

RS-232 / RS-422 / RS-485 over Fast Ethernet Media Converter



Cost-effective Solution for RS-232 / RS-422 / RS-485 to Ethernet Application

PLANET ICS-10x series Media Converter / Device Server can convert Serial RS-232 / RS-422 / RS-485 communication interface over Fast Ethernet networking. There are SC type and LC type connectors, and single-mode/multi-mode media for customers needs. Ethernet signal allows the two types of segments to connect easily, efficiently and inexpensively. The ICS-10x converter can be used as a stand-alone unit or as a slide-in module to PLANET Media Converter Chassis (MC-700 / MC-1500 and 1500R). It greatly saves time and expense for users and SIs without the need of replacing the existing serial equipment and software system.

Extending Distance

The ICS-10x extends the distance of deploying serial equipment and hosts. The selectable fiber-optic wires on the basis of distance are provided. Therefore, this product will perfectly satisfy the diverse demands while providing reliable and efficient network solutions based on the distance and budgets of installation.



Remote Manageable

The ICS-10x enables the serial equipment to be connected via IP-based transmission. It also makes them able to connect to a TCP / IP networking immediately. The ICS-10x Web Smart media converter provides management through Web Interface. It supports application mode and serial operation mode, connecting alarm IP address, etc. It helps the network administrators to reduce the amount of valuable time spending on detecting and locating network problems; otherwise, it requires visual inspection of cabling and equipment. For large networking environment, multiple connection options are available with the ICS-10x as well.

Serial Interface

- One **RS-232/422/485** port to one **100Base-FX** Media Converter
- Cost-effective solution for RS-232 to Ethernet application
- Supports RS-232, 4-wire RS-422 or 2/4-wire RS485 operation
- Asynchronous serial data rates up to 921600bps

Ethernet Interface

- Complies with IEEE 802.3, IEEE 802.3u 100Base-FX standard
- Choice of fiber-connector from ST / SC / LC, multi-mode / single-mode fiber

Smart Functions

- Standard TCP/IP interface and versatile operation modes
- Software Protocol Supported: ARP, ICMP, TCP/IP, UDP, HTTP server, DHCP client, Telnet server/client
- Built-in IP-based **Web interface** for remote management
- Serial operation mode selected via Web management
- Pair connection mode for connecting two serial devices over a network
- PLANET Smart Discovery utility automatically finds xxx devices on the network
- Firmware upgrade via HTTP protocol

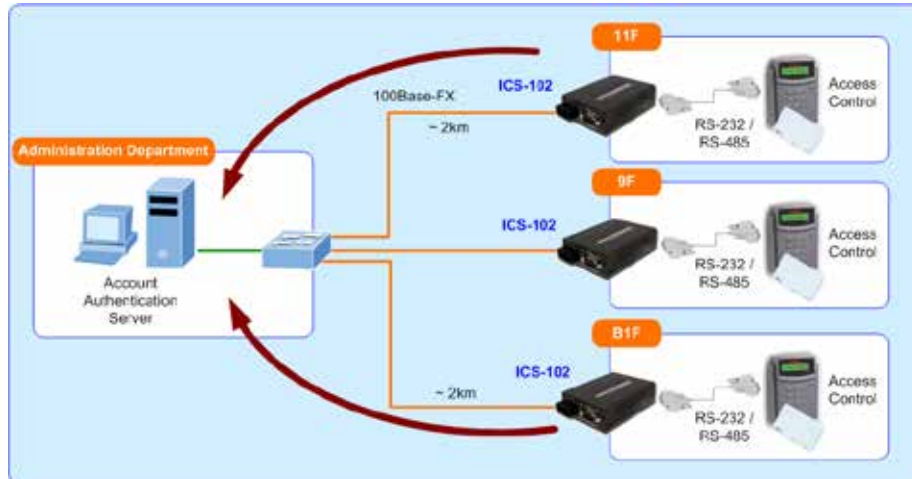
Hardware

- Compact size for easy Installation
 - Standalone - Wall mountable or DIN-rail mounting (optional accessory)
 - Co-work with PLANET MC family Media Chassis (MC-700/1500/1500R)
- LED indicators for easy network diagnose
- Reset button on the front panel for reset to factory default

Applications

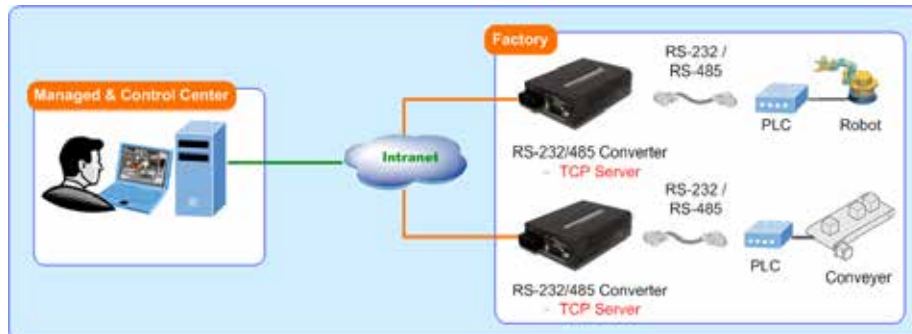
Access Control System – Traditional Installation

Most of the enterprises and governments use access control plate and Mifare or RFID to authorize entrance identity. With traditional deployment, access control machines use the RS-232 or RS-485 serial interface and cables connecting to login server. With connection with the ICS-10x Serial over Fast Ethernet Converter, the access control machine is able to be extended over longer distances via fiber optical interface. The distance can be up to 20km in a local range. The ICS-10x can also be linked to an XDSL router to get the Internet access capability; then the access control can be set and monitored over the Internet.



Process Control

The PLC (Programmable Logical Control) is required to monitor, configure and manage the Robot conveyor including other machines in the manufacturing process. The ICS-10x can be set to TCP server mode and connect with the PLC. Therefore, the administrator can remotely configure and set command settings through Fast Ethernet intranet to control the PLC, the administrators and workstations. There is no need for the administrators to be always by the side of the I/O machine.

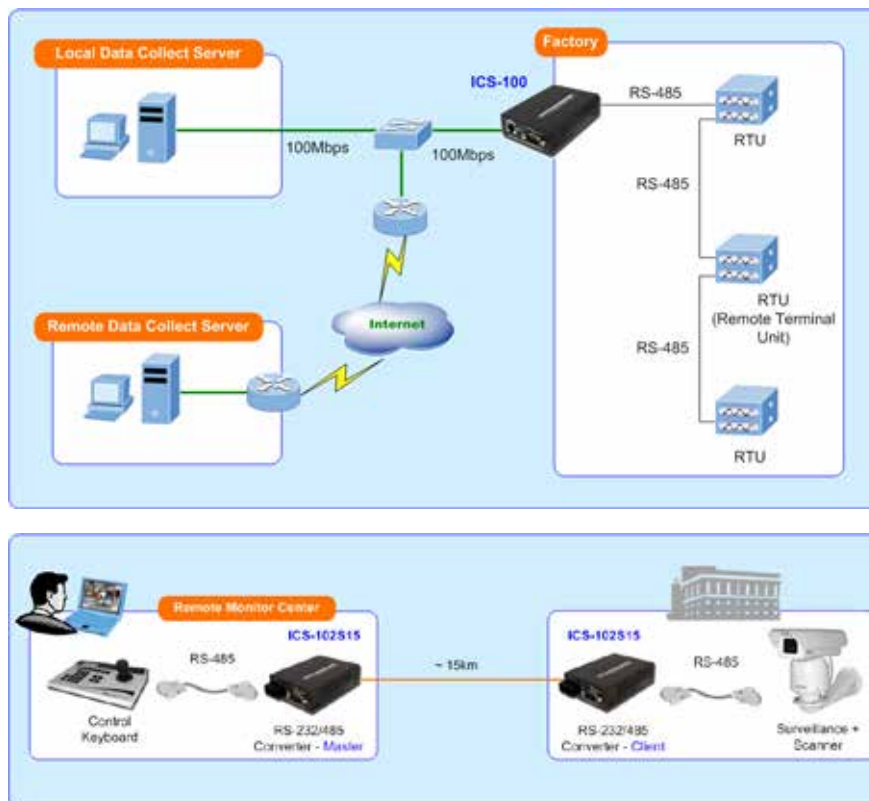


RTU Data Collect – UDP Mode

The RTU (Remote Terminal Unit) may be applied to collect and monitor the data of waves, signal and power utilization. Connecting the RTU with the ICS-10x in UDP mode, the data can be sent over Fast Ethernet to local server or over Internet to remote server automatically.

Surveillance Motion Control – Pair Connection Mode

Using pair connection along with the fiber optic patch cord, the ICS-10x extends the remote central surveillance monitoring with the control keyboard/joystick via RS-232 / RS-422 / RS-485 interfaces.



Specifications

Model	ICS-102 / ICS-102S15 / ICS-105A
Serial Port	
Interface	RS-232 / RS-422 / RS-485
Connector	3-in-1 DB9
Baud rate (Data Rate)	300bps to 921600bps
Character Bits	5,6,7,8
Parity Type	Odd, Even, None, Space, Mark
Stop Bit	1,1.5/2
Flow Control	HW/None
Signals	RS-232: Tx+, Rx+, RTS, CTS, DTR, DSR, DCD, GND RS-422: Tx+, Tx-, Rx+, Rx- RS-485(2-wire): Data+, Data- RS-485(4-wire): Tx+, Tx-, Rx+, Rx-
Fast Ethernet Port	
Standard	100Base-FX
Connector	ST Interface : ICS-101 SC Interface : ICS-102 / ICS-102S15 LC Interface : ICS-105A
Mode	ICS-101: Multi-Mode ICS-102: Multi-Mode ICS-102S15: Single Mode ICS-105A : Vary on SFP Module
Distance	ICS-101: 2km ICS-102: 2km ICS-102S15: 15km ICS-105A : Vary on SFP Module
Optical Wavelength	ICS-101: 1300nm ICS-102: 1300nm ICS-102S15: 1310nm ICS-105A : Vary on SFP Module

Cable	ICS-101: 50/125µm or 62.5/125µm multi-mode fiber cable ICS-102: 50/125µm or 62.5/125µm multi-mode fiber cable ICS-102S15: 9/125µm single-mode cable ICS-105A : Vary on SFP Module
Protection	Built-in 1.5KV magnetic isolation
Hardware	
LED Indicators	System: Power Fiber Port: Link / Active Serial Port: Serial port mode, RS-232, RS-422 or RS-485
Management	Web Management PLANET Smart Discovery Utility
Virtual COM Utility Platform Supports	Windows Base Only: Windows XP Windows Server 2003 Windows 7 Windows Server 2008 Windows 8 (Must install latest version of WinPcap) Windows Server 2012 (Must install latest version of WinPcap)
Operation Mode	TCP Server TCP Client UDP Client Virtual COM Telnet Server Pair Connection - Local (Master) Pair Connection - Remote (Slave)
Dimensions (W x D x H)	97 x 70 x 26 mm
Weight	200g
Power Supply	External Power Adaptor 5V DC / 2A max.
Power Consumption	5.5 watts (max)
Mechanical	Metal
Environment	Operating Temperature: 0~50 degrees C Storage Temperature: -10~70 degrees C Operating Humidity: 10~90% RH Storage Humidity: 5~90% RH
Emissions	FCC Class A, CE Certification
Standards	<ul style="list-style-type: none"> • IEEE 802.3 10Base-T • IEEE 802.3u 100Base-FX • EIA / TIA RS-232 / 422 / 485
Regulatory Approval	RoHS
Compatible Media Converter Chassis	MC-700 / 1500 / 1500R
Note	Reset Button on the rear panel for reset to factory default

Ordering Information

ICS-100	RS-232/422/485 over Fast Ethernet Media Converter (RJ-45) – 100m
ICS-101*	RS-232/422/485 over Fast Ethernet Media Converter (ST, MM) – 2km
ICS-102*	RS-232/422/485 over Fast Ethernet Media Converter (SC, MM) – 2km
ICS-102S15*	RS-232/422/485 over Fast Ethernet Media Converter (SC, SM) – 15km
ICS-105A	RS-232/422/485 over Fast Ethernet Media Converter (SFP) – Vary on module

(*): Upon request

Accessories

RKE-DIN	DIN-Rail Mounting Kit
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Related Products (Fast Ethernet Media Converter)

FT-80x	10/100Base-TX to 100Base-FX Fast Ethernet Media Converter
FT-90x	10/100Base-TX to 100Base-FX Web Smart Media Converter
FST-80x	10/100Base-TX to 100Base-FX Fast Ethernet Media Converter
IFT-80xT	Industrial 10/100Base-TX to 100Base-FX Smart Media Converter
MC-700	10" 7-Slot Media Converter Chassis
MC-1500	19" 14-Slot Media Converter Chassis

Diagram

