





- Before using this product, the user must read and understand this document.
- For additional information regarding this product, refer to the [MJ20-RS](#) technical specifications.
- All examples and diagrams are intended to aid understanding, and do not guarantee operation. Unitronics accepts no responsibility for actual use of this product based on these examples.
- Please dispose of this product according to local and national standards and regulations.
- Only qualified service personnel should open this device or carry out repairs.

 Failure to comply with appropriate safety guidelines can cause severe injury or property damage.

- 
- Do not attempt to use this device with parameters that exceed permissible levels.
  - Do not connect the RJ11 connector to a telephone or telephone line.

### Environmental Considerations

 Do not install in areas with: excessive or conductive dust, corrosive or flammable gas, moisture or rain, excessive heat, regular impact shocks or excessive vibration.

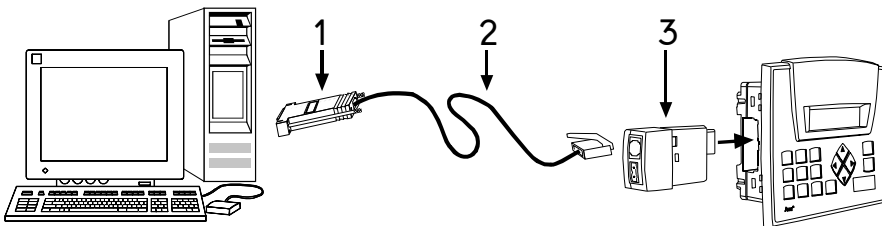


- Do not place in water or let water leak onto the unit.
- Do not allow debris to fall inside the unit during installation.

### Kit Contents

The numbered elements in the next figure are described in this section.

- 1 [MJ10-22-CS25](#)  
D-type adapter, interface between the PC or other RS232 device's serial port and RS232 communication cable.
- 2 [RS232 communication cable](#)  
4-wire programming cable, two meters long. Use this to connect the RS232 serial port on the MJ20-RS to the RS232 port of the other device, via adapter MJ10-22-CS25.
- 3 [MJ20-RS](#)  
RS232/RS485 Add-On Module. Insert this into the Jazz Jack to provide a serial communications interface.

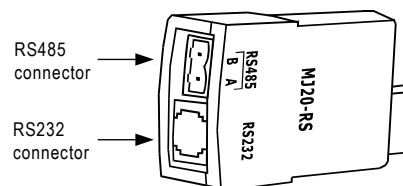


### About the MJ20-RS Add-on Module

The MJ20-RS Add-on Module enables Jazz OPLC™ networking and serial communications, including program download. The module comprises:

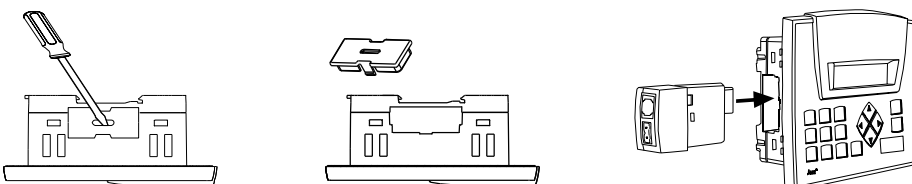
- A single communication channel that serves one RS232 port and one RS485 port. The module cannot communicate via RS232 and RS485 simultaneously.
- Switches that enable you to set the device as an RS485 network termination point

Note that the ports are isolated from the Jazz OPLC.



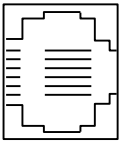
### Installation and Removal

1. Remove the cover from the Jazz jack as shown in the first two figures below.
2. Position the port so that the port's pin receptacles are aligned with the pins in the Jazz jack as shown in the third figure below.
3. Gently slide the port into the jack.
4. To remove the port, slide it out, and then re-cover the Jazz jack.



## RS232 Pinout

The pinout below shows the signals between the D-type adapter and RS232 port connector.

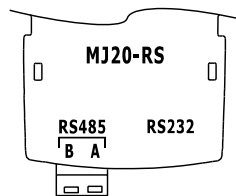
MJ10-22-CS25 D-type adapter			MJ20-RS RS232 Port		RJ11 MJ20-PRG – cable interface
Pin #	Description		Pin #	Description	
6	DSR	←	1	DTR signal*	
5	GND	—	2	GND	
2	RXD	←	3	TXD	
3	TXD	→	4	RXD	
5	GND	—	5	GND	
4	DTR	→	6	DSR signal*	

\* Note that standard communication cables do not provide connection points for pins 1 & 6.

## RS485 Settings

RS485 connector signals

A	Positive signal
B	Negative signal

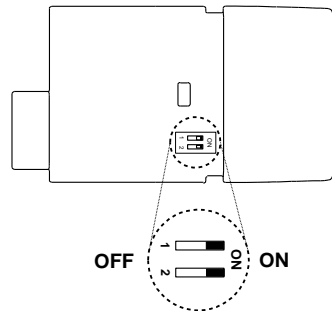


### Network Termination

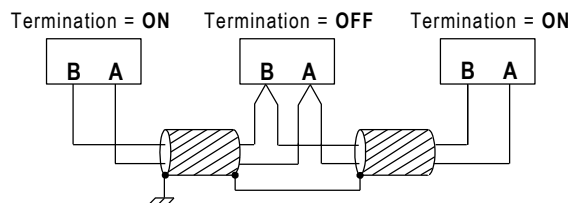
MJ20-RS comprises 2 switches.

ON	Termination ON (Factory default setting)
OFF	Termination OFF

Note that you must move **both** switches in order to set the desired state.



### Network Structure



- Do not cross positive (A) and negative (B) signals. Positive terminals must be wired to positive, and negative terminals to negative.
- Minimize the stub (drop) length leading from each device to the bus. The stub should not exceed 5 centimeters. Ideally, the main cable should be run in and out of the networked device.
- Use shielded twisted pair (STP) cables to network device, in compliance with EIA RS485.

# MJ20-RS

## Jazz® Add-on Module RS232/RS485 Communication Port

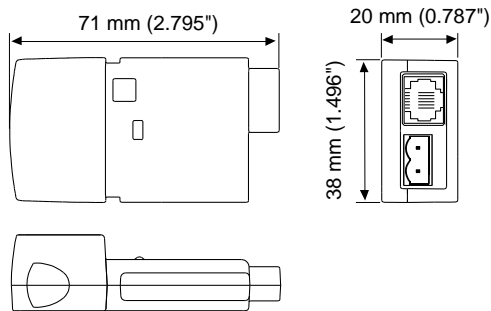
### MJ20-RS Technical Specifications

<b>Communication</b>	1 channel
Galvanic isolation	Yes
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200 bps
<b>RS232</b>	1 port
Input voltage	±20VDC absolute maximum
Cable length	3m maximum (10 feet)
<b>RS485</b>	1 port
Input voltage	-7 to +12VDC differential maximum
Cable type	Shielded twisted pair, in compliance with EIA RS485
Nodes	Up to 32

### Environmental

Operating temperature	0° to 50°C (32° to 122°F)
Storage temperature	-20° to 60° C (-4° to 140°F)
Relative Humidity (RH)	10% to 95% (non-condensing)

### Dimensions

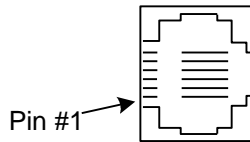


Weight 30g (1.06oz.)

### RS232 Pinout

MJ20-RS RJ11 connector

Pin #	Description
1	DTR signal
2	GND
3	TXD
4	RXD
5	GND
6	DSR signal



The information in this document reflects products at the date of printing. Unitronics reserves the right, subject to all applicable laws, at any time, at its sole discretion, and without notice, to discontinue or change the features, designs, materials and other specifications of its products, and to either permanently or temporarily withdraw any of the foregoing from the market.

All information in this document is provided "as is" without warranty of any kind, either expressed or implied, including but not limited to any implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Unitronics assumes no responsibility for errors or omissions in the information presented in this document. In no event shall Unitronics be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever arising out of or in connection with the use or performance of this information.

The tradenames, trademarks, logos and service marks presented in this document, including their design, are the property of Unitronics (1989) (R"G) Ltd. or other third parties and you are not permitted to use them without the prior written consent of Unitronics or such third party as may own them