

RF Ethernet Reader

Wiring Guide - For P/N: 5-RFB00433 (Beta)

Elpas

Active RFID/RTLS Solutions

Introduction

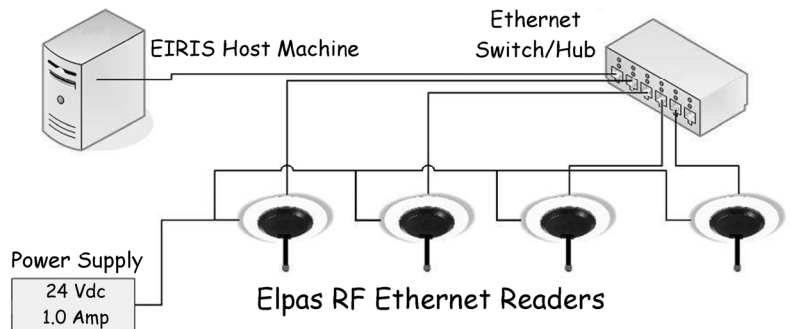
This guide provides basic wiring instructions for common installation scenarios. For advanced functionality, this document should also be used in conjunction with the: EIRIS IP Extension Configuration Guide.

Download from the **EIRIS Software Download Page** (<http://www.visonictech.com/Eiris.html>) of the VT Website, the **Elpas IP Extension** Zip file, which contains the files and documentation for configuring the RF Ethernet Readers into a legacy EIRIS V4.6 installation. Ensure that the EIRIS installation on the host machine has been properly updated before wiring the readers.

Product Description

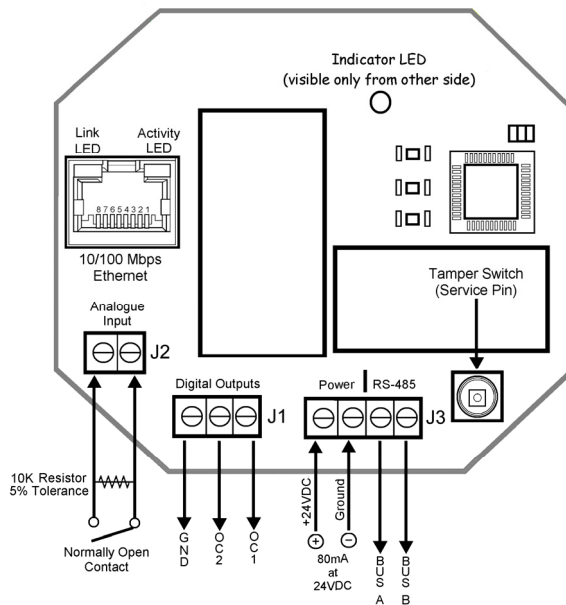
The RF Ethernet Reader is a supervised; fixed infrared locating device that detects, processes and relays RF message data from Elpas active RFID RF-enabled tags to a host computer in real-time. On-board I/O ports also enable the local monitoring of one alarm input sensor and control of two open-collector digital switched devices.

Additionally, the RF Ethernet Reader supports RS-485 data transmission between itself (RS-485 BUS master) and with up to 15 Elpas Gen-2 IR Readers (RS-485 BUS slaves) for integration onto wired or wireless Ethernet networks.



Circuit Board Terminal Blocks

The RF reader has one analogue input (J2) and two digital open-collector outputs (J1) located on the right-hand side of the board. The reader includes a four position removable terminal block (J3) for RS-485 data and power connections.



The reader also has a Service Pin/Tamper Switch 'that generates service messages when pressed to aide device registration. The switch also indicates attempts to remove the device's cover after the device is registered.

Power

Upon power-up the Indicator LED flashes one time. When the RF reader is correctly linked to the power source, switch it off again until you have finished wiring the inputs/outputs and the RS-485 BUS to prevent accidental shorts or power spikes from causing damage to the reader.

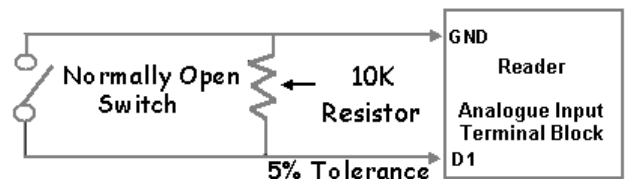
Power Requirements: 80mA/24Vdc

Recommended Cable: CAT5 Stranded (4x2x26AWG)

Max Distance: 100M/325Ft

Cabling the Alarm Input

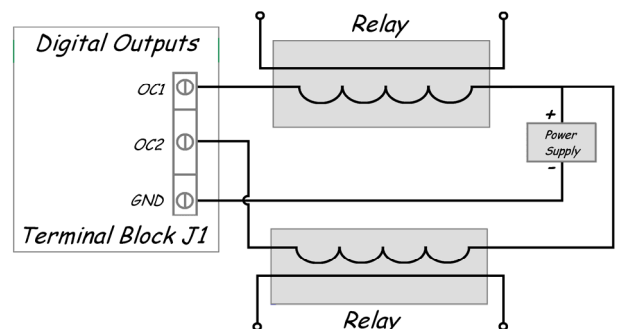
The RF reader is equipped with a general purpose analogue input (**Terminal Block J2**) that is a two-wired supervised circuit for monitoring alarm detection devices such as ultrasonic motion detectors and door contacts.



Recommended Cable: 22 AWG, unshielded/twisted pair
Max Distance: 1,000ft/300m

Wiring the Digital Outputs

The RF reader has two general purpose digital outputs (**Terminal Block J1**) that provide open-collector (up to 100mA, 28Vdc) switching.

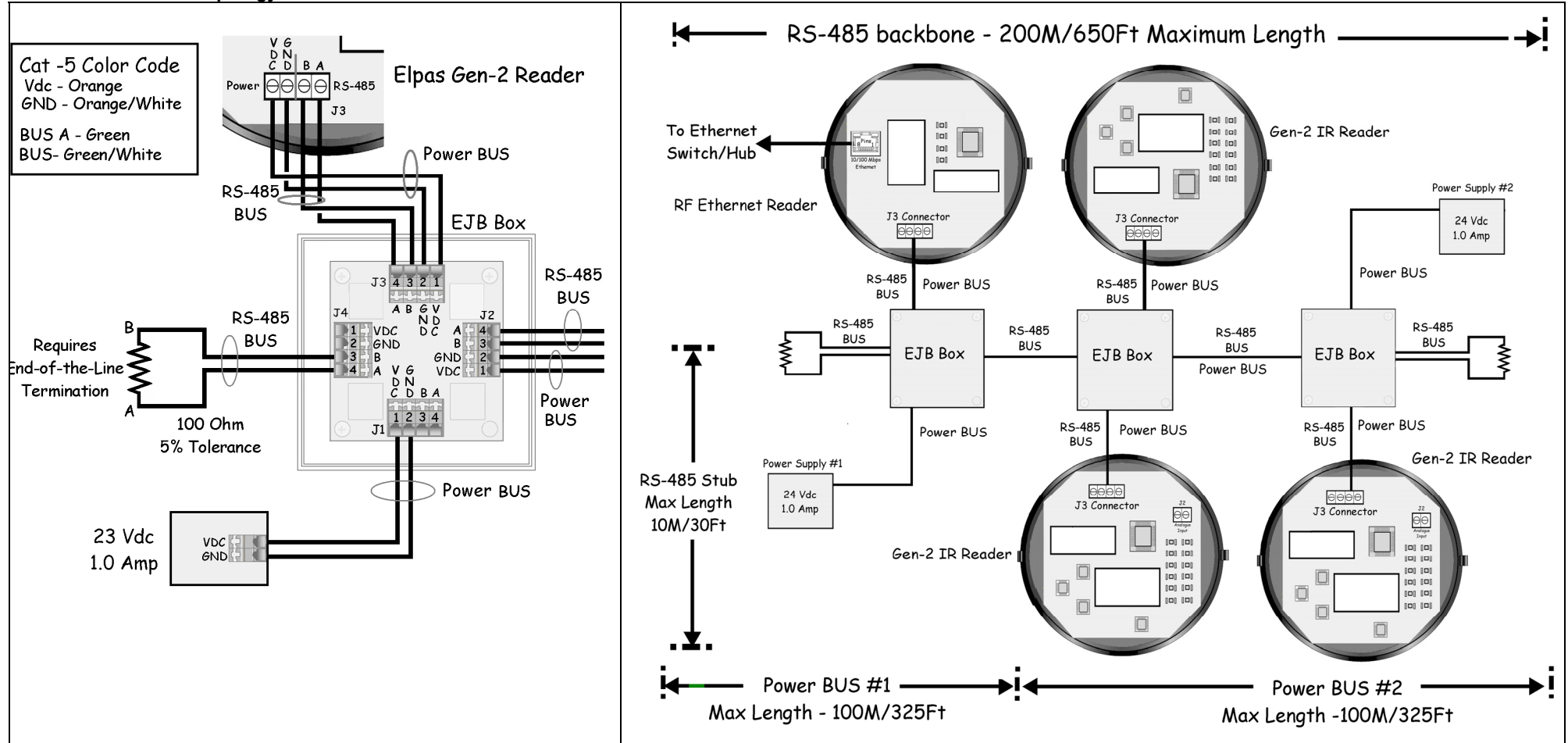


Recommended Cable: 22 AWG, unshielded/twisted pair,
Max Distance: 1,000ft/300m

Wiring the RS-485 Data BUS

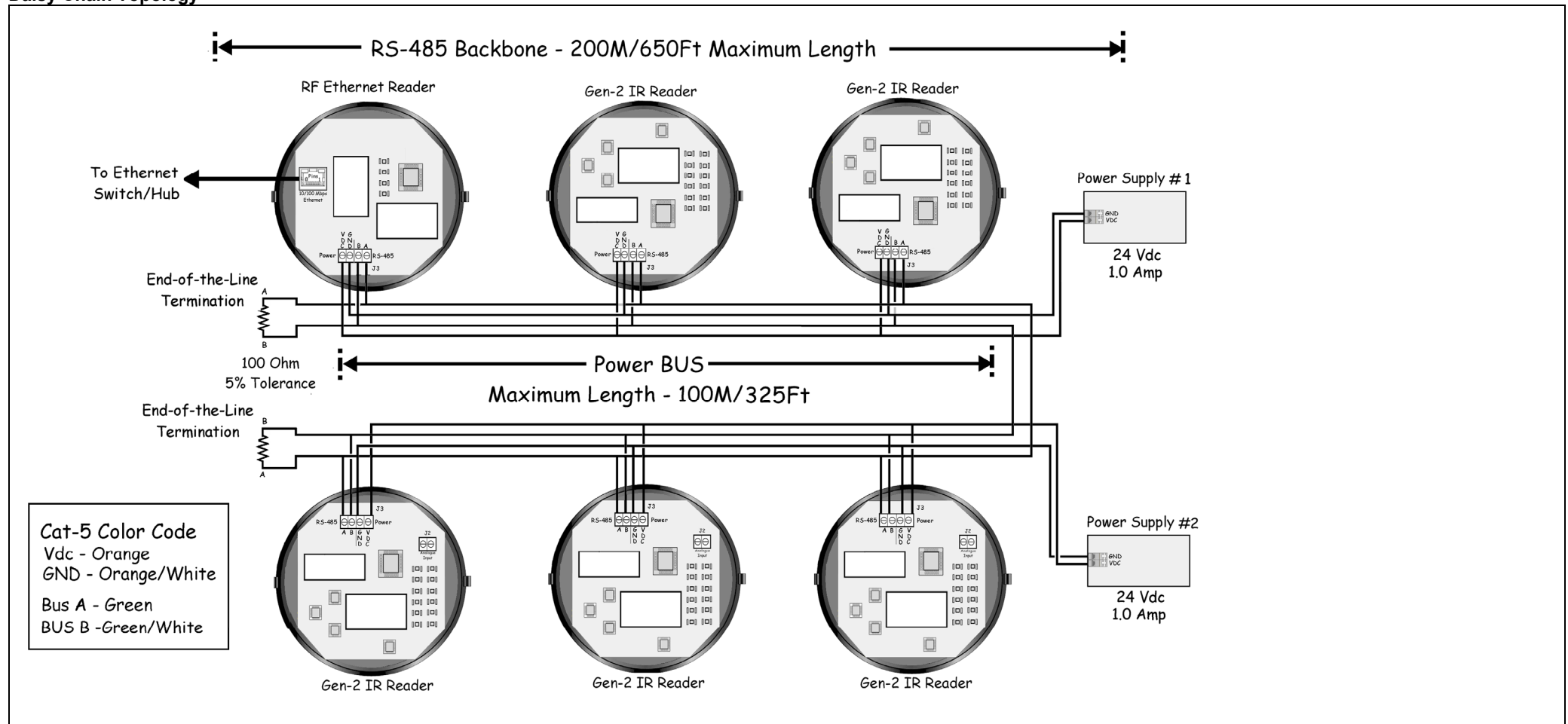
RS-485 is a multi-drop network that provides data-transmission between **1 RF Ethernet Reader** (BUS-Master) and up to **15 Gen-2 IR Readers** (BUS-Slaves). The data BUS can be wired using a Backbone with Stub Topology or utilizing a Daisy Chain Topology as illustrated in the two wiring schematics below:

Backbone with Stub Topology



Elpas RF Ethernet Reader – Wiring Guide

Daisy Chain Topology



The RF Reader (Bus Master) may be connected at any location on Bus. Both ends of the RS-485 Backbone require end-of-the-line termination.

Recommended Cable Type: CAT5 Stranded (4x2x26AWG)

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Manufactured in Israel



W.E.E.E. Product Recycling Declaration

For information regarding the recycling of this product you must contact the company from which you originally purchased it. If you are discarding this product and not returning it for repair then you must ensure that it is returned as identified by your supplier. This product is not to be thrown away with everyday waste.
Directive 2002/96/EC Waste Electrical and Electronic Equipment