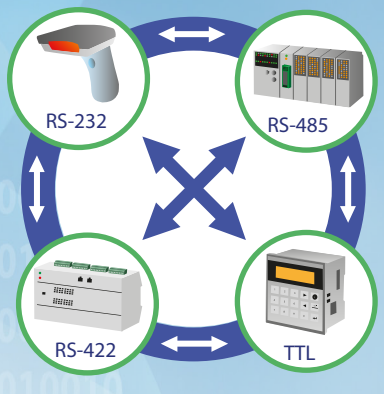
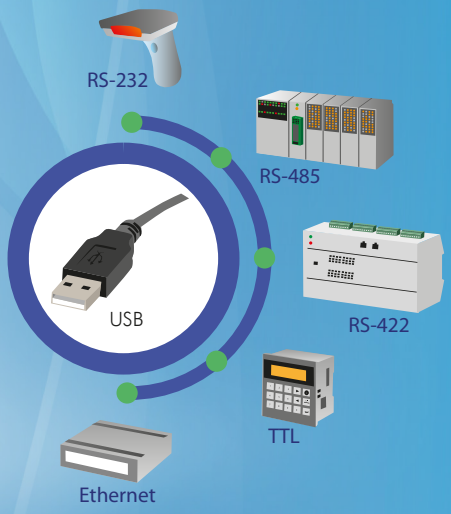
CONVERT

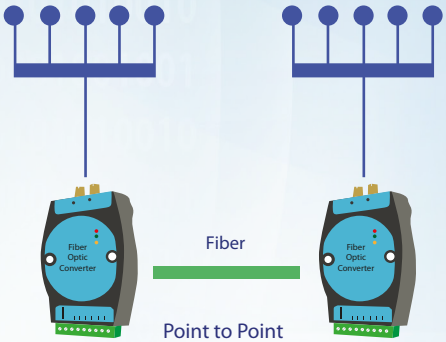


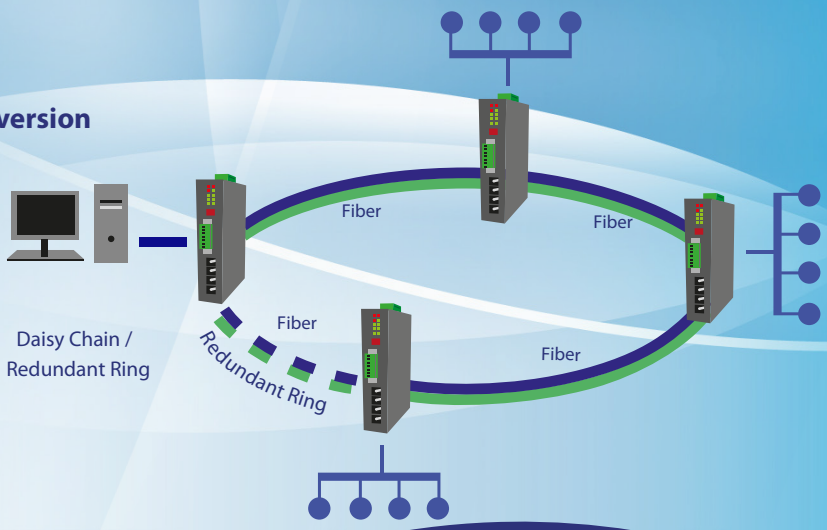
Serial Conversion



USB Conversion

Fiber Optic Conversion





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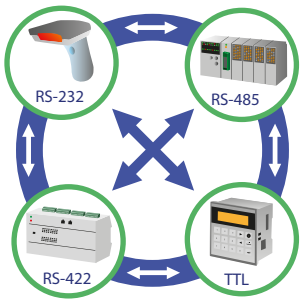
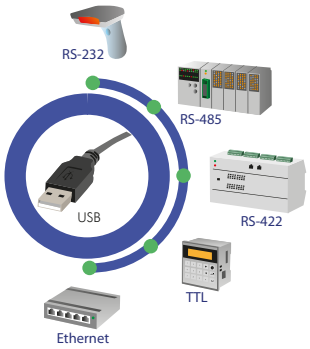
CONVERT

A MASTERY OF LEGACY AND LEADING-EDGE DATA FORMATS

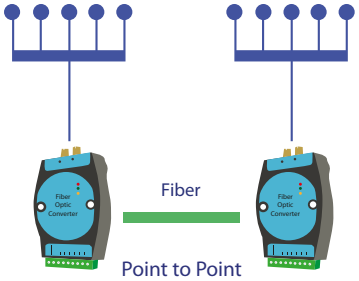


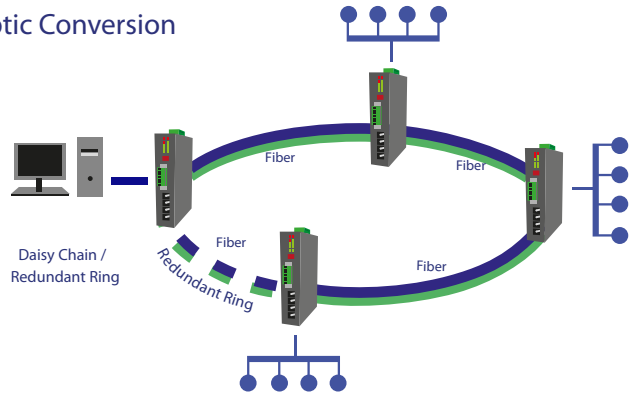
Serial Conversion

USB Conversion



Fiber Optic Conversion





The world today runs on data! From legacy serial communications to modern TCP/IP communications, data networks are widely used in automation, control, and communication systems that perform many important tasks ranging from production, communications, security, surveillance, to research. Modern data networks often face the challenge of merging legacy data formats and protocols with more technologically advanced formats. In addition, interference can seep into the communication lines from many sources, such as ground loops, spikes, transient surges, and remote lightning. All these sources threaten your valuable and mission-critical equipment and your production time, which is probably the most important factor to consider when choosing data communication products and suppliers.

For the past decade, CommFront has built a reputation as a major supplier of rugged and reliable, yet simple, data communication products and solutions.

Our versatile products make converting between many data formats – including the legacy RS-232, RS-485, RS-422, and TTL; and the leading-edge USB, Ethernet, and TCP/IP - smooth, simple, and reliable. Our line of rugged, industrial-grade, SGS/TUV-certified converters undergo rigorous testing so that you can enjoy reliable interfacing. These rugged converters withstand the harshest operating environments and come bundled with optional optical isolators and built-in selectable end-of-line terminators, allowing for interfacing between commercial and industrial equipment (computers, PLC, RTU, SCADA, and HMI, etc.) without interference from noise, reflections, ground loops, and transient surges. Our range of converters - standard or optically isolated, port or externally powered, copper-wire or optical-fiber - ranks among the widest in the market. If you have a data format, we have the perfect device for it.

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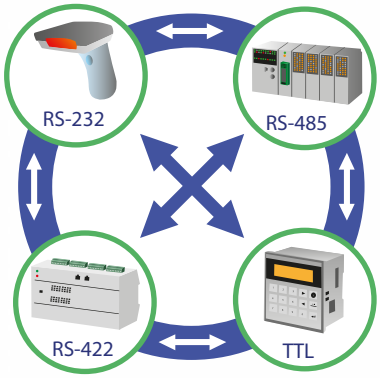
Serial Conversion



Rated to perform at temperatures between -40°F and 185°F (-40°C and 85°C), our rugged industrial-grade RS-232/RS-485/RS-422/TTL converters are almost indestructible. These converters support multi-drop RS-485/RS-422 networks and come with 600W surge protection, 15KV ESD protection, selectable end-of-line terminators, and optional 2500V opto-isolation circuitry, which ensure crisp data signals without interference for all types of installations.

Standard

RS-232 to TTL

Model: TTL-232-1

Description: Industrial Port-powered RS-232 to 5V TTL Converter

Key Features:

- Converts RS-232 to 5V TTL/COMS signals
- Port powered
- Rugged industrial grade
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Operates reliably from 300 to 115.2K baud

RS-485 to TTL

Model: TTL-485-2

Description: Industrial RS-485 to TTL Converter/TTL Repeater (half-duplex)

Key Features:

- Converts 2-Wire RS-485 to TTL signal
- Extends TTL's distance to up to 4000 feet
- External 5VDC powered (power adapter included)
- Rugged industrial grade
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Operates reliably from 300 to 115.2K baud

RS-422 to TTL

Model: TTL-485_422-2

Description: Industrial RS-485/RS-422 to TTL Converter/TTL Repeater (full-duplex)

Key Features:

- Converts RS-485/RS-422 to TTL signal
- Extends full-duplex TTL's distance to up to 4000 feet
- External 5VDC powered (power adapter included)
- Rugged industrial grade
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Operates reliably from 300 to 115.2K baud

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Standard

RS-232 to RS-485

Model: CVT-485-1
Description: Industrial Port-powered RS-232/RS-485 Converter

Key Features:
- Converts RS-232 to 2-wire RS-485
- Port powered
- Rugged industrial grade
- Supports up to 128 units of RS-485 devices
- Data direction auto-turnaround
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Selectable 120-Ohm end-of-line terminator
- Operates reliably from 300 to 115.2K baud

RS-232 to RS-422

Model: CVT-422-1
Description: Industrial Port-powered RS-232/RS-422 converter

Key Features:
- Converts RS-232 to 4-wire RS-422/RS-485
- Port powered
- Rugged industrial grade
- Supports up to 128 units of RS-422 devices
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Selectable 120-Ohm end-of-line terminator
- Operates reliably from 300 to 115.2K baud

RS-485 to RS-422

Model: RPT-485_422-2
Description: Industrial RS-485/RS-422 Converter/Repeater

Key Features:
- Converts 2-wire RS-485 to 4-wire RS-422/RS-485
- Extends RS-485/RS-422's distance to up to 4000ft
- External 5VDC powered (power adapter included)
- Rugged industrial grade
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Selectable 120-Ohm end-of-line terminator
- Operates reliably from 300 to 115.2K baud

Optically-Isolated

Model: CVT-485_422-4
Description: Industrial High-speed Opto-Isolated RS-232 to RS-485/RS-422 Converter

Key Features:
- Converts RS-232 to RS-485/RS-422
- Externally powered, no port power required
- 2500V opto-isolation
- Rugged industrial grade
- Supports up to 128 units of RS-485/RS-422 devices
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Selectable 120-Ohm end-of-line terminator
- Direct DIN-rail (rack) or wall/panel mounting
- Supports wide range of DC inputs (9 to 30VDC)
- Operates reliably from 300 to 115.2K baud

Model: : RPT-485_422-4
Description: Industrial RS-485/RS-422 Isolator/Repeater/Converter

Key Features:
- Isolates one group of RS-485/RS-422 devices from another
- Extends RS-485/RS-422's distance to up to 4000ft
- Converts 2-wire RS-485 to 4-wire RS-422/RS-485
- Rugged industrial grade
- 2500V opto-isolation
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Direct DIN-rail (rack) or wall/panel mounting
- Supports wide range of DC inputs (9 to 30VDC)
- Operates reliably from 300 to 115.2K baud

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THE PRODUCTS


CVT-485-1


CVT-485A-1


CVT-485-3


CVT-422-1


CVT-422-3


CVT-485_422-1


CVT-485_422-3


CVT-485_422-1(25)


CVT-485_422-3(25)


CVT-485_422-4


RPT-485_422-2


RPT-485_422-4


HUB-485-4


TTL-232-1


TTL33-232-1


TTL-485-2


TTL-485_422-2

Serial-TCP

KEY FEATURES

- Rugged industrial grade.
- Built for harsh environments and interfacing with mission-critical equipment.
- Convert between RS-232, RS-485, RS-422, TTL and TCP/IP data formats.
- Options of port or externally powered, standard or optically isolated.
- Built-in selectable end-of-line terminators to reduce noise and reflections.

Model	Description
CVT-485-1	Industrial RS232/RS485 Converter (Port-Powered)
CVT-485A-1	Industrial Slim RS232/RS485 Converter (Port-Powered)
CVT-485-3	Industrial RS232/RS485 Converter (Port-Powered/Isolated)
CVT-422-1	Industrial RS232/RS422 Converter (Port-Powered)
CVT-422-3	Industrial RS232/RS422 Converter (Port-Powered/Isolated)
CVT-485_422-1	Industrial RS232/RS485/RS422 Converter (Port-Powered)
CVT-485_422-3	Industrial RS232/RS485/RS422 Converter (Port-Powered/Isolated)
CVT-485_422-1(25)	Industrial 25-Pin RS232 to RS485/RS422 Converter (Port-Powered)
CVT-485_422-3(25)	Industrial 25-Pin RS232 to RS485/RS422 Converter (Port-Powered/Isolated)
CVT-485_422-4	Industrial High-Speed RS232 to RS485/RS422 Converter (Externally-Powered/Isolated)
RPT-485_422-2	Industrial RS485/RS422 Repeater/Converter (Externally-Powered)
RPT-485_422-4	Industrial RS485/RS422 Isolator/Repeater/Converter (Externally-Powered/Isolated)
HUB-485-4	Industrial 4-Port RS485 Hub/Splitter (Externally-Powered/Isolated)
TTL-232-1	Industrial RS232/TTL Converter (Port-Powered)
TTL33-232-1	Industrial RS232/TTL 3.3V Converter (Port-Powered)
TTL-485-2	Industrial RS485/TTL Converter (Externally-Powered)
TTL-485_422-2	Industrial RS485/RS422 to TTL Converter (Externally-Powered)
Serial-TCP	Serial to TCP/IP Bridge (Freeware)

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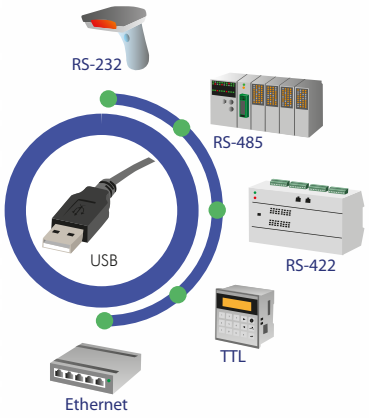
USB Conversion



With our high-quality, high-performance USB converters that use only top-quality chipsets such as those from FTDI and Silicon Labs, USB signals are converted seamlessly into RS-232, RS-485, RS-422, TTL, and Ethernet signals. You can confidently choose from our menu of industrial and commercial-grade devices, while knowing that you will get nothing but the best from CommFront.

Standard

USB to TTL

Model: USB-232-1+TTL-232-1
Description: USB to TTL Adapter

Key Features:
- Converts USB to TTL signals
- USB port-powered
- FTDI chipset
- Supports all major Windows, Mac, and Linux platforms
- Plug and play (hot-pluggable)
- Operates reliably from 300 to 115.2K baud

USB to Ethernet

Model: USB30-ETH-1
Description: USB 3.0 to Gigabit Ethernet Adapter

Key Features:
- Converts USB 3.0 to Gigabit Ethernet
- Backward compatible with USB 1.1 and USB 2.0
- Supports USB Super/High/Full/Low speed modes with bus power
- Complies with the Energy-Efficient Ethernet standard (IEEE 802.3az)
- Complies with IEEE 802.3, 802.3u, and 802.3ab standards
- Supports all major Windows, Mac, and Linux platforms
- Plug and play (hot-pluggable)
- Operates reliably from 0 to 1G baud

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Standard

USB to RS-232

Model: USB-232-1
Description: USB to single RS-232 Adapter

Key Features:
- Converts USB to RS-232
- USB port-powered
- FTDI chipset
- Supports all major Windows, Mac, and Linux platforms
- Plug and play (hot-pluggable)
- Operates reliably from 300 to 115.2K baud

USB to RS-485

Model: USB-485-1
Description: USB to RS-485 Adapter

Key Features:
- Converts USB to 2-wire RS-485
- USB port-powered
- FTDI chipset
- Supports one loop of up to 256 units of RS-485 devices
- Auto-turnaround for RS-485 communications
- Built-in selectable 120-Ohm terminator
- Supports all major Windows, Mac, and Linux platforms
- Plug and play (hot-pluggable)
- Operates reliably from 300 to 115.2K baud

USB to RS-422

Model: USB-422-1
Description: USB to RS-422 Adapter

Key Features:
- Converts USB to 4-wire RS-422/RS-485
- USB port-powered
- FTDI chipset
- Supports one loop of up to 256 units of RS-422 devices
- Auto-turnaround for RS-485 communications
- Built-in selectable 120-Ohm terminator
- Supports all major Windows, Mac, and Linux platforms
- Plug and play (hot-pluggable)
- Operates reliably from 300 to 115.2K baud

Optically-Isolated

Model: USB-Serial-3
Description: Industrial Port-powered Isolated USB to RS-232/RS-485/RS-422 Converter

Key Features:
- Converts USB to RS-232/RS-485/RS-422
- 2500V opto-isolation
- USB port-powered, no external power supply required
- Rugged industrial grade
- Silicon Labs chipset
- Built-in selectable 120-Ohm terminators for RS-485/RS-422
- Supports all major Windows, Mac, and Linux platforms
- Plug and play (hot-pluggable)
- Operating Temperature: -40°F to 185°F
- Direct DIN-rail (rack) or wall/panel mounting
- Operates reliably from 300 to 115.2K baud

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THE PRODUCTS

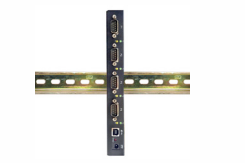

USB-Serial-3


USB-232-1


USB-232A-1


USB-485-1


USB-422-1


USB-232H-3


USB-232-1+TTL-232-1


USB-232-1+TTL33-232-1


USB30-ETH-1

KEY FEATURES

- Industrial or commercial grade.
- Convert USB signals into RS-232, RS-485, RS-422, TTL, and Ethernet signals, and vice versa.
- High-quality chipsets from FTDI and/or Silicon Labs.
- Support all major Windows, Linux and Mac platforms.
- Plug and play (hot-pluggable).
- Options of port or externally powered, standard or optically isolated

Model	Description
USB-Serial-3	Industrial USB to RS-232/RS-485/RS-422 Converter (Port-Powered/Isolated)
USB-232-1	USB to Single RS-232 Adapter (Port-Powered)
USB-232A-1	USB to Dual RS-232 Adapter (Port-Powered)
USB-485-1	USB to 2-Wire RS-485 Adapter (Port-Powered)
USB-422-1	USB to 4-Wire RS-422/RS-485 Adapter (Port-Powered)
USB-232H-3	Industrial USB to 4-Port RS-232 Hub (Port-Powered/Isolated)
USB-232-1+TTL-232-1	USB to TTL 5V Adapter (Port-Powered)
USB-232-1+TTL33-232-1	USB to TTL 3.3V Adapter (Port-Powered)
USB30-ETH-1	USB 3.0 to Gigabit Ethernet Adapter (Port-Powered)

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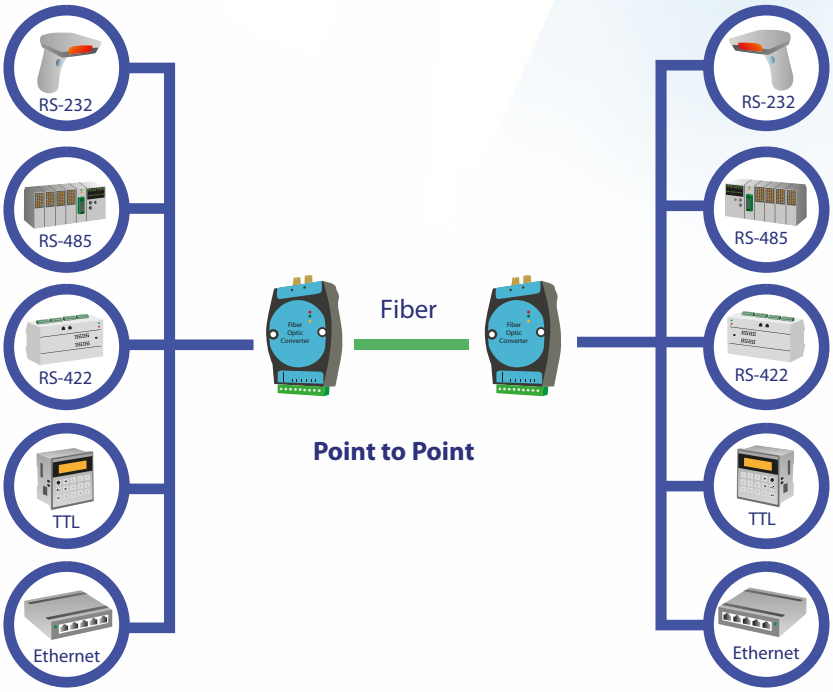
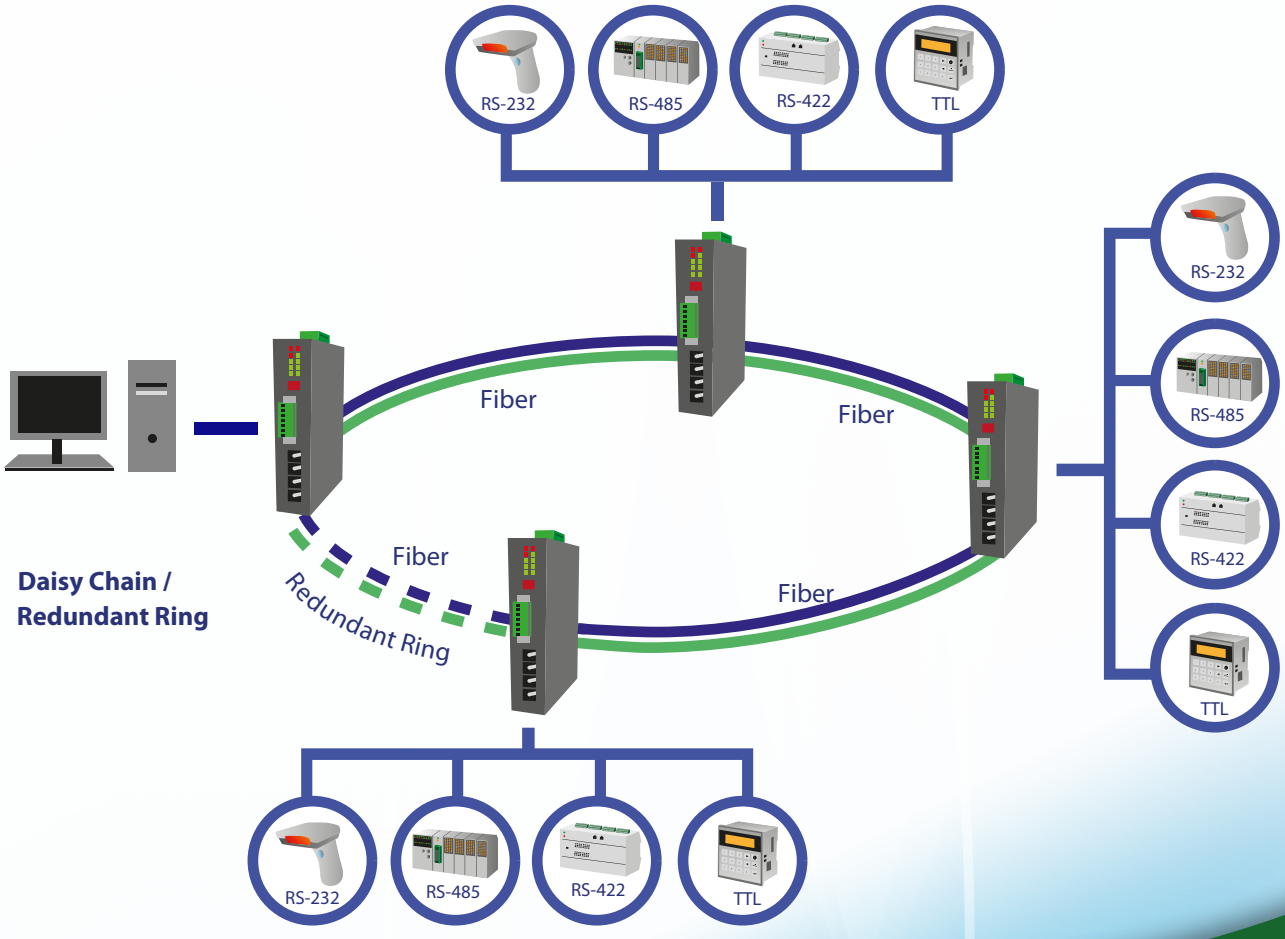
Fiber Optic Conversion



Point to Point



Daisy Chain / Redundant Ring

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Our fiber optic converters run on a light-speed fiber backbone that is inherently resistant to radio and electrical interference, such as EMI/RFI, lightning, transient surges, and ground loops. These converters extend serial (RS-232/RS-485/RS-422/TTL) and Ethernet signals with many options - single-mode and multi-mode; ST, SC, and FC connectors; point-to-point and advanced daisy-chain/self-healing redundant-ring fiber networks – giving your data networks unparalleled flexibility, reliability, and transmission range.

Serial to Fiber Optic (point-to-point)

Model: FBR-Serial-2
Description: Industrial RS-232/RS-485/RS-422 to Fiber Optic Converter

Key Features:
- Rugged industrial-grade
- Transmits serial data (RS-232, RS-485, or RS-422) over long distances through point-to-point fiber links
- Single-mode: 25 miles (40 km); Multi-mode: 3 miles (5 km)
- Standards can be mixed and matched (same data type; one side RS-232 and the other side RS-485 or RS-422; one side RS-485 and the other side RS-422; etc.)
- Supports up to 128 nodes of RS-485/RS-422 devices
- ST, SC, or FC connectors
- Supports a wide range of fiber optic cables
- No software drivers, DIP switch or jumper settings required
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Supports wide range of DC inputs (9 to 30VDC)
- Direct DIN-rail (rack) or wall/panel mounting
- Operates reliably from 300 to 115.2K baud

Serial to Fiber Optic (multi-drop)

Model: FBR(M)-Serial-2
Description: Industrial RS-232/RS-485/RS-422 to Multi-Drop Fiber Optic Converter

Key Features:
- Rugged industrial-grade
- Extends serial data (RS-232, RS-485, or RS-422) uninterruptedly over extremely large areas through multi-drop fiber optic links
- Daisy-chain or self-healing redundant-ring fiber network configurations
- Single-mode: 25 miles (40km) per fiber node; Multi-mode: 3 miles (5km) per fiber node
- Standards can be mixed and matched
- Supports a wide range of fiber optic cables
- Supports up to 255 fiber nodes
- Supports up to 128 nodes of RS-485/RS-422 devices per fiber node
- ST, SC, or FC connectors
- Full redundant power supply and fiber network
- Power loss alarm relay output
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Supports wide range of DC inputs (9 to 30VDC)
- Direct DIN-rail (rack) or wall/panel mounting
- Operates reliably from 300 to 115.2K baud

Ethernet to Fiber Optic

Model: FBR-Ethernet-2
Description: Industrial 10/100M Ethernet to Fiber Optic Converter

Key Features:
- Rugged industrial-grade
- Transmits 10/100M Ethernet data over long distances through point-to-point fiber links
- Single-mode: 12.4 miles (20 km); Multi-mode: 3 miles (5 km)
- Auto-negotiation of speed and duplex mode
- Auto-MDIX
- Store-and-forward mechanism
- ST, SC, or FC connectors
- Supports a wide range of fiber optic cables
- No software drivers, DIP switch or jumper settings required
- Operating Temperature: -40°F to 185°F
- Built-in 600W surge protection
- Built-in 15KV ESD protection
- Supports wide range of DC inputs (9 to 30VDC)
- Direct DIN-rail (rack) or wall/panel mounting
- Operates reliably from 0 to 100M baud

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THE PRODUCTS

FBR-Serial-2

FBR(M)-Serial-2

FBR-Ethernet-2

KEY FEATURES

- Rugged Industrial Grade.
- Built for harsh environments and interfacing with mission-critical equipment.
- Extend Serial (RS-232/RS-485/RS-422/TTL) and Ethernet signals through optical fiber.
- Support a wide range of fiber optic cables.
- Single-mode (25 miles/40 km) or multi-mode (3 miles/5 km).
- Options of ST, SC, and FC connectors.
- Options of point-to-point and advanced daisy-chain/self-healing redundant-ring fiber networks.
- Direct DIN-rail (rack) and/or wall/panel mounting.

Model	Description
FBR-Serial-2	Industrial RS232/RS485/RS422 to Fiber Optic Converter (Point to Point)
FBR(M)-Serial-2	Industrial RS232/RS485/RS422 to Multi-Drop Fiber Optic Converter (Daisy-Chain/Redundant-Ring)
FBR-Ethernet-2	Industrial 10/100M Ethernet to Fiber Optic Converter (Point to Point)

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Industrial Communication Solutions
RUGGED. SIMPLE. RELIABLE.

For the past decade, CommFront has built a reputation as a major supplier of rugged and reliable, yet simple, data communication products and solutions. From factories to energy plants, shipyards to transportation terminals, and server rooms to laboratories, CommFront provides complete solutions for data and device connectivity, conversion, protection, extension, and research. CommFront offers the broadest selection of rugged, simple, and reliable data communication and machine-to-machine (M2M) connectivity products, ranging from legacy serial communications to modern TCP/IP communications, copper wire to optical fiber, and D-sub to USB connectivity.

CommFront products have been proven to be reliable and are widely used in critical areas that require safe, reliable, and uninterrupted operation, including:

- Factory Automation
- Building Automation
- Energy Plants
- Shipyards and Marine
- Transportation
- Industrial and Commercial Buildings
- PoS, ATMs, and Banks
- PLC, RTU, HMI, and SCADA Systems
- Security and Surveillance
- Instrumentation
- IT Networks
- Laboratories

Pushing our products to the limit, so you don't have to

Data networks are widely used in automation, control, and communication systems that perform many important tasks ranging from production, automation, communications, security, surveillance, to research. Data networks are mission-critical, and even the shortest downtime or delay can be very costly; furthermore, data networks consist of many different components and are often used over long distances in an electrically noisy environment. Engineering, testing, and troubleshooting can be very time-consuming and challenging. At CommFront, we push our products to their limit over a 3-to-6-month assessment and certifying process, complete with functionality, reliability, and EMC/EMI tests. We test radiation, emissions, and immunity to guarantee the safety of our human users and compatibility with their devices. The industry has many certifying agencies, ranging from the reputable to the less reputable, and from 3 months to 3 days of certification time. CommFront chooses to partner with SGS and TUV because they have the strictest rules and regulations for product testing and certifications. Both SGS and TUV are the Nationally Recognized Testing Laboratories [NRTLs] in North America (approved by the Occupational Safety & Health Administration [OSHA]) and the Notified Bodies in the European Union, the most meticulous and recognized certifying labs in the industry. This makes our products worry- and hassle-free for safety, compatibility, and interfacing with mission-critical equipment.

A reliable data network starts with choosing the right solutions and partners. CommFront engineers have the rich field experience and in-depth knowledge to understand your problems, how to solve them, and most importantly, how to prevent them – right from the design stage. We design and engineer our products not just on the product level but also from the system perspective, for we believe that data communication products do not function by themselves; rather, they are part of a system. Any supplier can sell you a product, but only CommFront is equipped with the rich field experience, world-class certifications, proven track record, and strict ISO quality management system to ensure your total satisfaction.

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THE KEYS TO OUR EXCELLENCE

- Industrial Ruggedness
- Certification by World-Class Labs
- Designed & Manufactured to ISO Standards
- Lead-Free RoHS Compliance
- Applied Reliability Engineering
- Proven Track Record
- 5-Year Replacement Warranty
- 30-Day Money-Back Guarantee
- Free Worldwide Shipping
- Intensive and Fast Support

SAFETY ASSURANCE

CommFront products are strictly certified by SGS/TUV – the world's leading inspection, testing, and certification companies.

QUALITY ASSURANCE

CommFront products are designed and manufactured to ISO 9001 standards. Our quality control system is strictly certified by SGS (Cert No. SG12/04213).

WARRANTY & GUARANTEE

CommFront products have been proven to be reliable. We back our high-quality products with a 5-year replacement warranty and a 30-day risk-free money-back guarantee.

OUR CLIENTS

Throughout the years, CommFront has gained a sterling reputation in the industry, and its clients include many industry leaders. Below are some of our satisfied customers from around the world, just to name a few:

ABB
Advanced Control Systems
Allied Electronics
Applied Materials
AT&T
BAE Systems
Boeing
Cisco
Emerson Power
Fluke
General Electric
Google Inc.
Harris Corp.
Hewlett Packard
Honeywell Corp.
IBM Corp.
Intel Corp.
ITT Corp.
Johnson Controls
L-3 Communications
LG Corp.
Lockheed Martin
Microsoft
Mitre Corp.
MIT Laboratory
Motorola
NASA
Nissan
Northrop Grumman
Panasonic
Qualcomm
Raytheon Corp.
Rockwell Collins
Samsung
Schneider Electric
Seagate
Siemens Corp.
Singapore Technologies
Sirius Satellite
Spectra Energy
Serveron Corp.
Toshiba
Toyota
Thales Comm.
Tyco Electronics
University of Nebraska
University of Wisconsin
UL Laboratory
US Robotics
Vaddio
Volvo
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