

product catalogue 2011

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**BFR**  
DIGITAL



science



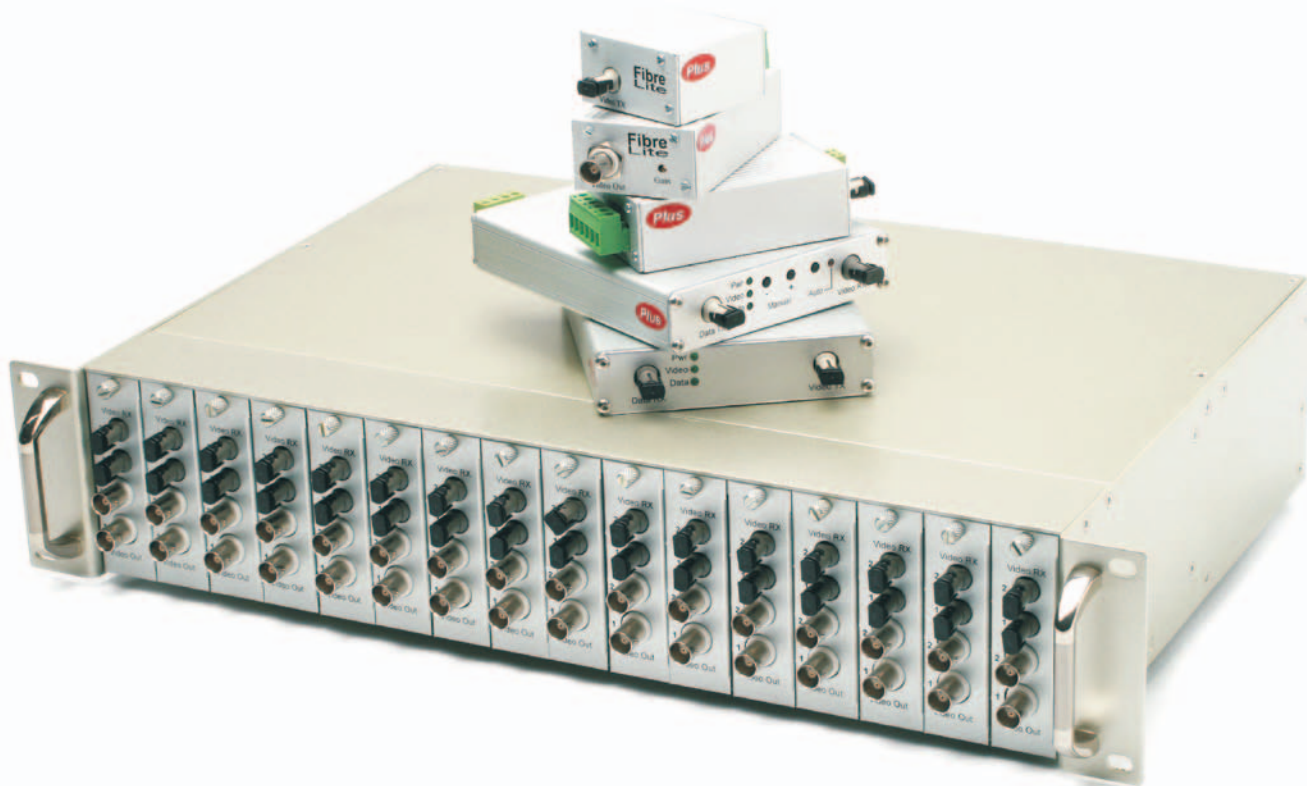
functionality



global standards



creative technology



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**Bruno Jones**  
**Managing Director**

## COMPANY PROFILE

BFR Digital specialises in the design, development and manufacture of a full range of Fibre Optic Transmission, Twisted Pair Video Transmission (UTP), Data Transmission, Video Amplifiers, Surge Protection and Power Supply products.

We know that our customers have unique business needs and that not all project requirements fit into a neat little box. We offer a full range of engineering solutions to our customers from OEM products to project specific engineering solutions.

## HISTORY

BFR Digital was founded in 2001 as a creative outlet for its 3 founding engineers. Our first product was the GUI-MUX which was a graphical user interface that operated a video multiplexer and a VCR off a Windows 98 platform. We soon found a niche business opportunity to develop and manufacture robust CCTV infrastructure equipment.

We understand that users just want equipment that works and that gimmicks lose their appeal within the first few weeks of operation. It is for this reason that innovation is key to our business, and our products constantly evolve, ensuring their reliability so they require little to no maintenance, and are easy to use. All this to better suit your unique business needs.



## CONTACT DETAILS



**Tel:** +27 11 786 5575  
0861 921 922



**Fax:** +27 11 786 5655



**Address:**  
26 Wynburg Road  
Kew  
Johannesburg  
South Africa  
2090



**Postal:**  
P.O. Box 4610  
Kempton Park  
South Africa  
1620



**Email:**  
[brunof@bfrdigital.co.za](mailto:brunof@bfrdigital.co.za)



**Website:**  
[www.bfrdigital.co.za](http://www.bfrdigital.co.za)



## VIDEO CAT PRO

Longer cable distance, easier installation, perfect picture.

We designed Video CAT Pro to facilitate the transmission of video over a copper cable length of 1800m.

Differential video signals sent over long distances of twisted pair wire exhibit large high frequency attenuation, resulting in loss of high frequency detail/blurring. The exact loss characteristic is a complex function of wire gauge, length, composition, and coupling to adjacent conductors.

The video signal can be restored by applying a filter with the exact inverse transfer function to the far end signal. Video CAT Pro is designed to compensate for the losses due to long cables, and incorporates the functionality and flexibility to match a wide variety of cable types and loss characteristics.

Video CAT Pro has been designed to be fully automated with the only manual function being the selector between CAT5 and RG59.

The VCP-ISL-01R offers 99% video reproduction at 1000m (same as a camera connected to a monitor on a 1m lead) and 75% video reproduction at 1800m (same as a camera connected to a monitor on 250m of RG59).



new



**VCP-ISL-01R**

Single channel receiver, automatic video equalizer, fully-adaptive to 1600m CAT5 or 1800m Rg59

new



**VCP-ISL-02R**

Single channel receiver, automatic video equalizer, fully-adaptive to 1200m CAT5 or 1300m Rg59

new



**VCP-ISL-03R**

Single channel receiver, automatic video equalizer, fully-adaptive to 900m CAT5 or 1000m Rg59

new



**VCP-ISL-04R**

Single channel receiver, automatic video equalizer, fully-adaptive to 600m CAT5 or 700m Rg59

new



**VCP-RACK**

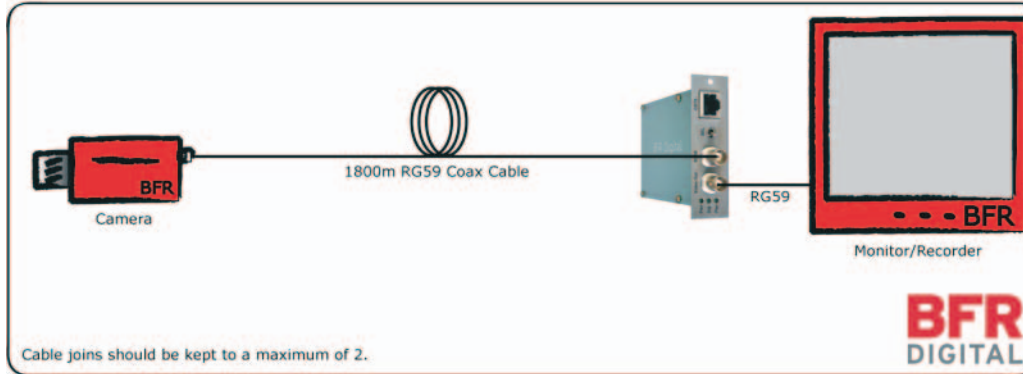
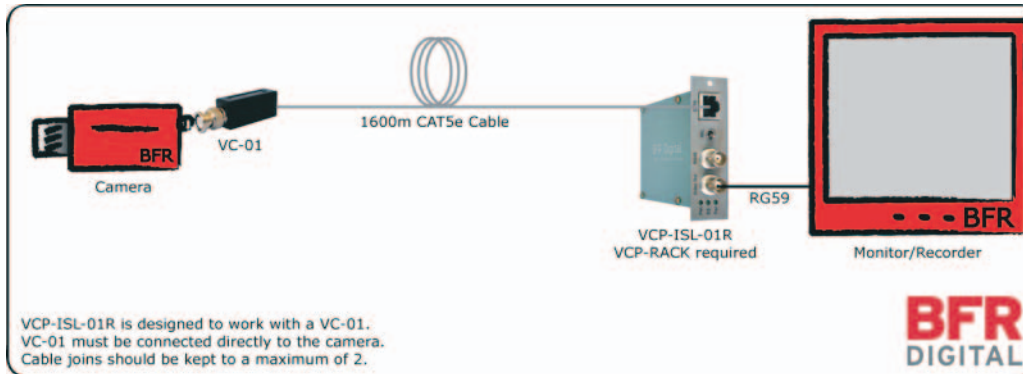
16 slot 19" rack mount card cage, including PSU. Cage Cards sold separately.

new



**DIN-C**

DIN rail mount enclosure for Video CAT Pro Cage Cards



## Midspan PoE PSE and Surge Protection

BFR Digital is proud to introduce high-end, high-power solutions for PoE (Power over Ethernet) IP cameras and other devices. All our products feature a self-contained power supply and surge protection. Our production range will cater for the most demanding industrial IP CCTV applications.

As we all know, PoE offers the advantage of power and data for a network device on one cable.

Our products are 10/100 IEEE 802.3af compliant PoE Midspan PSE featuring:

- Wide input supply voltage range
- Self contained 48v power supply
- Built-in surge protection
- High power output
- Intelligent PoE status indication and power management
- 1.5KV zone 2 protection level

The PoE-PSE devices are IEEE 802.3af compliant and have a uniquely intelligent indicator for:

- Non-Powered Device connected
- Port On
- Low Signature Resistance
- High Signature Resistance
- Port Overload
- PSE Power Supply Overload





new

#### POE-ESA-01

Single port 10/100Mbps PoE ethernet arrester, for use with POE-PSE-02S/04S/10R



new

#### POE-PSE-02S

Two port 10/100Mbps Midspan PoE PSE (Power Sourcing Equipment) and surge arrester, max of 12.5W per port



new

#### POE-PSE-04S

Four port 10/100Mbps Midspan PoE PSE (Power Sourcing Equipment) and surge arrester, max of 15W per port

new



#### POE-PSE-10R

Ten port 10/100Mbps Midspan PoE PSE (Power Sourcing Equipment) and surge arrester, max of 7.5W per port

## tip

#### 100m cable length

When using a Midspan PoE PSE the length distance between the ethernet switch and the IP device (i.e. camera) can not be increased. The maximum cable length between the camera and the ethernet switch remains 100m.

It is also advisable to protect both ends of the line, i.e. have a PoE-ESA at the device and a PoE-PSE at the switch. The PoE-PSE are not just Power Sourcing Equipment but also feature surge protection.

## I-WIE

The I-WIE range offers optical isolation between an access control wiegand controller and an access control wiegand reader. The products in the range offer isolation from just the D0 and D1 communication line to the isolation of D0, D1, LED1, LED2 and the 12 Vdc power supply.

Ports D0 and D1, which are the serial data and clock lines, are effective up to a data rate of 10Mbps. LED1 and LED2 offers logic state optical isolation.

The I-WIE5 features a true 10 watt DC to DC converter with 1.5KV isolation.



### I-WIE2

Wiegand isolator for D0 and D1



### I-WIE4

Wiegand isolator for D0, D1, LED1 and LED2



### I-WIE5

Wiegand isolator for D0, D1, LED1, LED2 and 12Vdc at 10Watt

## FIBRE LITE

Fibre Lite was designed for the analogue transmission of:

- Video
- Audio
- Data
- Contact Closures

Over 2.5km of multimode fibre optic cable. All transmission is unidirectional and the data transmission is designed for Pan/Tilt/Zoom camera control.

When overall system implementation costs need to be reduced we recommend the FIELD-LITE-4 enclosure. This enclosure features 4 video transmitters and 1 data receiver. The data is distributed out of 4 individual outputs, which allows for the operation of 4 Pan/Tilt/Zoom cameras through 1 data channel. This effectively reduces the equipment count by 3 data transmitters and 3 data receivers. By doing this the fibre optic cable count is also reduced by 3 fibres.





**LVTX -010-SMM**

Single channel video transmitter, 850NM, Multimode, 2.5km, Stand-alone.



**LVTX-010-RMM**

Single channel video transmitter, 850NM, Multimode, 2.5km, Cage card.



**LVTX2-010-RMM**

Two channel video transmitter, 850NM, Multimode, 2.5km, Cage card, Dual fibre.



**LVRX-010-SMM**

Single channel video receiver, 850NM, Multimode, 2.5km, Stand-alone.



**LVRX-010-RMM**

Single channel video receiver, 850NM. Featuring Digitally Controlled AGC, Cage card.



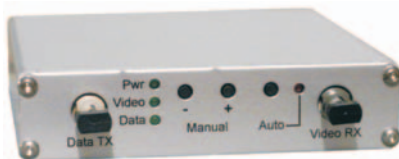
**LVRX2-010-RMM**

Two channel video receiver, 850NM. Featuring AGC, Cage card.



**LVTXD-010-SMM**

Single channel video transmitter and data receiver, 850NM, Multimode, 2.5km, Dual fibre, Stand-alone.



**LVRXD-010-SMM**

Single channel video receiver and data transmitter, 850NM, Multimode, 2.5km, Dual fibre, Stand-alone, Featuring Digitally Controlled AGC.



**LVTXD-010-RMM**

Single channel video transmitter and data receiver, 850NM, Multimode, 2.5km, Dual fibre, Cage card.



**LVRXD-010-RMM**

Single channel video receiver and data transmitter, 850NM, Multimode, 2.5km, Dual fibre, Cage card, Featuring AGC.



**LDTX-010-RMM**

Single channel data transmitter, 850NM, Multimode, 2.5km, Cage card.



**LDRX-010-RMM**

Single channel data receiver, 850NM, Multimode, 2.5km, Cage card.



**LCTX5-010-SMM**

Five channel contact closure transmitter, 850NM, Multimode, 2.5km, Stand-alone.



**LCTX5-010-RMM**

Five channel contact closure transmitter, 850NM, Multimode, 2.5km, Cage card.



**LCRX5-010-RMM**

Five channel contact closure receiver, 850NM, Multimode, 2.5km, Cage card.



**LARX-010-SMM**

Single channel audio receiver, Audio Line Output, 850NM, Multimode, 2.5km, Stand-alone.



**LATX2-010-RMM**

Two channel audio transmitter, Audio Line Input, 850NM, Multimode, 2.5km, Cage card, Dual fibre.



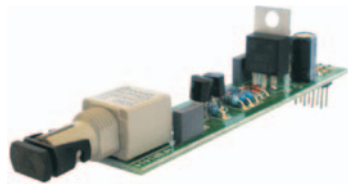
**LITE-RACK**

16 slot 19" rack mount card cage; including PSU. Cage cards are sold separately.



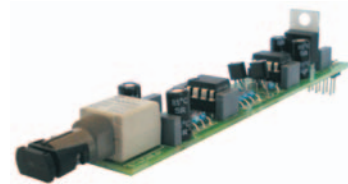
#### **FIELD-LITE-4**

Fibre Lite field enclosure, including 4 video transmitters, 1 data receiver, 4-way data distributor, power supply, splice cassette, 850NM, 2.5km, Multimode.



#### **LVTX -010-MMM**

Single channel video transmitter, 850NM, Multimode, 2.5km, Module for FIELD-LITE-4.



#### **LDRX-010-MMM**

Single channel data receiver, 850NM, Multimode, 2.5km, Module for FIELD-LITE-4.



#### **FIELD-LITE-BAT**

Fibre Lite field enclosure, including a battery backed power supply with a 12Vdc 2Amp output, splice cassette, featuring 2 slots that accommodates any 2 Fibre Lite/Fibre Lite Plus or DTX cage cards.

## **tip**

### **Use the correct cable for your application**

Many installations are being done with ruggedized fibre optic cable for applications internal to a building. Ruggedized fibre optic cable is intended for patch cords. We recommend heavy duct fibre for applications both internal and external to a building.

Heavy duct fibre optic cable is a hardy water tight cable that can withstand the stresses of the installation process. Use the correct cable for hassle free installations; when installing cable overhead use aerial span cable; when burying cable use steel taped armoured cable.

## FIBRE LITE PLUS

Fibre Lite Plus was designed for the analogue transmission of:

- Video
- Audio
- Data
- Contact Closures

Over 6km of multimode fibre optic cable. All transmission is unidirectional and the data transmission is designed for Pan/Tilt/Zoom camera control.

When overall system implementation costs need to be reduced we recommend the FIELD-LITE-4 enclosure. This enclosure features 4 video transmitters and 1 data receiver. The data is distributed out of 4 individual outputs, which allows for the operation of 4 Pan/Tilt/Zoom cameras through 1 data channel. This effectively reduces the equipment count by 3 data transmitters and 3 data receivers. By doing this the fibre optic cable count is also reduced by 3 fibres.





**PVTX-010-SMM**

Single channel video transmitter, 1300NM, Multimode, 6km, Stand-alone.



**PVTX-010-RMM**

Single channel video transmitter, 1300NM, Multimode, 6km, Cage card.



**PVTX2-010-RMM**

Two channel video transmitter, 1300NM, Multimode, 6km, Cage card, Dual fibre.



**PVRX-010-SMM**

Single channel video receiver, 1300NM, Multimode, 6km, Stand-alone.



**PVRX-010-RMM**

Single channel video receiver, 1300NM, Multimode, 6km, Cage card, Featuring Digitally controlled AGC.



**PVRX2-010-RMM**

Two channel video receiver, 1300NM, Multimode, 6km, Cage card, Dual fibre, Featuring AGC.



**PVTXD-010-SMM**

Single channel video transmitter and data receiver, 1300NM, Multimode, 6km, Dual fibre, Stand-alone.



**PVRXD-010-SMM**

Single channel video receiver and data transmitter, 1300NM, Multimode, 6km, Dual fibre, Stand-alone, Featuring Digitally Controlled AGC.



**PVTXD-010-RMM**

Single channel video transmitter and data receiver, 1300NM, Multimode, 6km, Dual fibre, Cage card.



**PVRXD-010-RMM**

Single channel video receiver and data transmitter, 1300NM, Multimode, 6km, Dual fibre, Cage card, Featuring AGC.



**PDTX-010-RMM**

Single channel data transmitter, 1300NM, Multimode, 6km, Cage card.



**PDRX-010-RMM**

Single channel data receiver, 1300NM, Multimode, 6km, Cage card.



**PCTX5-010-SMM**

Five channel contact closure transmitter, 1300NM, Multimode, 6km, Stand-alone.



**PCTX5-010-RMM**

Five channel contact closure transmitter, 1300NM, Multimode, 6km, Cage card.



**PCRX5-010-RMM**

Five channel contact closure receiver, 1300NM, Multimode, 6km, Cage card.



**PARX-010-SMM**

Single channel audio receiver, Audio Line Output, 1300NM, Multimode, 6km, Stand-alone.



**PATX2-010-RMM**

Two channel audio transmitter, Audio Line Input, 1300NM, Multimode, 6km, Cage card, Dual fibre.



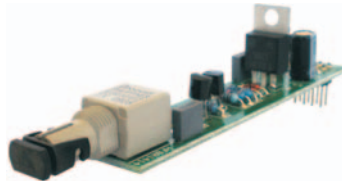
**LITE-RACK**

16 slot 19" rack mount card cage; including PSU. Cage Cards are sold separately.



#### **FIELD-PLUS-4**

Fibre Lite Plus field enclosure, including 4 video transmitters, 1 data receiver, 4-way data distributor, power supply, splice cassette, 1300NM, 6km, Multimode.



#### **PVTX -010-MMM**

Single channel video transmitter, 1300NM, Multimode, 6km, Module for FIELD-LITE-4.



#### **PDRX-010-MMM**

Single channel data receiver, 1300NM, Multimode, 6km, Module for FIELD-LITE-4.



#### **FIELD-LITE-BAT**

Fibre Lite field enclosure, including a battery backed power supply with a 12Vdc 2Amp output, splice cassette, featuring 2 slots that accommodates any 2 Fibre Lite/Fibre Lite Plus or DTX cage cards.

## **tip**

### **Bend radius should be 500mm (Multimode) to 700mm (Single Mode)**

Studies have shown that larger light wavelengths are more sensitive to the bending radius of the fibre optic cable. Put simply, the losses of a 1550nm wavelength transmitted over a single mode fibre optic cable will be greater as the bend radius of the fibre optic cable is reduced. The same principle applies to 850nm wavelengths over multimode fibre optic cable. The general rule for a minimum bend radius on fibre optic cable is 10 times overall diameter for multimode cable and 20 times overall diameter for single mode cable. There are other factors to consider such as; the loading effects on the fibres in the tray or conduit, temperature variations, ageing effects and PMD variations. It is because of all these factors that we recommend a bend radius of 500mm for Multimode cables and to 700mm for Single Mode cables.

## FIBRE PRO

Fibre PRO was designed for the digital transmission of:

- Video
- Bi-directional Audio
- Bi-directional Data
- Bi-directional Contact Closures

Over 2.5km of multimode fibre optic cable and 30km of single mode fibre optic cable.

The video is encoded using 8-bit digital encoding but is not compressed as bandwidth need not be a consideration. The Fibre PRO range features Wavelength Division Multiplexing (WDM) and thus each product only has one fibre optic connector regardless of the number of functions available on the product.

The data transmitted over Fibre Pro is full duplex, bi-directional data making it suitable for both Pan/Tilt/Zoom cameras and access control applications.





**VTX-030-SSM**

Fibre optic 8-bit uncompressed digitally encoded video transmitter. 2km Multimode, 30km single mode, Stand-alone.



**VRX-030-SSM**

Fibre optic 8-bit uncompressed digitally encoded video receiver. 2km Multimode, 30km Single Mode, Stand-alone.



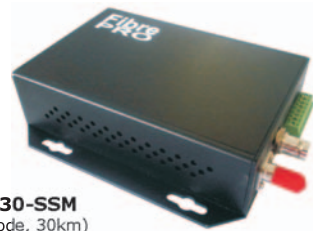
**VTX-030-RSM**

Fibre optic 8-bit uncompressed digitally encoded video transmitter. 2km Multimode, 30km Single Mode, Cage card.



**VRX-030-RSM**

Fibre optic 8-bit uncompressed digitally encoded video receiver. 2km Multimode, 30km Single Mode, Cage card.



**VTXD-030-SSM**  
(Single Mode, 30km)  
**VTXD-030-SMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VRXD-030-SSM**  
(Single Mode, 30km)  
**VRXD-030-SMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VTXD-030-RSM**  
(Single Mode, 30km)  
**VTXD-030-RMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Cage card.



**VRXD-030-RSM**  
(Single Mode, 30km)  
**VRXD-030-RMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Cage card.



**VTXDC-030-SSM**  
(Single Mode, 30km)  
**VTXDC-030-SMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels and 1 bi-directional contact closure. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VRXDC-030-SSM**  
(Single Mode, 30km)  
**VRXDC-030-SMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels and 1 bi-directional contact closure. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VTXDC-030-RSM**  
(Single Mode, 30km)  
**VTXDC-030-RMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels and 1 bi-directional contact closure. 1x RS485/422 and 1x Rs232 data, Cage card.



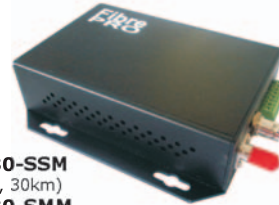
**VRXDC-030-RSM**  
(Single Mode, 30km)  
**VRXDC-030-RMM**  
(Multimode, 2.5km)

Fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels and 1 bi-directional contact closure. 1x RS485/422 and 1x RS232 data channel, Cage card.



**VTXDA-030-SSM**  
(Single Mode, 30km)  
**VTXDA-030-SMM**  
(Multimode, 2.5km)

Fibre optic 10-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels, 1 bi-directional contact closure and 1 bi-directional audio channel. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VRXDA-030-SSM**  
(Single Mode, 30km)  
**VRXDA-030-SMM**  
(Multimode, 2.5km)

Fibre optic 10-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels, 1 bi-directional contact closure and 1 bi-directional audio channel. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VTXDA-030-RSM**  
(Single Mode, 30km)  
**VTXDA-030-RMM**  
(Multimode, 2.5km)

Fibre optic 10-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels, 1 bi-directional contact closure and 1 bi-directional audio channel. 1x RS485/422 and 1x RS232 data channel, Card cage.



**VRXDA-030-RSM**  
(Single Mode, 30km)  
**VRXDA-030-RMM**  
(Multimode, 2.5km)

Fibre optic 10-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels, 1 bi-directional contact closure and 1 bi-directional audio channel. 1x RS485/422 and 1x RS232 data channel, Card cage.



**VQTXD-030-SSM**  
(Single Mode, 30km)  
**VQTXD-030-SMM**  
(Multimode, 2.5km)

4 channel fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VQTXD-030-RSM**  
(Single Mode, 30km)  
**VQTXD-030-RMM**  
(Multimode, 2.5km)

4 channel fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Card cage.



**VQRXD-030-SSM**  
(Single Mode, 30km)  
**VQRXD-030-SMM**  
(Multimode, 2.5km)

4 channel fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VQRXD-030-RSM**  
(Single Mode, 30km)  
**VQRXD-030-RMM**  
(Multimode, 2.5km)

4 channel fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Card cage.



**VOTXD-030-SSM**  
(Single Mode, 30km)  
**VOTXD-030-SMM**  
(Multimode, 2.5km)

8 channel fibre optic 8-bit uncompressed digitally encoded video transmitter with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VORXD-030-SSM**  
(Single Mode, 30km)  
**VORXD-030-SMM**  
(Multimode, 2.5km)

8 channel fibre optic 8-bit uncompressed digitally encoded video receiver with 2 bi-directional data channels. 1x RS485/422 and 1x RS232 data channel, Stand-alone.



**VRX-RACK**  
(For VTX/VRX single channel cage cards)  
**VRX-RACK2**  
(For VQTX/VQRX four channel cage cards)

14 slot, 19 inch, 4U, Fibre Pro card cage with power supply. Cage cards are sold separately.



**FIELD-ENC**

IP55 Field Enclosure Featuring a splice cassette, a multiple output power supply (5Vdc at 500mA, 12Vdc at 1A and 24Vac at 2A) and a DTX Series adaptor. Transmitters and receivers sold separately.

## DTX SERIES

The DTX Series was designed for the transmission of network data over 2km of multimode fibre optic cable and 20km of single mode fibre optic cable.

The DTX Series offers Point-to-Point Asynchronous Transparent Transfer of data. A DTX Series fibre optic link will behave as an extension to the CAT5 or CAT6 cable and requires no configuration.

### Features:

- 10/100Base-T
- Gigabit
- Single Fibre
- Dual Fibre
- Auto negotiation
- Auto MDI/MDI-X negotiation
- Point-to-point transparent transfer





**DTX-100-SSM-A**  
**DTX-100-SSM-B**

10/100Base-T Ethernet media converter; auto-negotiation; 100Base-FX full-duplex; stand-alone; 20km Single Mode; Single Fibre.



**DTX-100-RSM-A**  
**DTX-100-RSM-B**

10/100Base-T Ethernet media converter; auto-negotiation; 100Base-FX full-duplex; Cage Card; 20km Single Mode; Single Fibre.



**DTX-100-SSM-2**  
(Single Mode; 20km)  
**DTX-100-SMM-2**  
(Multimode; 2km)

10/100Base-T Ethernet media converter; auto-negotiation; 100Base-FX full-duplex; stand-alone; Dual Fibre.



**DTX-100-RSM-2**  
(Single Mode; 20km)  
**DTX-100-RMM-2**  
(Multimode; 2km)

10/100Base-T Ethernet media converter; auto-negotiation; 100Base-FX full-duplex; Cage Card; Dual Fibre.



**DTX-1000-SSM-2**

1000Base-T Ethernet media converter; auto-negotiation; 1000Base-LX; full-duplex; stand-alone; 20km Single Mode; Dual Fibre.



**DTX-1000-RSM-2**

1000Base-T Ethernet media converter; auto-negotiation; 1000Base-LX; full-duplex; stand-alone; 20km Single Mode; Dual Fibre.



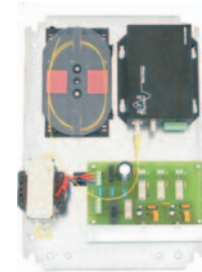
#### **DTX-RACK**

16 slot 19" rack mount card cage; including PSU. Cage cards are sold separately.



#### **FIELD-ENC**

Ip55 Field Enclosure, Featuring a splice cassette, a multiple output power supply (5Vdc at 500mA, 12Vdc at 1A and 24Vac at 2A) and a DTX Series adaptor. Transmitters and receivers sold separately.



#### **FIELD-PLT**

Field Termination Plate, Featuring a splice cassette, a multiple output power supply (5Vdc at 500mA, 12Vdc at 1A and 24Vac at 2A) and a DTX Series adaptor. Transmitters and receivers sold separately.



#### **FIELD-OEM**

Custom made Field termination enclosure to customer's specification.

## **tip**

### **Perform an OTDR test on each fibre as part of the system commissioning process**

OTDR tests are used to locate breaks or similar problems in cable runs. It's good practice to perform an OTDR test as a snapshot of the condition of the fibres before handing over the installation to the customer. This snapshot, which is a paper copy of the OTDR trace, gives you a permanent record of the state of that fibre at the time of handover. This can help installers when fibres have been damaged or altered after installation, proving where responsibility for the damage lies. In fact, some customers will demand OTDR testing as a condition for system handover.

## DATA

Our data products are designed for Pan/Tilt/Zoom camera control. With the exception of the CD232-422 the data products are unidirectional.

The CD422TX is a data distributor and used for wiring Pan/Tilt/Zoom cameras in a star configuration. The CD422TX is available with 8 or 16 output ports. All ports feature individual surge suppression.

When installing CCTV Pan/Tilt/Zoom cameras it's easier to run the data cable with the video cable than to daisy-chain the data cable from one camera to the next. The CD422TX is designed for this exact system topology and eliminates data termination problems that arise from this type of wiring configuration.



### CD232-422

Single port RS232 to RS422 converter, DB9 connector for RS232, screw terminals for RS422, port powered.



### CD422TX-08

8 port unidirectional RS422 data distribution unit



### CD422TX-16

16 port unidirectional RS422 data distribution unit

## VIDEO CAT

Our Video CAT range of products are designed to transmit differential video over CAT5e cable. The passive products transmit video up to 300m of cable while the active products offer a maximum cable length of 1000m. Only 1 pair of the CAT5e cable is required per video feed and up to 4 camera feeds can be transmitted over a single CAT5e cable.

The Power CAT products comprise of 2 components, the VC-016PR rack and the VC-01PM module. The VC-016PR rack is a 10Amp power supply that supplies raw power to the camera and receives video from the camera. The VC-01PM conditions the raw power and supplies 12Vdc to the camera whilst also transmitting the video. The video is transmitted as differential video over a maximum cable length of 300m of CAT5e cable. We specify 1 CAT5e cable per camera of which 1 pair is used for video transmission and the remaining 3 pairs used for the transmission of the raw power for the camera.





**VC-01**

Single channel Video CAT differential (UTP) video transceiver; direct camera coupling; 300m passive; 1000m with VCA-01R or VCA-01S active receivers.



**VC-04**

Four channel Video CAT differential (UTP) video transceiver; 300m passive; 1000m with VCA-01R or VCA-01S active receivers.



**VC-016R**

Sixteen channel Video CAT differential (UTP) video transceiver; 300m passive; 1000m with VCA-01R or VCA-01S active receivers.



**VC-016RJ**

16 channel Video CAT differential (UTP) video transceiver; 300m passive; 1000m with VCA-01R or VCA-01S active receivers; with RJ45 connectors



**VC-016RJ-AGC**

16 channel Video CAT differential (UTP) video receiver with AGC compensation and independent video indicators; 300m



**VCA-01S**

Single channel Video CAT differential (UTP) video receiver; 1000m active; Stand-Alone.



**VC-01R**

Single channel Video CAT differential (UTP) video transceiver; 300m passive; cage card for VCA-016R.



**VCA-01R**

Single channel Video CAT differential (UTP) video receiver; 1000m active; cage card for VCA-016R.



**VCA-016R**

Sixteen slot Video CAT card cage for VC-01R and VCA-01R cage cards; including power supply. Cage cards are sold separately.



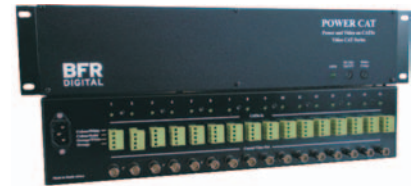
**GND-ISO**

Single channel coaxial video ground loop isolator.



**VC-01PM**

Single channel Video CAT differential (UTP) transmitter; with built-in DC-DC converter; 12Vdc output; 1 per camera; used with VC08PR or VC-016R; 300m passive.



**VC-08PR**

(Eight Channel; 6Amp)

**VC-016PR**

(Sixteen Channel; 10Amp)

16 channel Video CAT differential (UTP) receiver; with 30Vdc output; 500mA per channel; one VC-01PM module required per channel - 300m passive.

## VIDEO AMPLIFIERS

All our video amplifiers are for composite video terminated at 75ohm.

The TC-401 is a video launch amplifier and should ideally be installed as close to the video source as possible.

The VDA16X2 is a 16 input by 32 output video distribution amplifier. This product has been very effectively used in applications where a video surveillance control-room needs to be relocated. The DVR is removed and the camera video feeds terminated into the VDA16X2, the video is reconditioned by the VDA16X2 and connected in a Video CAT transceiver, a Fibre Lite, Fibre Lite Plus or Fibre Pro transmitter rack for transmission of the video feeds from 300m to 30km of cable.



### TC-401

Single channel composite video launch amplifier; 13dB gain.



### TC-402

1 in 4 out composite video distribution amplifier.

### TC-402/8

1 in 8 out composite video distribution amplifier.



### VDA16X2

16 channel composite video distribution amplifier, 2 outputs per channel.

## SURGE PROTECTION

Keeping your CCTV security operational is critical to an effective surveillance system. If your equipment is not operational, the safety and security of your staff and your property can be put in jeopardy. One of the biggest threats to the effective operation of your CCTV equipment are lightning strikes and electrical surges. If an electrical surge occurs, your equipment can be destroyed.

All our surge protection products are class 3 products and are designed for industrial CCTV security applications.

The VCSA-01 and VCSA-016R are differential video surge arrestors specifically designed for our Video CAT range of products.



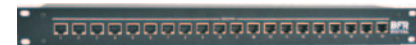
### ESA-01

Single port 10/100BaseT ethernet surge arrester, not suitable for PoE applications.



### ESA-04

Four port 10/100BaseT ethernet surge arrester, not suitable for PoE applications



### ESA-20R

Twenty port 10/100BaseT ethernet surge arrester, not suitable for PoE applications

new



**IVSA-01R**

10 channel coaxial video surge arrester with one 2-wire RS-485/422 port and one 10/100BaseT ethernet port, designed for HiTel DVR



**VCSA-01**

Single channel Video CAT (UTP) differential video surge arrester.



**VCSA-016R**

16 channel Video CAT (UTP) differential video surge arrester.



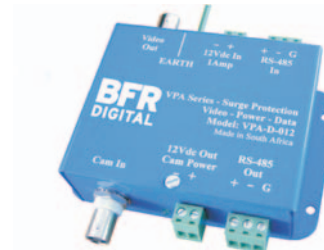
**VPA-012**

Single channel coaxial video and 12volt DC surge arrester.



**VPA-024**

Single channel coaxial video and 24volt AC surge arrester.



**VPA-D-012**

Single channel coaxial video, data and 12volt DC surge arrester



**VPA-D-024**

Single channel coaxial video, data and 24volt AC surge arrester



**DSA-01**

Two wire RS-485/422 surge arrester

*new*



**VSA-01**

Single channel coaxial, video surge arrester.



**VSA-016R**

16 channel coaxial, video surge arrester.



**VSA-016RH**

16 channel coaxial, video surge arrester with output for HIK-Vision capture card

*new*

**tip**

**Protect both ends of the cable**

When installing surge protection it is always advisable to protect both ends of the video cable, as an induced surge will always follow the path of least resistance to ground.

Always connect the earth cable on the surge arrester to a good electrical earth. Without the earth connection the arrestors within the device will not activate.

## POWER SUPPLIES

Our power supplies are robust and designed for security applications. All our power supplies feature Metal Oxide Varistors, these devices offer over voltage protection on the mains input. All inputs and outputs are protected with either fast blow fuses or resettable fuses.

Our battery backed power supplies feature an automatic 10.9 volt cut-off on the battery to protect the battery from a deep discharge cycle.



### PSU-250VA-12VDC

12Vdc 10Amp fused power supply with mains input over voltage protection, 16 individually fused 1Amp outputs with surge protection and 16 channels of video surge protection.



### PSU-250VA

24Vac 10Amp fused power supply with mains input over voltage protection, 16 individually fused outputs with surge protection and 16 channels of video surge protection.



### PSU-317T

12Vdc 1Amp regulated power supply with mains input over voltage protection, resettable fused output and short circuit protection.



#### PSU-12-3A

12Vdc 3Amp regulated battery backed power supply with mains input over voltage protection and resettable fused output.



#### PSU-12-6A

12Vdc 6Amp unregulated battery backed power supply with mains input over voltage protection and 6 resettable fused outputs.



#### PSU-24VAC-1A

24Vac 1Amp fused power supply with mains input over voltage protection and fused output.



#### PSU-24VAC-2A

24Vac 2Amp fused power supply with mains input over voltage protection and fused output.



#### PSU-24VAC-6A

24Vac 6Amp fused power supply with mains input over voltage protection and fused output.



#### PSU-24VAC-6A-MULTI

24Vac 6Amp fused power supply with mains input over voltage protection and 8 individually fused outputs.

# NOTES



# NOTES



# NOTES



## WARRANTY POLICY

- 5 year manufacturer's warranty on Fibre Optic products
- 3 year manufacturer's warranty on Video CAT products
- 1 year manufacturer's warranty on Copper products

Terms and conditions apply. For full warranty details please visit [www.bfrdigital.co.za](http://www.bfrdigital.co.za).

## REPAIR POLICY

All products under warranty are repaired or replaced in line with our warranty policy. All products that are out of warranty are repaired at no charge to our customers provided that:

- Our customers are responsible for all transportation costs
- That the products are repairable and have not been subjected to abuse or excessive electrical surge damage.

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**Phone** 011 786 5575  
0861 921 922  
**Fax** 011 786 5655  
**Address** 26 Wynberg Road, Kew, JHB  
**Postal** PO Box 4610 Kempton Park  
1620, South Africa  
**Email** info@bfrdigital.co.za

[www.bfrdigital.co.za](http://www.bfrdigital.co.za)

Video CAT

Video CAT Pro

Power CAT

Fibre Lite

Fibre Lite Plus

Fibre Pro

DTX Series

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