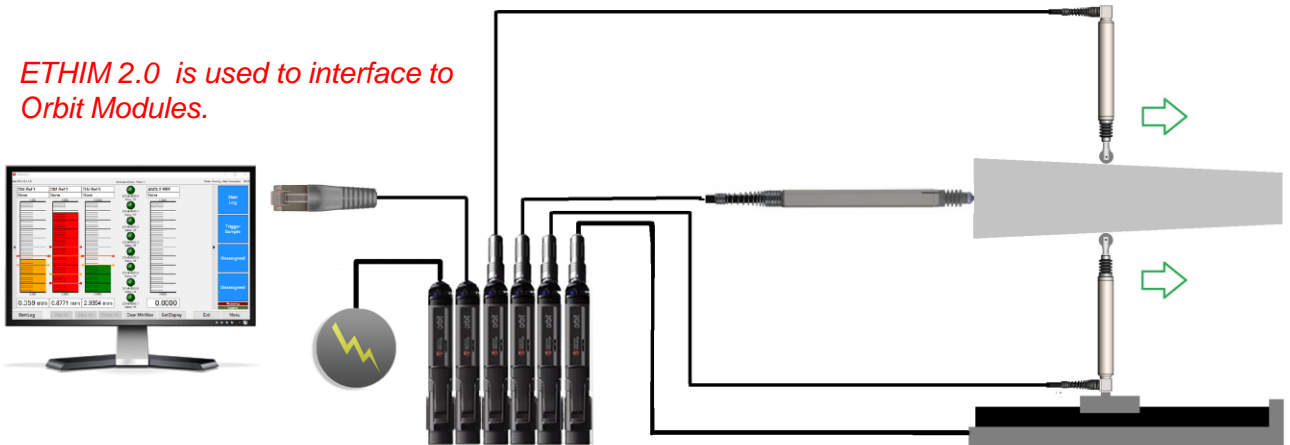


Dynamic Orbit[®] Ethernet Interface Module 2.0



- New, lower cost Ethernet Interface Module
- Connect up to 200 Orbit Modules
- **Dynamic Capability** 3906 readings per module per second. (Previous ETHIM models did not have Dynamic capability)
- Requires Orbit Support Pack for Windows 2.0.0 or later

ETHIM 2.0 is used to interface to Orbit Modules.



Encoder Interface Module

Gauging application where taper is checked dynamically

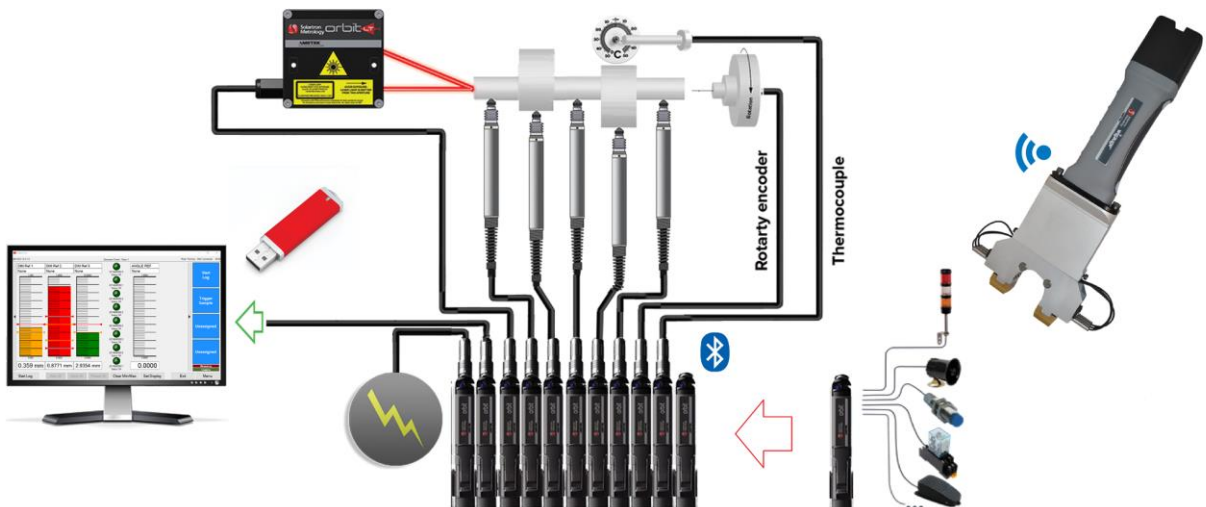
Ethernet Interface Module (ETHIM 2.0)

- The New Ethernet Interface Module carries all the same capabilities as an Orbit USB Interface Module, including Dynamic modes.
- Connect over networks and long distances.
- **Dynamic Capability** 3906 readings per module per second.
- Avoid driver issues with USB and Windows



Note Reading rates over Ethernet can be influenced by the quality of the connection and other Ethernet traffic.

Mode	NEW ETHIM 2.0	Old ETHIM
Network Speed	Low, High, Ultra High	Low, High
Basic	X	X
Difference	X	X
Buffered	X	X
Readburst	X	X
Dynamic	X	
Dynamic 2	X	
Typical Reading Rate (Depends on Network)	1000 to 3000 Readings per second	Up to 1000 Readings per Second



The new ETHIM 2.0 will connect with all Solartron Modules and Sensors

Orbit Modes

- The Orbit Network has three different levels of output speed, and several different reading modes. The new ETHIM 2.0 is capable of reading at all these levels.

ORBIT SPEEDS (For ETHIM 2.0 and USBIM)

- Low Speed: 187.5 kb/s
- High: 1.5 MB/s
- Ultra High: 2.25 MB/s

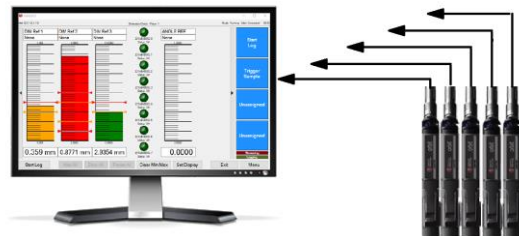


READING MODES (Consult Orbit 3 Manuals for full details)

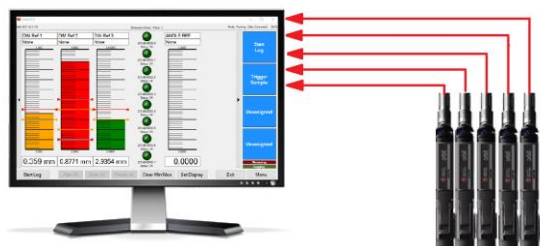
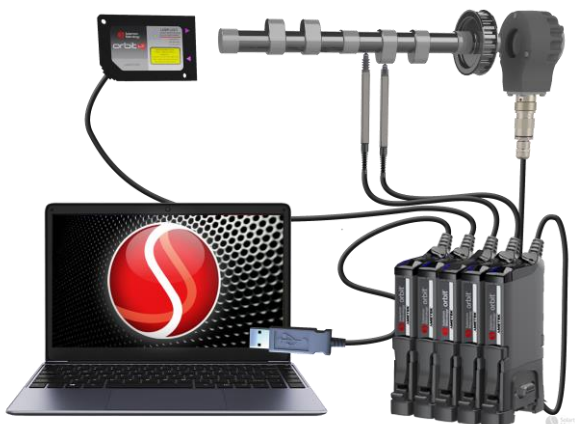
- BASIC: Standard Measurement Mode where one module is queried at a time. Slower but simple to set up.
- DYNAMIC: High Speed Synchronized readings for up to 32 modules.
- DYNAMIC 2: High Speed Synchronized readings, for up to 200 modules. Can also be used at Ultra High Speed. ETHIM 2.0 and USBIM Only.
- READBURST: One high speed *synchronized* reading of all modules on network.
- BUFFERED: Mode where up to 3000 readings are stored in module, then extracted on command
- DIFFERENCE MODE: Maximum and Minimum readings, along with difference are stored in module then extracted with command

Module Commands			
Module	526AP04403	Enabled	True
Read Difference			
Count		Unit	
Maximum	11124	Maximum	2.71582
Minimum	10722	Minimum	2.61768
Sum of	14793775	Sum of	3611.76147
Difference	402	Difference	0.09814
# Reads	1352	Error Msg	No Error
		Enable	Disable

A readout of **Difference Mode**, via the Orbit Library Test Program. Both Maximum and Minimum readings saved.



Basic Mode (above) vs. **Read Burst Mode** (below). With Read Burst, readings from all modules sent simultaneously



Sample of **Orbit Dynamic 2 Mode**. Readings triggered by Rotary Encoder into Encoder Interface Module. Readings output into computer via ETHIM 2.0.

Technical Specifications

Performance		ETHIM 2.0
Interface		Ethernet
Data Rate MBps		10/100
No of Modules		200
Orbit Measurement Modes		All
Readings per second		3906
Nominal Power Requirement mA@ 5V (no load)		200 (Note 2)
Cable length (m) (Note 1)		2
Connector		RJ45 Male
Environmental		
Sealing		IP43
Storage Temperature (°C)		-20 to 70
Operating Temperature (°C)		0 to 60
EMC (Immunity)		(BS) EN 61000-6-2:2005
EMC (Emissions)		(BS) EN61000-6-3:2007/A1:2011
EMC (Immunity/Emissions)		(BS) EN61326-1:2013

Note1: Unit supplied with adapter to facilitate adding Ethernet extension cable if required).

Note 2: The Ethim requires +5V dc power supply to operate and does not provide any power for other Orbit Modules. A PSIM is required.

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