manufacture products for all network solutions. Whatever the network use or structure, there is a B3FT solution ready for delivery and installation.

PRODUCTS	Fibre Cable & accessories	Cable protection & accessories	Chambers & accessories	Road cabinets & accessories	Indoor cabinets MDF/ODF systems	Splice units	Structure Cabling
Backbone/City network	Yes	Yes	Yes	Yes	Yes	Yes	-
Access Network	Yes	Yes	Yes	Yes	Yes	Yes	-
In-building Network	Yes	Yes (LSZH ducts)	-	-	Yes	Yes	Yes

- Not applicable

The entire B3FT product range extends far beyond the segments listed above and also combines building control, infrastructure and mass transit applications. B3FT can supply all necessary products for networks on any scale. If a bespoke system to a particular specification is required, B3FT can offer a flexible, adaptable service delivering tailored systems to clients anywhere.

If you would like to discuss project details or would like further information regarding B3FT products and services please contact your nearest representative.

the complete FTTx solution

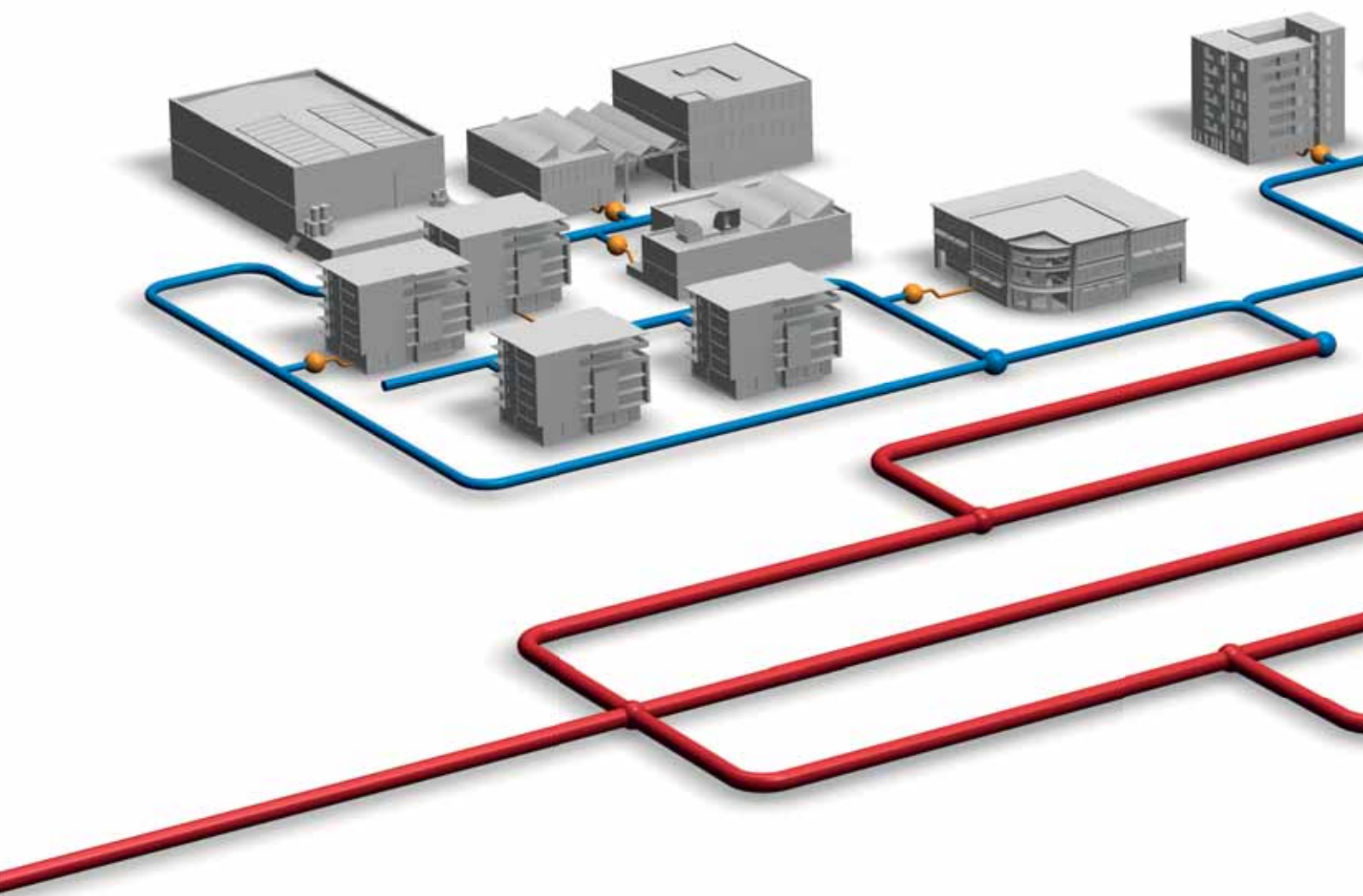
Ethernet over Coax EOC	POF	Wireless	RF over Glas	Power Equipment	CDWM DWDM	CPE's	Test & Measurement Equipment	Accessories & tools
-	-	-	Yes	Yes	Yes	-	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes
Yes	Yes	Yes	Yes	-	-	Yes	Yes	Yes

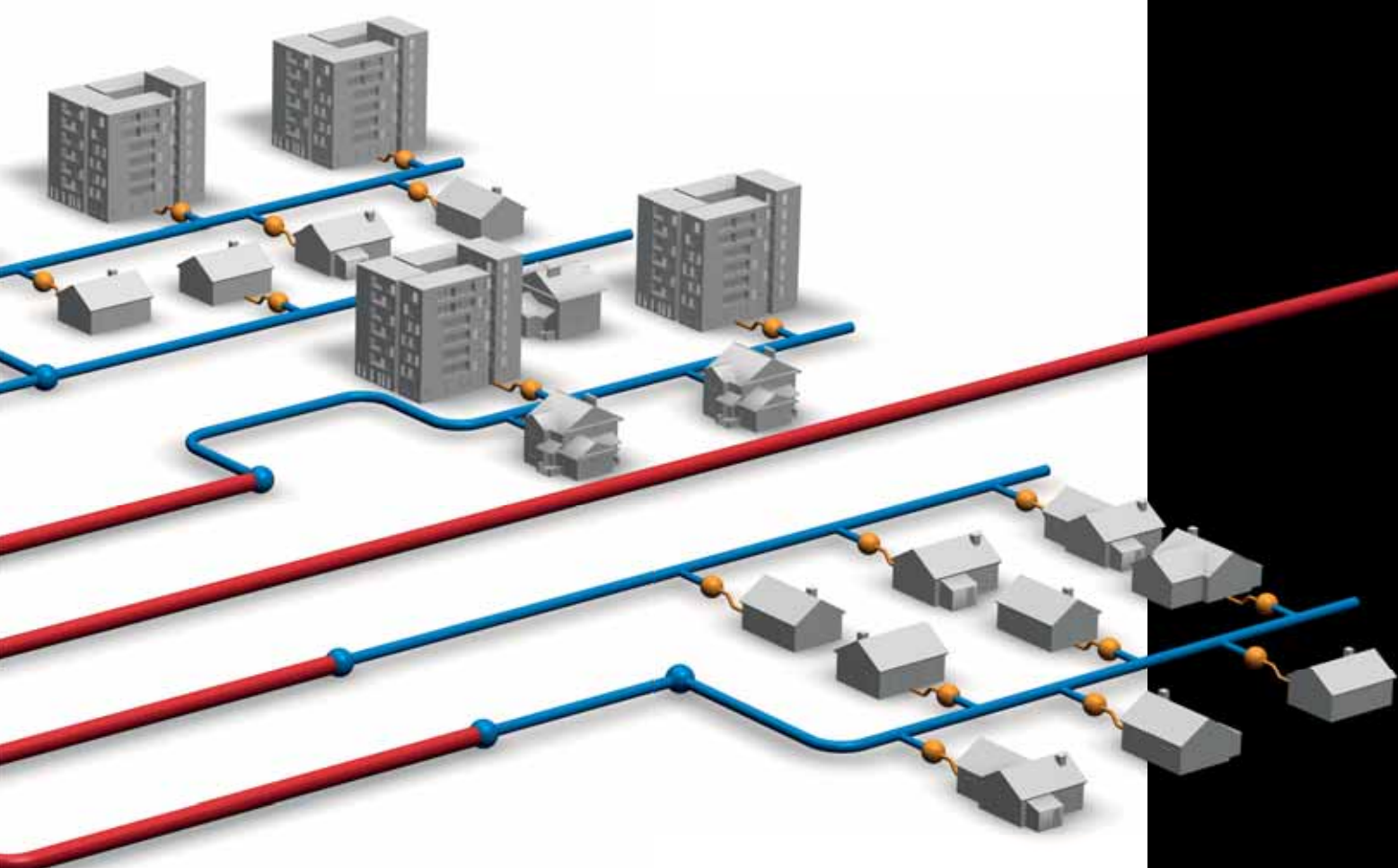





a complete network

Combining the three major network areas, B3FT products are present in some of the world's most advanced communication systems.

Schools, shopping centres, offices and homes rely on B3FT to provide essential band width and communications, which today are taken for granted.





- BACKBONE / CITY NETWORK**  Connecting all cities and municipalities
- ACCESS NETWORK**  Connecting local areas
- IN-BUILDING NETWORK**  Connecting the end user

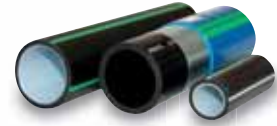
BACKBONE / CITY NETWORK

Backbone and City networks are the main arteries of major communication systems. B3FT products define and complement all aspects of these architectures.

CABLE PROTECTION



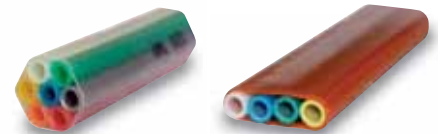
Corrugated double-wall HDPE pipes from 50-160mm. Smooth inner side. Hard or Flexible types available.



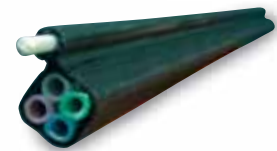
HDPE Optopipes from 20-50mm, Low friction inner side.



HDPE Optopipes for direct bury applications with preloaded microducts in different configurations. Microducts from 5-14mm can be loaded. With swellable tape or aluminium layer.



HDPE Bundled microducts for direct bury applications. Can be supplied in different configurations. Microducts from 7-20mm can be bundled. Round or flat shape.



HDPE Aerial bundled microducts in Fig.8 shape. UV resistant and antistatic design. Can be supplied in different configurations. Microducts from 5-14mm can be bundled.



HDPE Microducts for direct bury or direct installation. Options with silicone coating, ribbed or smooth inner surface.



OPTICAL CABLES



Microcable for blowing installation, from 24-144 cores, multitube design.



Microcable for blowing installation, from 2-24 cores, monotube design.



Ductcable for blowing, floating or pulling installation, from 24-512 cores, multitube design, single or ribbon fibre.



Pre-terminated Fibre Cable manufactured to customer specification.

CHAMBERS



Chambers made of composite 12.5-40 tons. From 300-1200mm width and length, each module is 15cm high.

JOINT CLOSURES



Joint closures for duct or microcable.

ROAD CABINETS



Road cabinets made of steel, composite or recycled plastic. Fully equipped upon request or empty.

MDF and ODF SYSTEMS

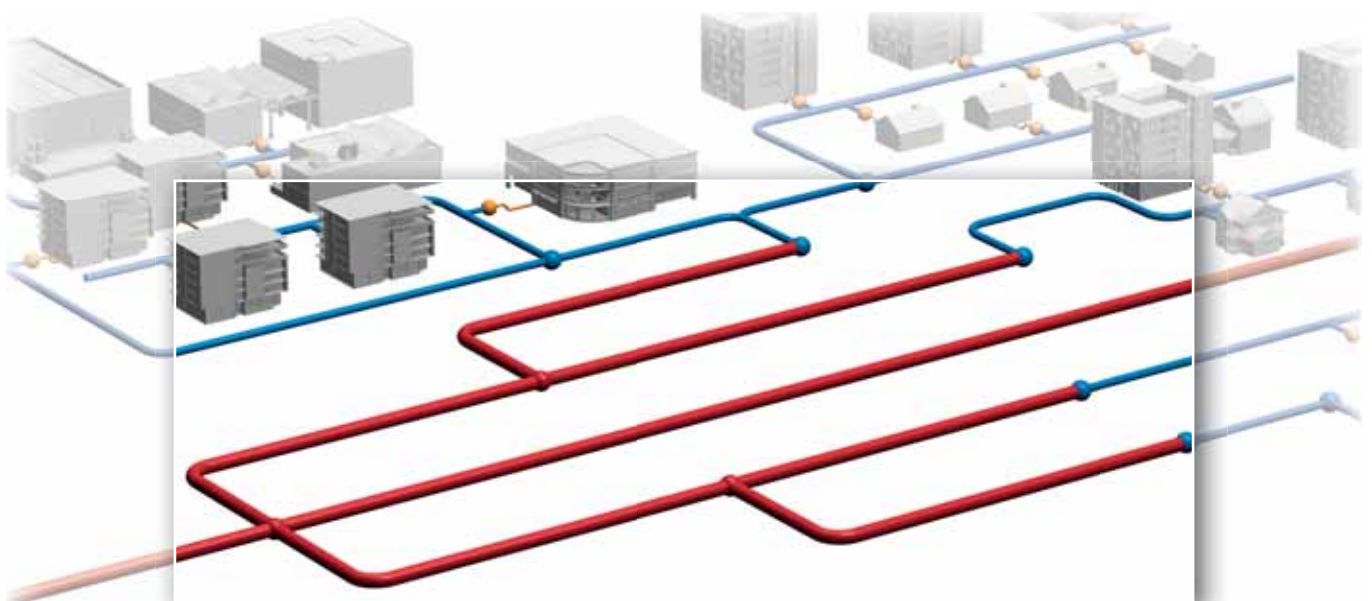


High density ODF system, open or closed system. One unit can handle up to 1920 fibre ports.

EDFAs



Active optical components, transmitters, receivers, amplifiers, optical nodes, etc.



ACCESS NETWORK

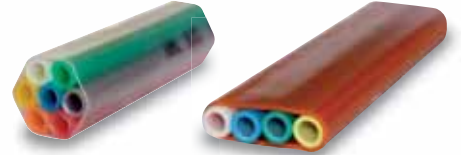
Access Networks link the main network nodes with the localities. Here the connection with the high traffic city networks is critical. B3FT products bridge these with ease, keeping the customer connected at all times.



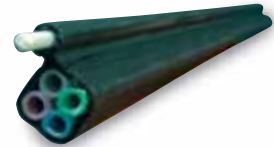
CABLE PROTECTION



HDPE Optopipes for direct bury applications with preloaded microducts in different configurations. Microducts from 5-14mm can be loaded. With swellable tape or aluminium layer.



HDPE Bundled microducts for direct bury applications. Can be supplied in different configurations. Microducts from 7-20mm can be bundled. Round or flat shape.



Pipes pre-loaded with microducts.



HDPE Microducts for direct bury or direct installation. Options with silicone coating, ribbed or smooth inner surface.

OPTICAL CABLES



Microcable for blowing installation, from 24-144 cores, multitube design.



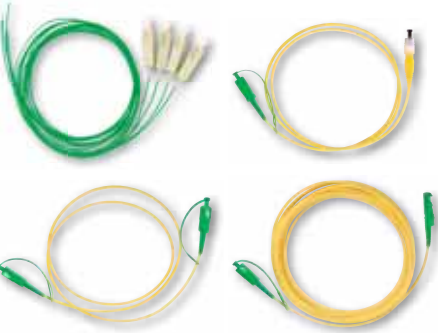
Microcable for blowing installation, from 2-24 cores, monotube design.



Ductcable for blowing, floating or pulling installation, from 24-512 cores, multitube design, single or ribbon fibre.



Nanocable for blowing installation, suitable for 5 and 7mm ducts, from 2-12 cores, monotube design. From 1-1.65mm in diameter.



Pigtails and Patchcords.

CHAMBERS



Chambers made of composite 12.5-40 tons. From 300-1200mm width and length, each module is 15cm high.

JOINT CLOSURES



Splicebox for chambers 24-288 splices.

ROAD CABINETS



Road cabinets made of steel, composite or recycled plastic. Fully equipped upon request or empty.

SPLITTERS

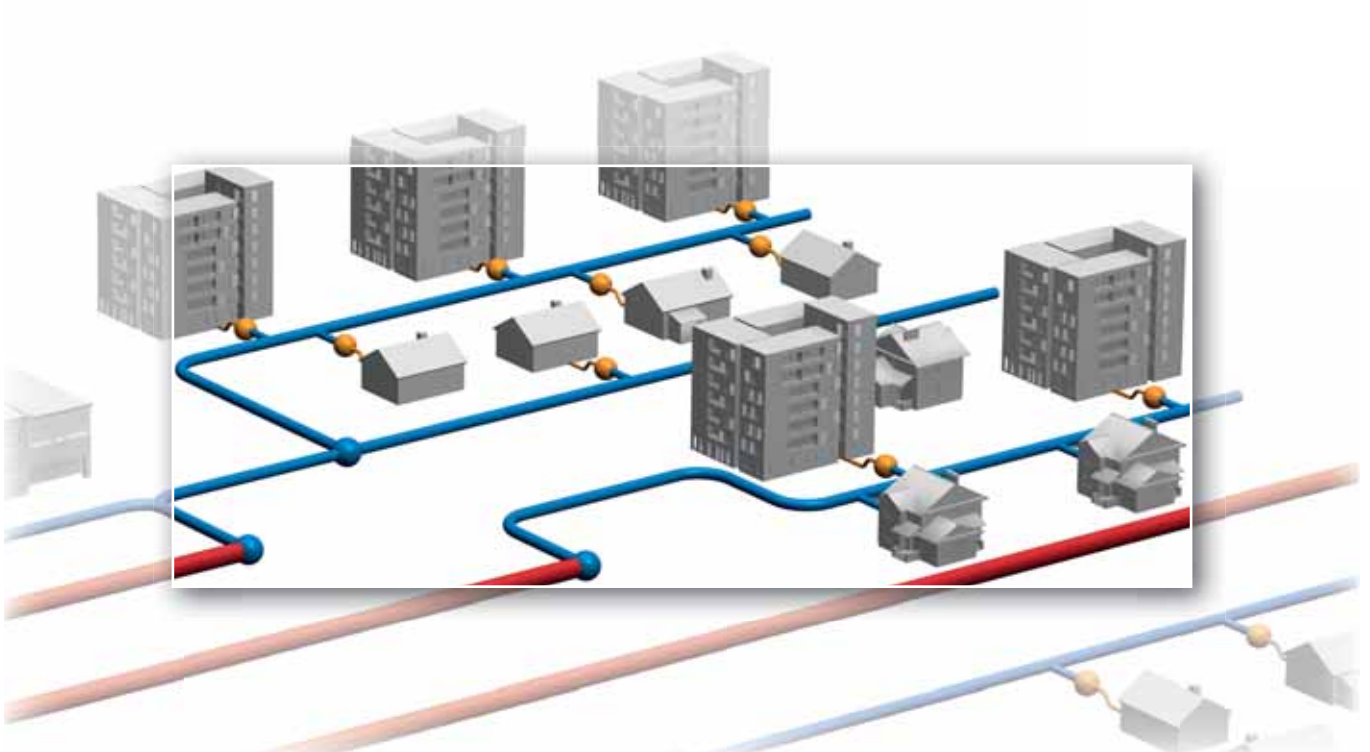


Passive optical signal distribution equipment in 19-inch, LGX and DIN-Rail enclosures.

WDMs



Complete range of CWDMs and DWDMs available.



IN-BUILDING NETWORK

Translating the 'network' into the many broadband services used for commercial and domestic buildings, B3FT products are functional, secure and aesthetic. Providing the customer with safe, secure links to the outside world.

CABLE PROTECTION



Multiducts 5/3.5mm for indoor installation, LSZH, Available as single, 2-way, 4-way, 7-way, 12-way, 19-way or 24-way.

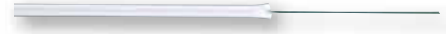
INDOOR FIBRE CABLES



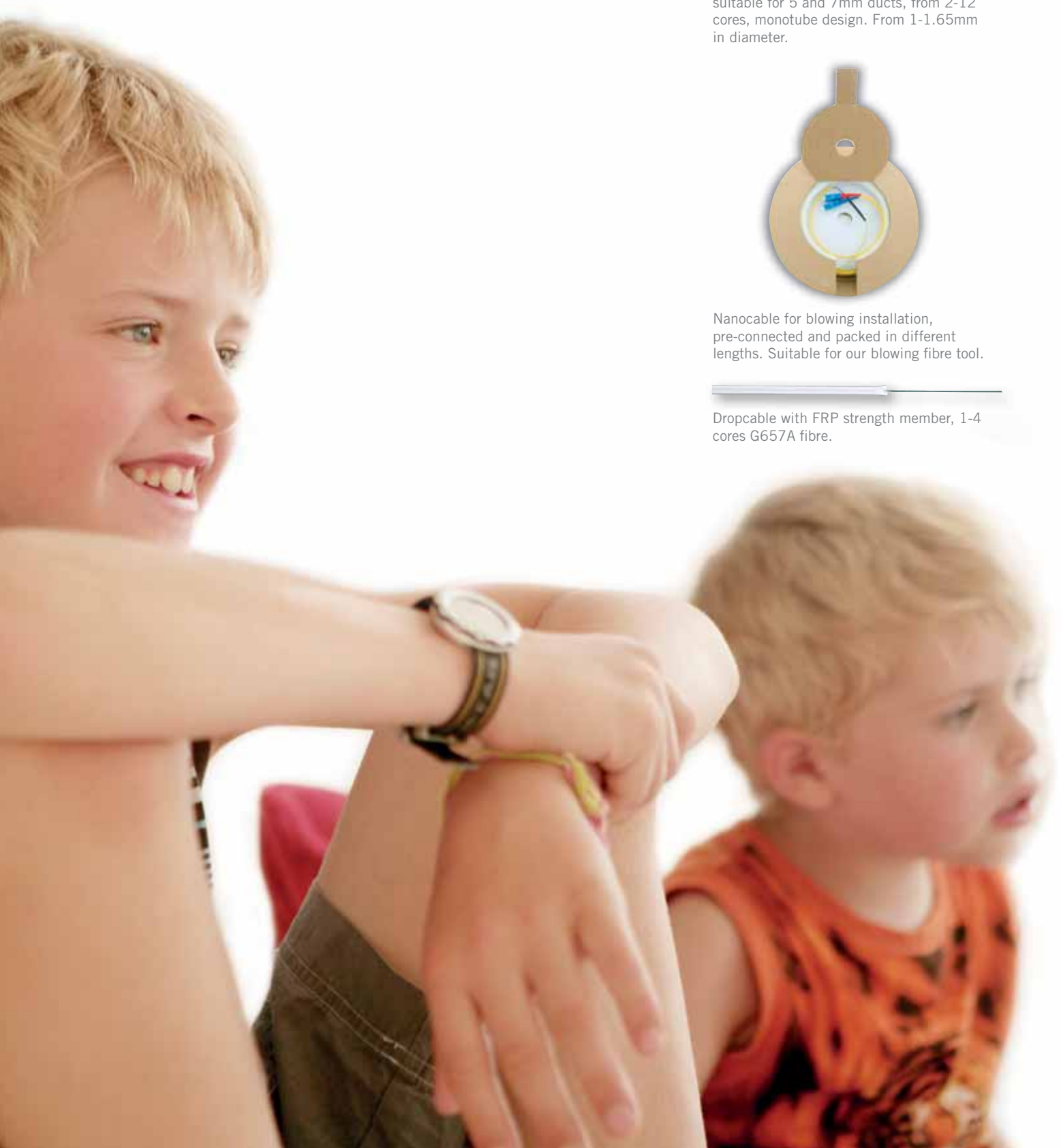
Nanocable for blowing installation, suitable for 5 and 7mm ducts, from 2-12 cores, monotube design. From 1-1.65mm in diameter.



Nanocable for blowing installation, pre-connected and packed in different lengths. Suitable for our blowing fibre tool.



Dropcable with FRP strength member, 1-4 cores G657A fibre.



WALL CABINETS



Wall cabinets and splice boxes for in-building installations.

ODF and SPLICE SYSTEMS



Splice pivot system 19" or other systems with high density, several configurations and designs available.



ODF 19", wide range of ODF's. Can also be pre-connected with fan-outs and fibre tubes.

OPTICAL NODE



Optical Nodes for MDUs, offices and homes w/w Return Path features.

FIBRE SWITCH



Manageable optical Switches for PON/GPON with RJ45 and/or SFP-Ports.

FIBRE CPE



Intelligent, manageable, remote device compliant with worldwide standards to meet all triple play requirements 100Mb / 1Gb.

TERMINATION UNITS



Outlets for in-building use, 1-6 ports with cable management.

SELF INSTALLATION KITS



DIY Installation Kit for home networking using POF, UTP, WiFi and Homeplug AV.



ETHERNET over COAX

Utilising existing cable infrastructure for high speed broadband access in a new way is a fantastic idea. Since it already exists, you save time and money. B3FT's Ethernet over Coax Technology uses existing in-building coax-cable installations originally intended for analogue TV and radio signal distribution. The B3FT network can easily provide 100 Mbps to each antenna outlet. B3FT products use a spectrum overlay technology, based on the industry standard Multimedia over Coax Alliance (MoCA). It utilises the free capacity above 862 MHz for services as IPTV, VoIP and high speed Internet in parallel with existing Cable TV service.

The B3FT access system provides up to four channels per coax cable in the spectrum between 862 MHz to 1500 MHz for data communication in the building. A single coax-cable can carry up to 400 Mbps. B3FT architecture ensures high broadband capacity to every home.

NETWORK CONTROLLER



A 100 Mbps Network Controller which connects to the fibre node Ethernet connector or fibre node switch. One or more can be connected to the buildings coax network, depending on the network structure. Installed in the basement, next to the B3FT Network Controller, it injects the High-Speed-Internet services into the existing coaxial infrastructure. Up to 31 B3FT Home Modems can be connected to each controller, depending on the guaranteed broadband capacity dedicated to each individual home.



1 PORT MODEM



The B3FT Modem is a 100 Mbps device, connected to any TV antenna outlet in the home. There can be as many modems in one home as there are wall outlets.

The B3FT Network Controller injects communication channels at either 1000 or 1150 MHz - field selectable - while the B3FT Modem works with a fixed frequency which is determined in production at 1000 MHz or 1150 MHz; frequencies outside the CATV bands. It features 4 10/100 Base-T Ethernet ports for High-Speed Internet and other IP services including VoIP.

4 PORTS MODEM



The B3FT 4-port Modem provides numerous features and functions allowing subscribers to utilize all multi-media services including IPTV, Video-on-Demand and VoIP by simply connecting up to four devices to the RJ45 Ports. While the modem can handle data rates of up to 100MBit/s altogether, each port can be programmed and controlled individually - by an IP based management system - in order to meet the the devices optimal speed and data requirements.

REPEATER



The Repeater was designed to build networks that include several buildings or networks that reach out to cover large housing developments. It by-passes existing coaxial amplifiers and repeats the network signal. The Repeater supports a data rate of 100 Mbps, using 4 different frequencies which work in parallel. The input and output frequencies are field selectable of either 1000 MHz, 1150 MHz, 1325 MHz or 1500 MHz. The robust housing meets IP67 specifications and can be installed outdoors. It is powered over the coaxial cable (line feed) or locally (mains powered).

HOME NETWORK ADAPTER

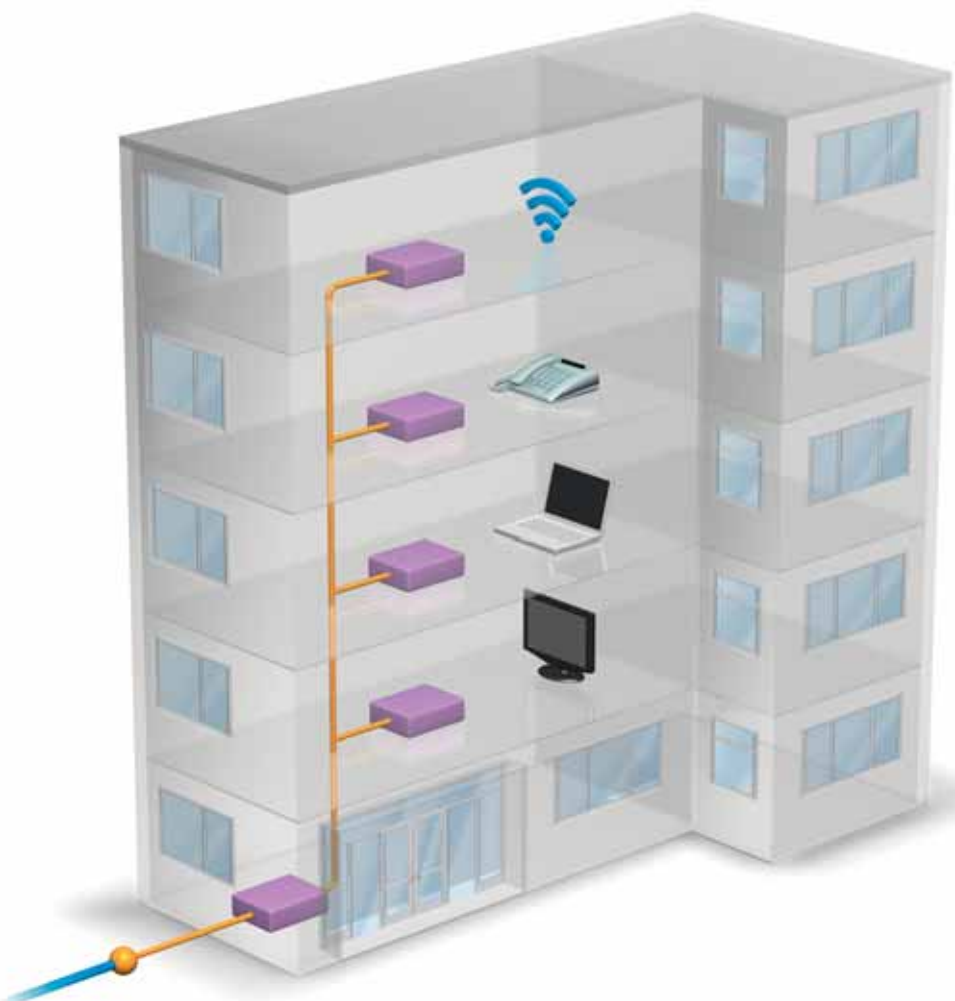


The B3FT Home Network Adapter provides super high speed data connection for in home IPTV, media centres, DVRs, Blue Ray players, game consoles, etc. Using the MoCA standard, existing coaxial wiring in the home can, in essence, be converted to an Ethernet network, delivering high speed Internet to every connected device in the home. The B3FT Home Network Adapter is compatible with most broadband services, and passes CATV or terrestrial signals to components such as televisions without signal degradation.

MANAGEMENT SYSTEM



The B3FT Management System is IP based allowing to control and update any device or port in the B3FT Network at any given time. It maintains a database for various key information regarding link quality and error indications and provides functions to allocate individual services, bandwidth or features to every subscriber in the network. This as a base for statistical presentation to guide supporting people when finding errors, detecting weaknesses in the net and manage subscriptions. This database is continuously updated. All B3FT components can be part of an existing higher level management and provisioning systems.



a global responsibility

Now more than ever, business and industry need to be acutely aware of the effects their practices have on the environment both in the present and the long term.

B3 Future Technologies takes its responsibilities seriously and as such is working with The Carbon Trust, Groundwork EBS and The Manufacturing Institute to calculate its carbon footprint and reduce its impact on the environment by up to 25% in the next 10 years.

B3FT is one of the few companies within the industry to have an Environmental Manifesto:

- **ISO 14001 certified / ISO 18001 Certified**
- **RoHS fully compliant (prior to the final European directive)**
- **Full range of HFFR products**
- **2010 target: reduction of 3% in power consumption**

B3FT demonstrates duty of care by segregating all waste to maximise recycling opportunities and minimise landfill. Examples include segregating all waste and working with recycling agents to maximise yields of metals, polymer, wood and other materials. This service provides B3FT's customers with a "*cradle to the grave*" solution for all cable and related products, whilst ensuring low whole life costs.

B3FT's customers have been the main beneficiaries in the recycling programme through -

- **Re-use and refurbishment of existing products, saving expenditure**
- **Reduced space requirements for storage of products**
- **Compliance with recycling and waste legislation**

These value added solutions in effective recycling are recognised by our customers and demonstrate the focus environmental issues continue to have at B3FT.







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