

# FT120DB / FT220DB / FT420DB / FT820DB

10-bit Digital 1 / 2 / 4 / 8-ch Video with 2-ch Bi-directional Data



## Features

### Video

- ▶ NTSC or PAL video standards supported
- ▶ Non-compressed 10-bit digitally encoded video
- ▶ No video degradation over the maximum operating distance

### Data

- ▶ Meets EIA RS-232/422/485 specifications
- ▶ Full RS-485 Tri-state support
- ▶ Half or full-duplex operation
- ▶ Transparent to data encoding
- ▶ Data rates from 0 to 256kbps

### Optical

- ▶ One fiber design
- ▶ High performance laser-based optics
- ▶ Multimode or Singlemode
- ▶ ST or FC connectors available

### Robust Design

- ▶ Plug-and-Play design, no in-field adjustments required.
- ▶ Hot-swappable design
- ▶ Wide operating temperature range of -40°C to +75°C
- ▶ Designed for use in harsh environments

### Warranty

- ▶ Comprehensive Lifetime Warranty

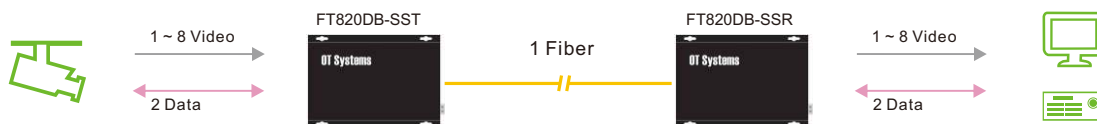
## Description

The FT120DB/FT220DB/FT420DB/NFT820DB 10-Bit Digital Video and Data transmission products, support fiber optical transmission of 10-Bit PCM coded video (up to 8 channels) with two bi-directional data and features high-performance laser-based optics for the clearest, most reliable data transmission in both single and multi-mode with no video degradation over the entire operating distance (up to 20 km).

This plug-and-play product provides instant product compatibility for most major security manufacturers' equipment and reliability in harsh environments, a perfect compliment to any commercial, government or intelligent transportation application. The product features in card module or standalone type.

Video Transmission

## Typical Application



## Specifications

### Video

Number of Channels	1 / 2 / 4 / 8
Format	NTSC/PAL/SECAM
Input/Output	1 Volt pk-pk (75 ohms)
Bandwidth	>=6MHz
Differential Gain	<1% Typical
Differential Phase	<1 Degree Typical
SNR-CCIR weighted	>65dB

### Data

Number of Channels	2
Data Direction	Bi-directional
Data Interface	RS232, RS422, RS485 2 or 4-wire Tri-state
Selection Method	DIP switch-selectable
Data Rate	0-256kbps
Data Format	MPD (Manchester, Bi-phase, etc)

### LED

Video Signal Indication (Presence)	Green LED lit
Data In / Out	Red/Green LED lit
Optical Carrier Detected	Yellow / Active
Power	Red/On

### Connectors

Video Input / Output	BNC
Optical Input / Output	ST (standard), FC (optional)
Data Input / Output Connectors	7-pin screw terminals
Power (Standalone)	2-pin screw terminals
Power (Rack-Mount)	Bus connector

### Electrical and Mechanical

<b>FT120DB</b>	
Power (Standalone)	12VDC @ 5.4W
Power (Rack Mount)	From FT-C18 Chassis
Dimensions(WxHxD) (Standalone)	156 x 30.5 x 223mm(Max)
Dimensions(WxHxD) (Rack Mount)	148 x 20.4 x 213mm(Max)
Shipping Weight (Standalone)	0.76kg
Shipping Weight (Rack Mount)	0.3kg

<b>FT220DB / FT420DB</b>	
Power (Standalone)	12VDC @ 5.4W
Power (Rack Mount)	From FT-C18 Chassis
Dimensions(WxHxD) (Standalone)	156 x 50.5 x 223mm(Max)
Dimensions(WxHxD) (Rack Mount)	148 x 41.4 x 213mm(Max)
Shipping Weight (Standalone)	0.8kg (Max)
Shipping Weight (Rack Mount)	0.32kg (Max)

<b>FT820DB</b>	
Power (Standalone)	12VDC @ 6.6W
Power (Rack Mount)	From FT-C18 Chassis
Dimensions(WxHxD) (Standalone)	156 x 50.5 x 223mm(Max)
Dimensions(WxHxD) (Rack Mount)	148 x 41.4 x 213mm(Max)
Shipping Weight (Standalone)	0.82kg
Shipping Weight (Rack Mount)	0.35kg

### Environmental

Operating Temp	-40°C to +75°C
Storage Temp	-40°C to +85°C
Relative Humidity	0 to 95% non-condensing
MTBF	> 100,000 hours

Video Transmission

## Ordering Information

Fiber Type	Part Number	Description	Wavelengths (nm)	Optical Power Budget (dB)	Max. Distance (Km)	No. of slots
Multi-mode (62.5/125µm)	FT120DB-SMT FT120DB-SMR	1 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	23	4	1
	FT220DB-SMT FT220DB-SMR	2 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	23	2	2
	FT420DB-SMT FT420DB-SMR	4 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	23	2	2
	FT820DB-SMT FT820DB-SMR	8 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	23	1	2
Single-mode (9/125µm)	FT120DB-SST FT120DB-SSR	1 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	17	20	1
	FT220DB-SST FT220DB-SSR	2 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	17	20	2
	FT420DB-SST FT420DB-SSR	4 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	17	20	2
	FT820DB-SST FT820DB-SSR	8 - ch Video Transmitter / Receiver with 2-ch bidirectional Data Transceiver	1310   1550	17	20	2

Options	<ul style="list-style-type: none"> <li>ST type connector is standard. For FC type, specify "F" in the suffix. E.g. FMT.</li> <li>For Standalone type, please add "SA". E.g. SMTSA</li> <li>Please feel free to consult factory if longer transmission distance is required.</li> </ul>
Power Adaptor	<ul style="list-style-type: none"> <li>Power adaptor is included in Standalone type only.</li> </ul>
Rack Mount Chassis	<ul style="list-style-type: none"> <li>FT-C18 is to be purchased separately. Please refer to accessories section for the details.</li> </ul>

- Notes:
- Transmission distance will suffer if additional losses are introduced by the optical connectors, fusions, splices and the fibers within the network.
  - Operating distance of multimode is limited by the characteristics of the fiber bandwidth.
  - Power adaptor is manufactured by third party and is supplied with fitted screw - terminal output cables.
  - Please feel free to consult factory for any special requirement and customization.

