

ULI-351D
ULI-351DK
ULI-351T
ULI-351TK
ULI-361D
ULI-361DK
ULI-361T
ULI-361TK

BB-485USB9F-4W
BB-485USB9F-4W-LS
BB-485USBTB-4W-A
BB-485USBTB4WLS-A
BB-485USB9F-2W
BB-485USB9F-2W-LS
BB-485USBTB-2W-A
BB-485USBTB2WLS-A

USB to RS-485 2 / 4-Wire Converters



Features

- Connect RS-485 devices to your USB port
- Up to 921.6 kbps serial data rate
- USB 2.0 (12 Mbps) compatible
- USB port powered (separate power supply not required)
- Compact size
- Quick, convenient in-line installation
- USB cable included with all models (0.9 m)
- High retention USB port (1.54 kg, 15N) option (by model#)
- Locked Serial Number option (by model#)



Introduction

These compact Advantech USB to RS-485 converters are ideal for on-the-go field service and mobile applications. "High retention USB port" option is 50% stronger than regular USB ports gripping standard USB cables in demanding applications. "Locked Serial Number" options use the same serial number with same converter models so, if a converter is shared by field service laptops, the locked serial number lets you plug-&-play without matching. DB9 serial models include a CD with drivers to install. Terminal block models use FTDI virtual COM (VCP) driver software: plug in the converter and Windows installs the software. The converter appears as an additional COM port in Windows Device Manager.

Specifications

Serial Technology

- **Data Rate** 921.6 kbps, max.
- **Port Count** 1 port

Model:	Serial Connector:	RS-485 Mode:	Locked Serial#:
ULI-351D	DB9 female	4-wire	-
ULI-351DK	DB9 female	4-wire	Yes
ULI-351T	Terminal block	4-wire	-
ULI-351TK	Terminal block	4-wire	Yes
ULI-361D	DB9 female	2-wire	-
ULI-361DK	DB9 female	2-wire	Yes
ULI-361T	Terminal block	2-wire	-
ULI-361TK	Terminal block	2-wire	Yes

USB Technology

- **Data Rate** 12 Mbps
- **Port Count** 1 port
- **Standard** 2.0 (backwards compatible)

Model:	USB Port Connector:
ULI-351T	USB Type B female, high-retention - 3.4 lb (15N) pull force
ULI-351TK	
ULI-361T	
ULI-361TK	
ULI-351D	USB Type B female, standard
ULI-351DK	
ULI-361D	
ULI-361DK	

Environmental

- **Operating Temperature** 0 to +70 °C
- **Storage Temperature** -40 to +85 °C
- **Operating Humidity** 95%, non-condensing

Power

- **Source** USB port powered
- **Input** 5 Vdc
- **Consumption** ~0.5W (low power device, draws <100 mA)

Mechanical

- **Enclosure** Plastic
- **Mounting** In-line installation

Model:	Dimensions, mm:	Weight (with included USB cable), gm:
ULI-351D	58 x 32 x 16 mm	68.0 gm
ULI-351DK		
ULI-361D		
ULI-361DK		
ULI-351T	65 x 32 x 16 mm	68.0 gm
ULI-351TK		
ULI-361T		
ULI-361TK		

Software

Model:	Drivers:	Windows O/S:
ULI-351D	CD, included	XP, 7 (32/64 bit), 8 (32/64 bit), 8.1 (32/64), 10 (32/64)
ULI-351DK		
ULI-361D		
ULI-361DK		
ULI-351T	Driver FTDI Virtual COM Port (VCP) Driver	98, ME, 2000, XP, Vista, 7 (32/64), 8 (32/64), 10
ULI-351TK		
ULI-361T		
ULI-361TK		

Meantime Between Failures (MTBF)

- **Calculation Method** MIL217F Parts Count Reliability Prediction

Model:	Hours:
ULI-351D	4907831
ULI-351DK	
ULI-351T	
ULI-351TK	
ULI-361T	5109862
ULI-361TK	
ULI-361D	
ULI-361DK	

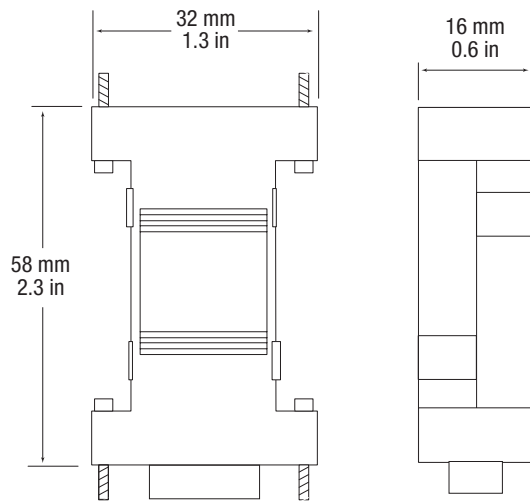
ULI-351D BB-485USB9F-4W
ULI-351DK BB-485USB9F-4W-LS
ULI-351T BB-485USBTB-4W-A
ULI-351TK BB-485USBTB4WLS-A
ULI-361D BB-485USB9F-2W
ULI-361DK BB-485USB9F-2W-LS
ULI-361T BB-485USBTB-2W-A
ULI-361TK BB-485USBTB2WLS-A

Regulatory/Approvals/Certifications

Model:		CE Directives	CE Standards
ULI-351D	FCC	2014/30/EU – Electromagnetic Compatibility (ECD)	EN 55032 – Class B Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements
ULI-351DK			EN 55024 – Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement
ULI-351T			EN 61000-6-1 – Generic Immunity Standard for Residential, Commercial and Light-industrial Environments
ULI-351TK		2011/65/EU amended by (EU) 2015/863 Reduction of Hazardous Substances (RoHS)	EN 55022+AC – Information Technology Equipment - Radio Disturbance Characteristics – Limits and Methods of Measurement
ULI-361D			EN 61000-6-1 – Generic Immunity Standard for Residential, Commercial and Light-industrial Environments
ULI-361DK		2012/19/EU – Waste Electrical & Electronic Equipment (WEEE)	EN 55032 Class A – Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements
ULI-361T			EN 55024 – Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement
ULI-361TK			EN 61000-6-1 – Generic Immunity Standard for Residential, Commercial and Light-industrial Environments

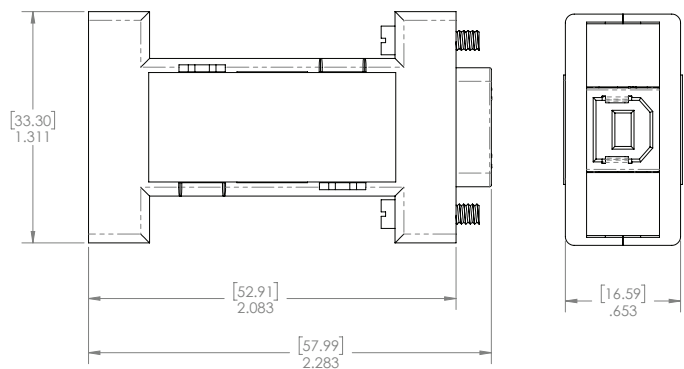
Dimensions - DB9 Female Models

Unit = mm



Dimensions - Serial Terminal Models

Unit = mm

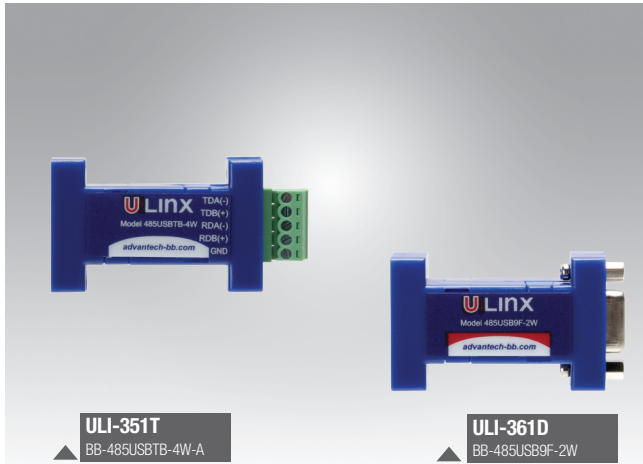


Ordering Information

Model Number	Part Number to Order	Description
ULI-351D	BB-485USB9F-4W	USB to RS-485 Converter – 4W, Standard Type Bf/DB9F, unique serial# & COM port for each ULI-351D model
ULI-351DK	BB-485USB9F-4W-LS	USB to RS-485 Converter – 4W, Standard Type Bf/DB9F, locked serial# (shared serial# & COM port) for all ULI-351DK models
ULI-351T	BB-485USBTB-4W-A	USB to RS-485 Converter – 4W, High-retention Type Bf/TB, unique serial# & COM port for each ULI-351D model
ULI-351TK	BB-485USBTB4WLS-A	USB to RS-485 Converter – 4W, High-retention Type Bf/TB, locked serial# (shared serial# & COM port) for all ULI-351TK models
ULI-361D	BB-485USB9F-2W	USB to RS-485 Converter – 2W, Standard Type Bf/DB9F, unique serial# & COM port for each ULI-351D model
ULI-361DK	BB-485USB9F-2W-LS	USB to RS-485 Converter – 2W, Standard Type Bf/DB9F, locked serial# (shared serial# & COM port) for all ULI-361DK models
ULI-361T	BB-485USBTB-2W-A	USB to RS-485 Converter – 2W, High-retention Type Bf/TB, unique serial# & COM port for each ULI-351D model
ULI-361TK	BB-485USBTB2WLS-A	USB to RS-485 Converter – 2W, High-retention Type Bf/TB, locked serial# (shared serial# & COM port) for all ULI-361TK models

ULI-350/360 Series Selection Guide

USB to RS-485 2 / 4 Wire Converters



Common Features

- Connect RS-485 devices to your USB port
- Up to 921.6 kbps serial data rate
- Up to 12 Mbps USB data rate
- USB 2.0 (12 Mbps) compatible
- USB port powered (no separate power supply required)
- Compact size fits into laptop bags; perfect for field service
- Quick, convenient inline installation
- USB cable included with all models (0.9 m)
- High retention USB port option (by model#)
- Locked Serial Number option (by model#)

USB/RS-485 Converters Comparison Table

Model Number	ULI-351D	ULI-351DK	ULI-351T	ULI-351TK	ULI-361D	ULI-361DK	ULI-361T	ULI-361TK
Part Number to Order	BB-485USB9F-4W	BB-485USB9F-4W-LS	BB_485USBTB-4W-A	BB-485USBTB4WLS-A	BB-485USB9F-2W	BB-485USB9F-2W-LS	BB-485USBTB-2W-A	BB-485USBTB2WLS-A
Description	USB to RS-485, 4-wire, Type Bf/DB9f		USB to RS-485, 4-wire, Type Bf/TB		USB to RS-485, 2-wire, Type Bf/DB9f		USB to RS-485, 2-wire, Type Bf/TB	
USB Port Count	1							
USB Connector	USB Type B female							
High Retention Connector	-		✓		-		✓	
USB Data Rate, max.	12 Mbps							
USB Standard	2.0 (backwards compatible)							
Serial Port Count	1							
Serial Connector	DB9 female		Terminal block		DB9 female		Terminal block	
Serial Interface	RS-485, 4-wire				RS-485, 2-wire			
Serial Data Rate, max.	921.6 kbps							
Locked Serial Number	-	✓	-	✓	-	✓	-	✓
Operating Temperature	0 to +70 °C							
Power Source	USB port-powered							
Power Input	5 Vdc							
Enclosure	Plastic							
Mounting Installation	In-line							
Dimensions, mm	58 x 32 x 16		65 x 32 x 16		58 x 32 x 16		65 x 32 x 16	
MTBF (MIL217F), hours	4907831				5109862		4907831	
Regulatory / Approvals	FCC, CE							
	EN55032/B, EN55024, EN61000-6-1				EN55022+AC, EN61000-6-1		EN55032/A, EN55024, EN61000-6-1	