

### Architectural and Engineering Specifications

#### 1.0 Description

The Digital 1 Video Fiber Optic system shall be Alba Fiber Systems' AFS1001T/R Digital 1 video fiber optic transmitter and receiver system on multimode or singlemode fiber. The AFS1001T/R Series are digital 1 Video fiber optic system designed to convert analog signals into digitally encoded light for transmission over multimode or singlemode fiber.

#### 2.0 General Requirements

1. The Digital 1 Video Fiber Optic system shall be compatible with NTSC, PAL and SECAM Video Standards
2. The Digital 1 Video Fiber Optic system shall employ 8 Bit uncompressed digital encoding
3. The Digital 1 Video Fiber Optic system shall provide 10MHZ video bandwidth; 700 Lines of TV Resolution
4. The Digital 1 Video Fiber Optic system shall comply with RS-250C specifications and meet EIA RS-170 and RS-343 Standards
5. The Digital 1 Video Fiber Optic system shall feature by 12VDC/24VAC Input Voltage (Standalone)
6. The Digital 1 Video Fiber Optic system shall feature 90-130VAC or 180-264VAC input Voltage (19" Chassis)
7. The Digital 1 Video Fiber Optic system shall be compliant with CE, FCC and ROHS standards and be Laboratory certified

#### 3.0 Function and Features

1. The Digital 1 Video Fiber Optic system shall require no user adjustments
2. The Digital 1 Video Fiber Optic system shall employ Performance and Link Status Indicator LEDs power optic link and video signals
3. The Digital 1 Video Fiber Optic system shall feature Integrated Optics / WDM for greater reliability
4. The Digital 1 Video Fiber Optic system shall feature Voltage Transient Protection on Power/Signals
5. The Digital 1 Video Fiber Optic system shall feature Distances up to 30mi. (48Km) with no repeaters on standard units and up to 62mi (100 Km) on high power units
6. The Digital 1 Video Fiber Optic system shall employ ST (MM), FC (SM) Optical Connectors
7. The Digital 1 Video Fiber Optic system shall provide auto re-settable solid state current limiters on rack cards
8. The Digital 1 Video Fiber Optic system shall provide hot swappable rack cards
9. The Digital 1 Video Fiber Optic system shall feature Interchangeable Standalone w/Rackmount
10. The Digital 1 Video Fiber Optic system shall be designed with Lowest Power Consumption components
11. The Digital 1 Video Fiber Optic system shall provide 16dB optical dynamic range
12. The Digital 1 Video Fiber Optic system shall support 1 separate video channels per rack card
13. The Digital 1 Video Fiber Optic system shall support highest racking density of single slot 19 cards per 19" x 4U Subrack and 1 power supply
14. The Digital 1 Video Fiber Optic system shall support highest racking density of single slot 17 cards per 19" x 4U Subrack and redundant (2) power supplies
15. The Digital 1 Video Fiber Optic system shall support MTBF> 100,000 Hrs

### Architectural and Engineering Specifications (continued)

#### 4.0 Digital 1 Video Fiber Optic System Parameters

1. System shall provide 1 unidirectional Video channel
2. System input/output shall feature 1V p-p (75 ohm); max 1.5V p-p
3. System shall provide 5Hz to 10MHZ video bandwidth; 700 TV Lines of Resolution
4. System Signal to Noise Ratio shall be >65dB weighed
5. System Differential Phase shall be <2°
6. System Differential Gain shall be <2%
7. System Tilt shall be <0.5%

#### 5.0 Connections

1. Video input/output Connectors shall be BNC with gold plated center pin BNC
2. Optical Connectors shall be ST for Multimode fiber and FC for Singlemode fiber
3. Power Connectors shall be two pin Terminal Block

#### 6.0 Electrical and Mechanical parameters

1. Input Voltage on Standalone units shall be 12VDC or 24VAC
2. Input Voltage on 19" Rackmount Chassis shall be 110/220V, 50/60Hz, selectable; power cord provided
3. Power Consumption shall be <4W
4. Number of Rack Slots per video channel shall be one (1)
5. Dimensions (L x W x H) shall be 7.36 x 6.85 x 0.8in; 187 x174 x 20mm
6. Weight per unit shall be 21oz /600g
7. Standalone and Card Units shall be interchangeable with wall mounting hardware provided

#### 7.0 Optical Parameters

1. Fiber Type shall be Multimode or Singlemode
2. Wavelength shall be 1310nm for Multimode or Singlemode on standard units
3. Optical Budget shall be 16dB for standard units and 23dB for High power units
4. System Optical Dynamic Range shall be 16dB

#### 8.0 Environmental Parameters

1. Operating Temperature shall be -40°F to 185°F; -40°C to 85°C
2. Storage Temperature shall be -85°F to 212°F; -65°C to 100°C
3. Relative Humidity shall be 0% to 95% (non-condensing)
4. Units shall be certified to comply with CE, FCC and ROHS

#### 9.0 Warranty

The Digital 1 Video Fiber Optic system shall be provided with a manufacturer's warranty that shall be extended only to the original purchaser and for the original installation for a period of three (3) years from date of original shipment.