## ontaira

# STF-500C Series

Self Healing Serial Fiber Redundant Network Industrial RS-232/422/485 Serial to Single or Dual 100Fx Fiber Converter



#### **Features**

- Supports Point-to-Point, Daisy Chain or Ring Connection
- Supports RS-232, RS422/485 (2/4 Wire) Transmission to Single or Dual Fiber Connections
- ▶ Enhanced Serial Baud Rate up to 1024Kbps
- Supports SC or ST Multi-Mode in 2Km, Single-Mode in 30Km
- 2.5KV Isolation Protection for Serial Signal
- Supports Relay Output for Power or Link Failure Warning
- ▶ 10 Position Rotary Switch for RS-422/485 Pull High/Low Transmission
- Hardened housing with IP30 protection
- Fan-less and Din-Rail design for harsh industrial environment
- Redundant Dual Power Inputs (12 ~ 48VDC)
- Operating Temperature Range: Standard: 0~60°C, EOT: -40~75°C
- 5-Year Warranty

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### Overview

The Antaira STF-500C Series are Industrial Grade Design Serial-to-Fiber Media Converters that provide rugged solution to extend asynchronous RS-232, or RS-422/485 serial data transmissions over a distance of up to 2Km in Multimode fiber, or up to 30Km in Single mode fiber.

The converter is capable of selecting interface modes for connection to RS-232 (3 or 5 wire), RS-485 (2 or 4 wire, half or full duplex) or RS-422 (4 wire, full duplex). With the High Performance design, the STF-500C series provide:

#### **High Data Protection:**

- Secures Asynchronous Serial Data transmissions over EMI resistant fiber at speeds up to 1024Kbps
- Built-in RS-485 auto detection feature, 8KV ESD Protection and 2.5KV Isolation for Serial data transmission protection; and 10 positions Rotary Switch for RS-422/485 Pull high/low feature.

#### **Secure Serial Network:**

- Supports Point-to-Point, Daisy Chain, and Half Duplex Ring Topology Fiber Network
- STF-502C series supports Point-to-Point, Single Duplex Fiber connection (without Protection), or Dual Duplex Fiber connection (with Fiber Protection) Redundancy Serial Fiber Network with Dual Fiber connections

#### **Easy Monitoring and Maintenance:**

- Built-in Dual alarm relay contacts and Dual redundant DC power inputs
- Front LED indicators for any Power, TD/RD, or Fiber Link failure monitoring

#### The STF-500C Series is a high performance & protection solutions for critical applications, such as

- ▶ High Serial Isolation Protection for Outdoor Equipment data extension in ITS Signaling, or VMS;
- > Dual Fiber Ring Redundancy Serial Network in Firm Alarm Panels control;
- ▶ EMI resistant for IEDs data transmission in Substation Automation;
- Industrial Control in Process Control Automation, such as WWTP and Oil/Gas/Mining.





## Specifications

Warranty:

5-Year Warranty

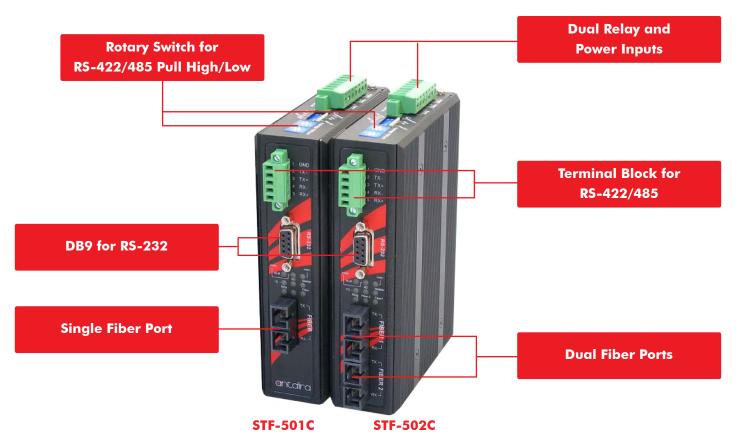
STF-500C Serie	oc Smoot					
Optical Fiber Interface						
Fiber Connector:		SC or ST				
Cable Requirement:		Multi-Mode: 50/125um, 62.5/125um Single-Mode: 9/125um				
Fiber Port:		STF-501C with 1 Fiber Port STF-502C with 2 Fiber Ports				
Transmission Distance:		Multi-Mode: 2km Single-Mode: 30km				
Wavelength:		Multi-Mode in 1310nm Single-Mode in 1310nm/1550nm				
Tx Power:		Multi-Mode: -14 ~ -20 dBm Single-Mode: -5 ~ -15 dBm				
Rx Sensitivity:		Multi-Mode: -31 dBm Single-Mode: - 35 dBm				
Serial Interface						
Serial Port Connector:		RS-232 (DB9 Female) RS-422-4w (Terminal Block) RS-485-2w, or 4w (Terminal Block)				
Baud Rate:		50 up to 1024Kbps (RS-422/485) 230.4Kbps (RS-232-CH1) 115.2Kbps (RS-232-CH2)				
Serial Isolation:		2.5KV				
ESD Protection:		8KV				
Pull High/Low:		Selected by 10 Position Rotary Switches				
Power Requireme	nts					
Power Input:		12, 24, 48 VDC (9.6 ~ 58VDC absolute)				
Power Consumption:		5W				
Power Connector:		Dual Power Inputs with Alarm Relay Contact				
Power Protection:		Reverse Polarity Protection				
Mechanical Chara	ıcteristics					
Housing:		Metal, IP30 Protection				
Dimensions:		106 x 39 x 142 mm ( 4.72 x 1.54 x 5.59 in)				
Weight:		720g				
Mounting:		DIN-Rail Mounting, and Wall Mounting Kits Included				
Environmental						
Operation Town	STD:	0°C ~ 60°C (32 ~ 140°F)				
Operating Temp:	EOT:	-40°C ~ 75°C (-40 ~ 167°F)				
Storage Temperature:		-40°C ~ 85°C (-40°F ~ 185°F)				
Humidity:		5 ~ 95%				
<b>Regulatory Appro</b>	vals					
EMI:		FCC Part15, CISPR (EN55022) Class A				
EMS:		EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (EFT) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A				
Shock / Freefall / Vibration:		Shock: IEC60068-2-27 Free Fall: IEC60068-2-32 Vibration: IEC60068-2-6				
Green:		RoHS Compliant				
MTBF:		797,101 Hours				
Certifications:		FCC, CE, UL (Pending)				

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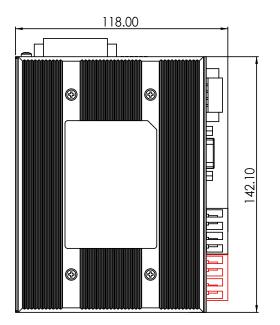
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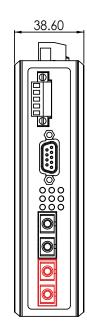
### Layout

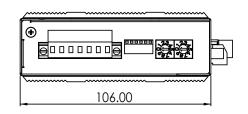
**Product Highlights** 



**Dimension Drawing (unit = mm)** 







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## Ordering Information

Single Fiber Ver	sion
STF-501C-CM02	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Multi-Mode 2KM, SC, 0°C ~ 60°C
STF-501C-CM02-T	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Multi-Mode 2KM, SC, EOT (-40°C ~ 75°C)
STF-501C-TM02	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Multi-Mode 2KM, ST, 0°C ~ 60°C
STF-501C-TM02-T	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Multi-Mode 2KM, ST, EOT (-40°C ~ 75°C)
STF-501C-CS30	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Single-Mode 30KM, SC, 0°C ~ 60°C
STF-501C-CS30-T	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Single-Mode 30KM, SC, EOT (-40°C ~ 75°C)
STF-501C-TS30	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Single-Mode 30KM, ST, 0°C ~ 60°C
STF-501C-TS30-T	Industrial RS-232/422/485 To 100Fx Fiber Converter, 2.5KV Isolation, Single-Mode 30KM, ST, EOT (-40°C ~ 75°C)
<b>Dual Fiber Versi</b>	on
STF-502C-CM02	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Multi-Mode 2KM, SC, 0°C ~ 60°C
STF-502C-CM02-T	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Multi-Mode 2KM, SC, EOT (-40°C ~ 75°C)
STF-502C-TM02	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Multi-Mode 2KM, ST, 0°C ~ 60°C
STF-502C-TM02-T	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Multi-Mode 2KM, ST, EOT (-40°C ~ 75°C)
STF-502C-CS30	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Single-Mode 30KM, SC, 0°C ~ 60°C
STF-502C-CS30-T	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Single-Mode 30KM,SC, EOT (-40°C~75°C
STF-502C-TS30	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Single-Mode 30KM, ST, 0°C ~ 60°C
STF-502C-TS30-T	Industrial RS-232/422/485 To Dual 100Fx Fiber Ports Converter, 2.5KV Isolation, Single-Mode 30KM, ST, EOT (-40°C~75°C
<b>Optional Access</b>	pries
DR-45-24	45W Industrial Din Rail Power Supply
DR-75-24	75W Industrial Din Rail Power Supply

## Comparison

Industrial Serial-to-Fiber Product Family Comparison							
	STF-401C Series Compact 1 Fiber Port	STF-501C series High Performance 1 Fiber Port	STF-502C series High Performance Dual Fiber Ports				
Compare Features							
Supports 1*RS-232 (DB9), or 1*RS-422/485 (Terminal Block)	•	•	•				
Supports Multi-mode in 2Km, Single-mode in 30Km	•	•	•				
Baud Rate up to 1024Kbps		•	•				
Serial Isolation		•	•				
ESD Protection	•	•	•				
RS-422/485 Pull High / Low	•	•	•				
Support Point-to-Point Application	•	•	•				
Support Half-Duplex Daisy Chain / Ring Topology Serial-Fiber Network	•	•	•				
Support Full-Duplex Redundant Ring Serial-Fiber Network			•				
5 Years Product Warranty	•	•	•				