

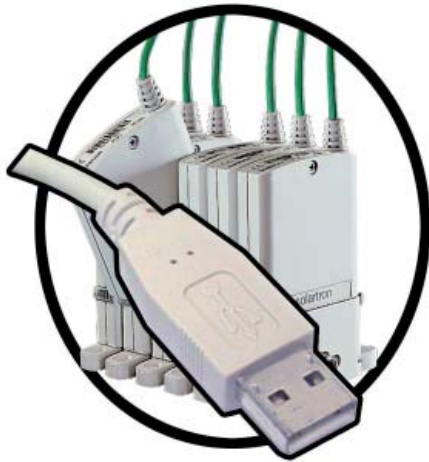
world leaders in the art of linear measurement



# Orbit® USB Interface Module

For easy interfacing to portable computers and field devices

Datasheet  
502685  
Issue 3  
EDCR 18766



## Features

- USB 2.0 compliant full speed interface to the Solartron Orbit® Network
- Powered from USB port
- Supplies power to 4 Orbit modules without the need for an external power supply
- Interfaces up to 31 Orbit modules in conjunction with an Orbit PSIM
- Automatically detects overload and short circuit conditions

## Description

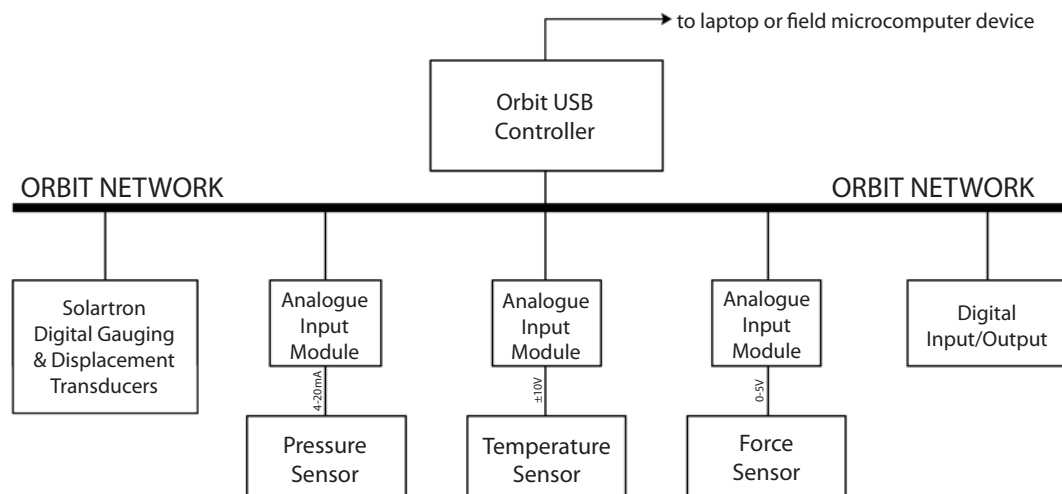
The Orbit USB Interface Module, USBIM, provides a simple interface between personal computers and the Solartron Orbit Network. It is suitable for applications where an Orbit PCI Network Card cannot be used, such as in notebook computers and field devices.

The computer USB power supply allows a maximum of four Orbit modules to be controlled via the USBIM without the need for a separate power supply. The addition of a Solartron PSIM can extend the capability of the USBIM to control up to 31 Orbit modules.

Installation of the new USBIM controller is a simple process and comes complete with the Solartron Orbit Windows Support Pack that contains all the necessary software to both install and use an Orbit Network.

The USBIM is Orbit backward compatible and fully supports all Orbit functions except the dynamic measurement feature of the Orbit PCI Network Card.

## Electrical Connections



## Technical Specification

### USB Interface

Speed	Full speed
Revision	USB 2.0 compliant
Connector	USB type A male
Power Supply Requirement	+4.0 VDC to +5.5 VDC @ 500 mA max <sup>1</sup>
Overload Detection	Automatic <sup>2</sup>

### Orbit Interface

Power Supply Capability	+4.75 VDC to +5.25 VDC @ up to 300 mA
Baud Rate	187.5 kbaud
Measurement Modes Supported	Standard and Buffered
Number of Orbit Modules (without external PSIM example)	5 Digital Probes 4 Analogue Input Modules
Number of Orbit Modules (with external PSIM)	31 modules (any type)

### Environmental

Storage Temperature	-20°C to + 85°C
Operating Temperature	0°C to + 60°C
IP Rating	IP43

<sup>1</sup> The USBIM is a bus-powered device; when plugged into the host PC, Windows learns about its power requirements (bus powered / 500 mA max). In the rare case where the host is not capable of supplying the required power, Windows will display a 'not enough power' message. The current drawn from the USB power supply depends on the number of Orbit modules connected and is internally limited by the USBIM to maximum of 500 mA.

<sup>2</sup> The USBIM continuously monitors the Orbit network voltage. If the Orbit loading (number of modules connected) causes the Orbit voltage to drop below 4.75 V, the USBIM abandons the Orbit transfer and reports an error code to the host application. If the voltage is below 2 V (possible short circuit), the USBIM goes into a low power state and reports an error code to the host application. This condition is cleared by an application call to the OrbitRst command.

### Ordering Guide

Product	Part Number
USB Interface Module	911320
Power Supply Interface Modules	
PSIM (AC Assembly)	911173
PSIM (5 V)	911226
PSIM (DC Assembly)	911225

The USBIM is supplied with an Orbit T-Con