FDVA1-DB1 Series

One Channel Video with Bi-Directional Data, Point-to-Point Transmission
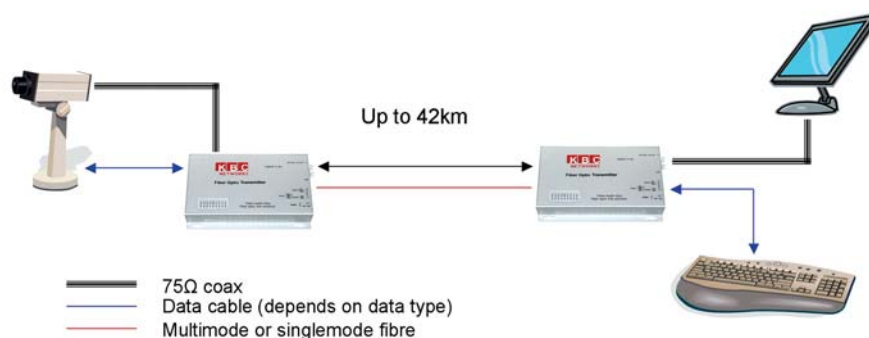
Product Description

The KBC FDVA1-DB1 series uses the most advanced digital technologies to provide excellent, repeatable performance for today's CCTV systems. It supports transmission of one analogue composite video channel and one bi-directional data channel over either one or two multimode or singlemode optical fibres. PAL, NTSC and SECAM video standards are fully supported, and the data channel supports all standard PTZ (Pan-Tilt-Zoom) control signals. The plug-and-play design ensures ease of installation with no electrical or optical adjustment needed. LED indicators are provided to clearly show the operational status of the unit. This series is available in either compact, wall mount or 3U chassis card configurations.

Product Features

- 8 bit or 10 bit digitally encoded non-compressed video transmission
- Directly compatible with NTSC, PAL and SECAM CCTV camera systems
- Wide optical dynamic range. No adjustment is required
- LED indicators provide quick diagnosis of all important system parameters
- Singlemode & multimode models
- Switchable 120Ω termination and biasing
- Up to 14 receivers in one 3U chassis
- Compact, wall mount and 3U chassis card configurations

Typical System Configuration

Up to 42km

75Ω coax
Data cable (depends on data type)
Multimode or singlemode fibre

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Specifications

VIDEO

No of Channels	1
Format	PAL / NTSC / SECAM
Input/Output	1.0V p-p typical, 75Ω
Bandwidth	5Hz ~ 10MHz

Digital Encoding (non Compressed)	8 bit	10 bit
Differential Gain (10-90% APL)	< 2%	< 2%
Differential Phase (10-90% APL)	< 2°	< 0.7°
Signal to Noise Ratio (SNR) weighted	> 60dB	> 67dB

DATA[1]

Data Formats	RS232, RS422, RS485 (2W & 4W)
Two Way Channels	1
RS-232 Data Rate	DC ~ 115.2kbps
RS-422/485 Data Rate	DC ~ 250kbps
Bit error rate	$< 1 \times 10^{-12}$
Encoding schemes	Manchester, Bi-Phase, NRZ, NRZI

OPTICAL

Wavelength	1310nm/1550nm
Fibre	Multimode or Singlemode
Number of Fibres	1 or 2

POWER

Power Input Compact	+12Vdc
Wall Mount	+5Vdc
Power Supply[2]	Input: 100~240VAC;
	Output: +12Vdc or +5Vdc
Chassis Card	Supplied from FR3 PSU

ENVIRONMENTAL

Operating Temperature	-40° ~ +70℃ / -40° ~ +158°F
Storage Temperature	-40° ~ +70℃ / -40° ~ +158°F
Operating Humidity	0 to 95% non-condensing
Mean Time Between Failure (MTBF)	> 100,000 Hours
Number of 3U Chassis Card Slot[3]	1

MECHANICAL

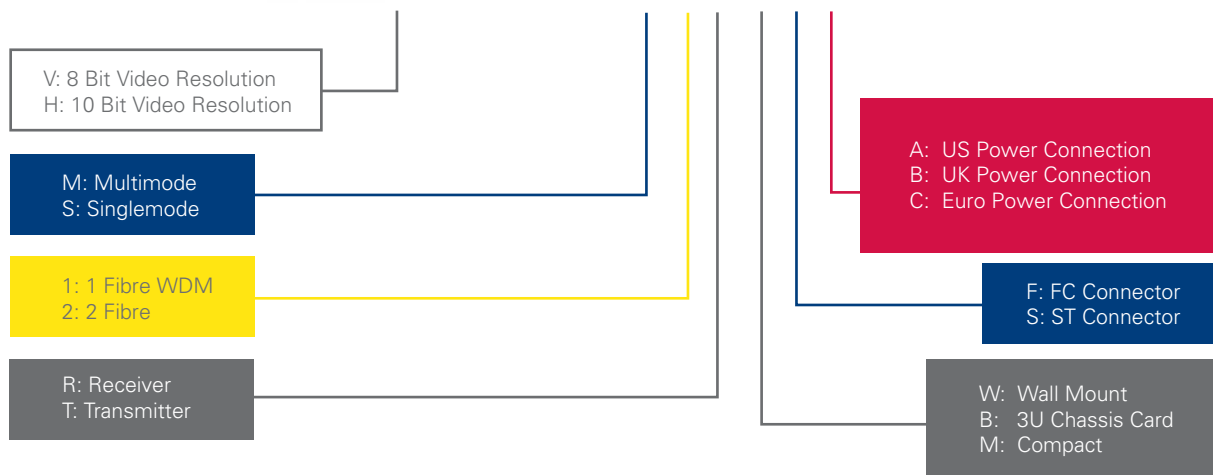|	
Dimensions (compact, L x W x H)	60mm x 28.5mm x 26mm / 2.36" x 1.12" x 1.02"
Dimensions (Wall Mount, L x W x H)	135mm x 116mm x 36mm / 5.32″ x 4.57″ x 1.42″

CONNECTORS

Video	BNC 75Ω
Data	Screw Block Terminal
Fibre	ST or FC (ST fitted as standard)
Power[4]	Screw Block Terminal (for compact and wall mount)

DIP SWITCH SETTINGS

Data	Switch selectable
120Ω termination	On / Off
Biasing	On / Off

Part Number Configurator

FDVA1-DB1-M1T-BSB

- V: 8 Bit Video Resolution
- H: 10 Bit Video Resolution

- M: Multimode
- S: Singlemode

- 1: 1 Fibre WDM
- 2: 2 Fibre

- R: Receiver
- T: Transmitter

- A: US Power Connection
- B: UK Power Connection
- C: Euro Power Connection

- F: FC Connector
- S: ST Connector

- W: Wall Mount
- B: 3U Chassis Card
- M: Compact

Optical Budget

Part Code	Fibre Type	No.	Optical Budget	Wavelength nm	Approximate Transmission Distance[5]
FDVA1-DB1-M*	Multimode	2	15dB	1310	0~4km / 0~2.5miles
FDVA1-DB1-M*	Multimode	1	15dB	1310/1550	0~4km / 0~2.5miles
FDVA1-DB1-S*	Singlemode	2	15dB	1310	0~42km / 0~26miles
FDVA1-DB1-S*	Singlemode	1	15dB	1310/1550	0~42km / 0~26miles

1 RS232, RS422 and RS485 are field selectable.
2 Please select the power plug from US Standard, Euro 2 Circular or UK 3 Pin Square when placing order.
3 Support maximum up to 14 cards for each 3U Chassis.
4 Power lines are crimped and fitted to screw block connector in factory.
5 Transmission distance is limited by optical loss of the fibre and loss introduced by connectors, splices and patch panels. Fibre bandwidth also limits the transmission distance.

Due to ongoing technological improvements, product specifications are subject to change without notice.

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