RiBUS

The Intelligent Display BUS

Specification

Rev. 2.0

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What is RiBUS?

RiBUS is the perfect BUS for **connecting your product with Riverdi displays**. It can run with any size or type of Riverdi intelligent display. Once you have it on your device, you don't need to worry about changing displays mid-project.

It is a **standardized 20-pin FPC connector** that reports all the signals necessary to drive the display.

Since RiBUS is a BUS it has **two connectors**: a **display connector** (located on Riverdi displays) and a **host connector** (located on the host device).

The RiBUS connector offers a way to connect an intelligent display to any other product. Many manufacturers have already implemented it in their designs.

The standard RiBUS connector **accepts 20-pin FFC cables with 0.5mm pitch**.
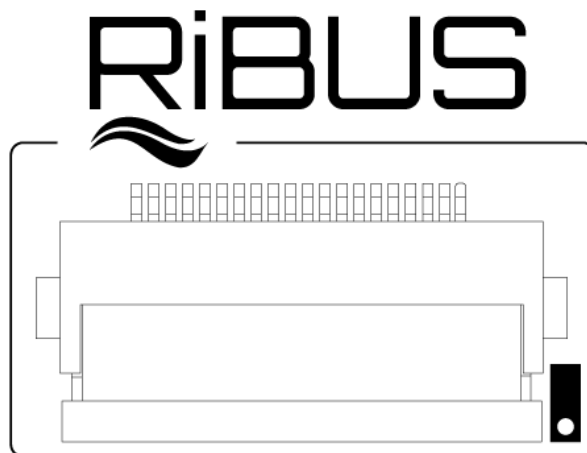

Contact us to learn more.

Pinout

The pinout of the RiBUS connector:

#	Host	Description	Display
1	VDD	Power Supply - **3.3V**	VDD
2	GND	Ground	GND
3	SPI_SCLK	SPI SCK Signal	SPI_CLK
4	MISO / IO.1	SPI MISO Signal / QSPI data line 1	MISO / IO.1
5	MOSI / IO.0	SPI MOSI Signal / QSPI data line 0	MOSI / IO.0
6	CS	SPI Chip Select Signal	CS
7	INT	Interrupt Signal from device to the system	INT
8	RST / PD	Reset / Power Down Signal	RST / PD
9	GPIO.0	GPIO.0	GPIO.0
10	DISP_AUDIO	Display audio out	DISP_AUDIO
11	GPIO.1 / IO.2	GPIO.1 / QSPI data line 2	GPIO.1 / IO.2
12	GPIO.2 / IO.3	GPIO.2 / QSPI data line 3	GPIO.2 / IO.3
13	DTR	UART DTR signal	DTR
14	RTS	UART RTS signal	RTS
15	RX	UART RX / I2C	TX
16	TX	UART TX / I2C	RX
17	BLVDD	Backlight Power Supply, **5V**	BLVDD
18	BLVDD	Backlight Power Supply, **5V**	BLVDD
19	BLGND	Backlight Ground, connected to GND on the display	BLGND
20	BLGND	Backlight Ground, connected to GND on the display	BLGND

Note: the default connection pinout is **host**.

PCB Marking

The PCB marking of the RiBUS connector reports the position of the pin 1 with a black dot.
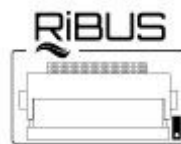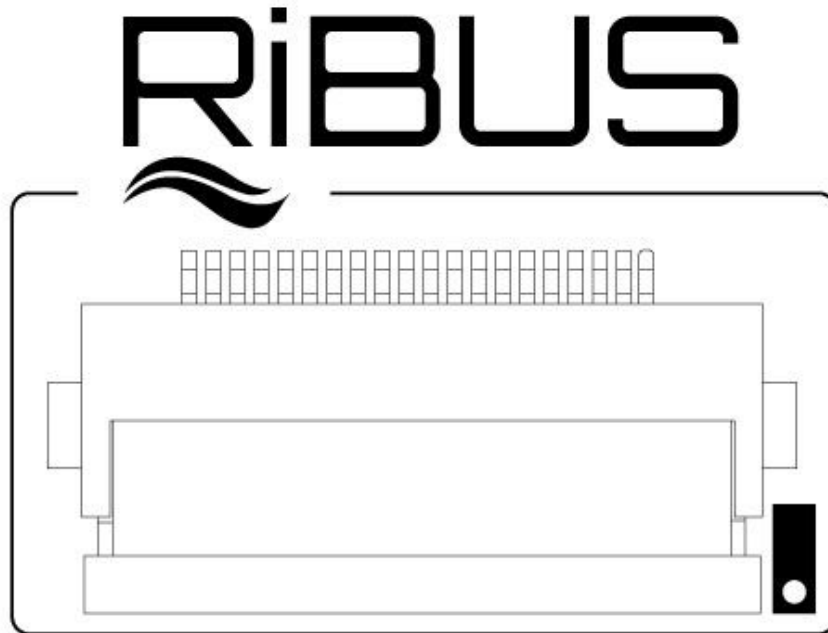
"Real size"

As mentioned above, RiBUS has two connectors:

- The **host** connector - located on the device you want to connect with Riverdi displays
- The **display** connector - located on the Riverdi display

The image above illustrates the display connector and PCB marking.

For all the Altium users we have made a [library available here](#).

Note: the RiBUS standard connector is the **ZIF0520DH-CF25** (20-pin, 0.5mm pitch, downside connection, flip type ZIF).


Connector and cable

The standard RiBUS connector accepts **20-pin** FFC cables with **0.5mm** pitch.

The standard FFC cable is the **FFC0520150** (20-pin, 0.5mm pitch, **same-side** connection, 150mm length), as indicated in figure 1.

Alternatively, the **FFC0520150x** offers the same features but **opposite-side** connection, as indicated in figure 2.
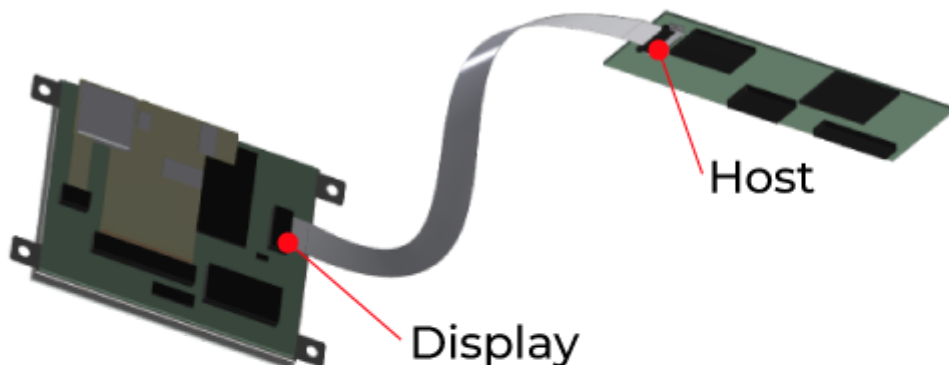
Same-side connection

Same-side connection with [FFC0520150](#) cable and [ZIF0520DH-CF25](#) connector
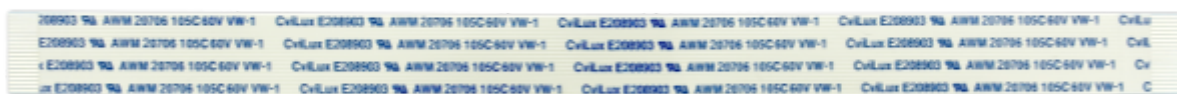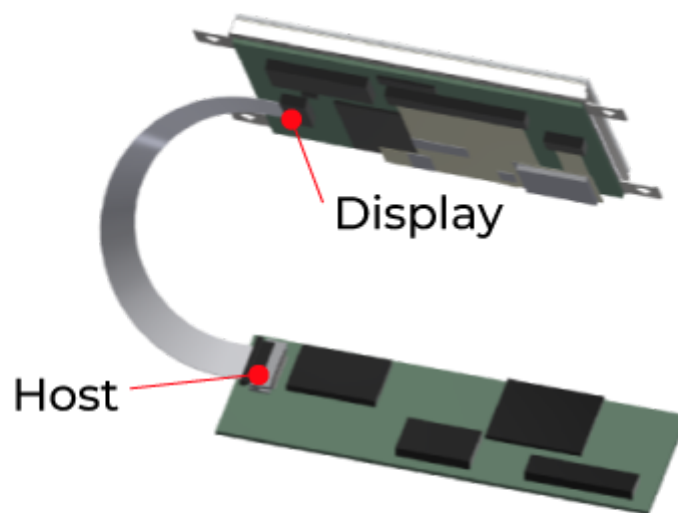
Opposite-side connection

Opposite-side connection with FFC0520150x cable and ZIF0520DH-CF25 connector

Logo Usage

Always use the RiBUS logo when implementing the RiBUS connector into your design. We recommend that you make the logo clearly visible next to the connector on your design.

The black and white versions of the RiBUS logo are recommended for use on PCB.

The RiBUS logo must be used following the convention of using a light color type on a dark background (version B) or in a dark color type on a light background (version C). The logo outline must be clearly distinguishable from the background color.

Also, there should be enough clear space around the RiBUS logo.

version A

version B

Version C

If you are using the colored version of the logo (version A), do not stray from the color palette.

You can find downloadable high-resolution files of all the versions of the RiBUS logo here.

History

Date	Version	Changes
13.06.2019	2.0	● New PCB marking ● New history section ● General improvement
12.12.2018	1.0	Initial release