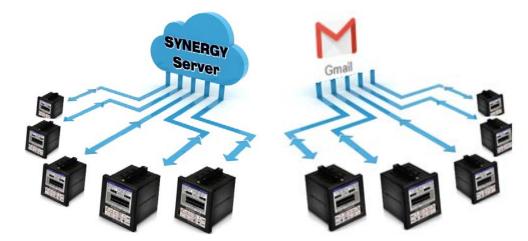
Synergy Controller Cloud Storage Features and Benefits



The exploding popularity of cloud based data storage and application services is a direct result of the benefits they seem to provide in virtually all business and industrial applications. This note explains the Synergy Controller features developed to help test and manufacturing organizations take advantage of Cloud infrastructure with their environmental test chambers and process ovens.

Tidal Engineering's Synergy Controllers, the Synergy Micro 2, Synergy Quattro, and the ¼ DIN Synergy Nano provide state-of-the-art usability and connectivity for environmental test control and data acquisition and combine the functions of a chamber controller and a data logger. These controllers are designed to improve test efficiency by supporting both factory automation and test and measurement protocols and standards. These include: E-mail, FTP, HTTP (Web), PDF plotting, and now Cloud resources.

Delivering Test Results – There are two principal ways that Synergy Controllers are used in conjunction the cloud based storage and applications:



Synergy Server. The latest Synergy Controller software features integrated access to Synergy Cloud Servers and can automatically Deliver Test Results to it*. The Synergy Server client is integrated into the controller and therefore provided some additional benefits; access to centrally stored test programs, controller backups, and configuration files.



Gmail. All Synergy Controllers have the ability to Deliver Test Results (test logs and test reports in PDF format) via e-mail. Using this Synergy Controller functionality in conjunction with a free Gmail account, engineers and managers can create cloud based archives of test results at virtually no cost.

*Note that there are currently two Synergy Server implementations; Synergy Cloud Server and Synergy VM Server. Synergy VM Server is the Virtual Machine version of the Synergy Server that can run on a computer at your site. Synergy Server will refer to both in this application note. *Synergy Server requires controller application software version 4.1.4 or newer.

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Cloud Storage Benefits

Circular chart recorders were ubiquitous data recording instruments for environmental test chamber and process oven applications. Some of the biggest issues with chart recorders are keeping the instruments in running order, fed with paper and pens, and calibrated. In addition, the resulting hard copy test records are of limited utility and accuracy. Furthermore, storing the constant output of hard charts produced is time consuming.

For these reasons, cloud storage is quickly becoming the method of choice when engineers and managers consider their budgets. Storing test results electronically and remotely provides an array of advantages including:

Cost –Online storage services reduce the cost associated with traditional backup methods, providing ample storage space in the cloud for no cost (Google Gmail) or for a low monthly fee. As mentioned above, a big issue with chart recorders is keeping the instruments in good running order and calibrated. Online storage services eliminated the tedious process and cost of keeping chart recorders running and with the Synergy Controller/Logger only one instrument requires calibration instead of two.

Security – Storing confidential or sensitive information in the cloud is often more secure than storing it locally. With online storage services, data is encrypted both during transmission and while at rest, ensuring no unauthorized users can access the files.

Automation –Automating the logging and archival process can reduce the time spent on these tasks and reduce the risk of lost data.

Accessibility – From tablets to smartphones, netbooks to desktops, engineers and managers are using more devices every day. With a cloud based storage solution, you can access your test data from any internet connection, whether you're on a mobile browser or on a workstation computer.

Configuration Control – Synergy Cloud Server based storage ensures that all of your chambers and process ovens automatically use the latest versions of the test and process programs.

Collaboration – Online storage services are also ideal for collaboration purposes. They allow multiple people including the test chamber technician, chamber operator, test engineer and the lab manager, access to the test results they need to do their jobs. Whether you want to share the results from a single test or from all the tests run in the lab, the Synergy Controller's cloud based storage allows you to select files with just a few clicks.

Protection – Cloud storage serves as an added layer of data protection for irreplaceable test results. Backups are kept in secure locations in multiple sites on the coat tails of the Google[™] and Amazon[™] burgeoning Cloud infrastructures.

Recovery – In the event of catastrophic equipment loss, test results are available anywhere and everywhere.

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Setting up your controllers to use Synergy Cloud features is straightforward. To start, whether using Synergy Server integration or the controller's built-in e-mail delivery feature in conjunction with a Gmail account, the first step is to setup the Synergy Controller's **Deliver Test Results** settings in the **Setup\Logging\Profiles\Deliver Test Results** folder as shown below:

Setup - PR	RODUCT1	3:25:36 PM	ä	Setup - LabviewTest5 3	3:47:13 PM	
	jging\Profiles\			Logging\Profiles\Deliver Test Re	esults\	ĺ
		-		Deliver Test Log to e-mail	No	
				Deliver Test Plot to Printer	No	
				Deliver Test Plot to e-mail	Yes	
Options	Deliver Test	Plot Setup		Deliver Test Log to Synergy Server	Yes	
	Results			Deliver Test Plot to Synergy Server	Yes	
Puppingling?	Time: 0:05:22	122.05 0.0.04		Description: Help is not availab		
RunningLine2.	Time: 0:05:33	-133.0C 0.0 %	82	Steady State 2	:6.3F 0.0%	0

For detailed setup instructions, see the following application notes:

Application Note 84 Synergy Controller E-Mail Features. Application Note 85 Synergy Controller Logging Features and Applications. Application Note 90 Synergy Controller Network Printing Features Application Note 99 Synergy Server Features

The sections below provide an overview of the Synergy Controller features and benefits for cloud based storage with both Synergy Server and Gmail implementations.

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The Synergy Server is a web server application designed to provide virtually unlimited centralized and searchable storage for an unlimited number of Synergy Controllers. Based on Virtual open source LAMP server technology (Linux OS, Apache Web Server, MySQL Database, and PHP scripting platform), the Synergy Server provides centralized storage and a simple Web Interface for:

- Recipe
- Test Results •
- Controller Backup

The Synergy Server can be hosted in the cloud or alternatively installed on any Windows PC or Server in the enterprise. Synergy Server functionality is available in Synergy Controller software versions 4.1.4 and later.

The Synergy Controller cloud storage integration provides a number of advantages for storing test results and programs critical to any testing process and manufacturing process. The Synergy Server is integrated into the Synergy Controller software. For example, the Drive List includes Synergy Server when loading programs and settings backup/restore files.

F	⁻ rogram -	1fast wa	iit2	ALARM		Open - TRI	3:00:47 PM 📲
New I		ave File			3 X Step Delete Step		V
L#	Cmd	CH1	CH2	Time	JL, JC	Laby FlashDisk	
1	SetPt	0.0	0.0	00:00:00			
2	SetPt	100.0	100.0	00:00:00			
З	WaitFr	Off	Off	00:00:00	Inp		
4	SetPt	0.0	0.0	00:00:10	<u>8</u>		
RunTi	ime:0:00:10						
104	n, Internal			150.0C	50.0 %	File:	Open Cancel

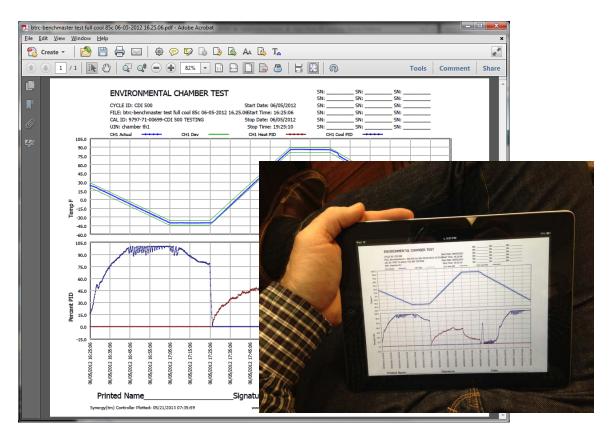
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To retrieve a plot from the Synergy Server, click on the **Download Plot** link next to the test results.

🕒 WebTouch Remote(tm) Er 🗙 🕒 Web	bTouch Remote(tm) Er 🗙	🗅 WebTouch Remote(tm) E 🗙 🗋 Tidal Syne	rgy Server ×						
← → C 🗋 172.16.10.200/SynS	erver/testresults.php						☆ =		
🐵 OnTime 📋 🚦 ox-social DOT bidsy	🛿 OnTime 📋 🏪 ox-social DOT bidsy 🍝 Small Business Mark 🗋 Tidal Engineering C 🔵 salesforce.com - Cu 📓 Evernote Rememb 🧰 Raspberry Pi								
	Synergy Server								
Tidal Engineering Dashboard Users Controllers Test Profiles Controller Settings Test Results Logout	Controller Name Craig's Nano Craig's Nano	Test Name Filter: labviewtest4 Test Name LABVIEWTEST4 07-25-2013 15.20.25 LABVIEWTEST4 07-25-2013 15.20.25	a Test Result	500 Refresh Test Log Download Log Download Log	Test Plot Download Plot	Options Delete Delete			
		Synergy Server Version 0	.9.5						

The browser will download the plot in Adobe PDF format as shown below. As mentioned above, the Synergy Server can be accessed from any desktop or mobile browser.



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To connect to the SYNERGY Server from your desktop or mobile browser, type the IP address of your **Synergy Server** in your web browser.

The Synergy Server Main Menu provides the following choices:

- Dashboard Displays recent activity (as shown below)
- Users Lists current users and supports user add and delete functions.
- Controllers– Lists current controllers and supports controller add and delete functions.
- Profiles Lists current profiles and supports profiles add and delete.
- Controller Settings Lists current Settings Backup files and supports add and delete.
- Test Results- Lists test results files and supports add and delete.
- Logout Closes Synergy Server session.

Synergy Server Dashboard Page

WebTouch Remote(tm) E × C B WebTouc → C B 172.16.10.200/SynServer				j nuai synergy server	×		 52
nTime 🗋 <table-cell-rows> ox-social DOT bidsy 🨒</table-cell-rows>		🗋 Tidal Engineerir	ng C 🔘 sales	sforce.com - Cu 🥘 Eve	rnote Rememb 🗀 I	Raspberry Pi	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
				y Server			
idal Engineering							
ashboard				Recent Ac	tivitv		
sers ontrollers	Test	Results:			ofiles:	Se	ttings:
est Profiles	1631	Nesults			mes.		ttings.
ontroller Settings Controller Settings Name	roller Test Nam	10	Upload Date	Profile Name	Last Updated	Setting Name	Last Updated
ogout Craig'		1-Labview6 08-	08-07-	LabviewTest5.vpl	08-07-2013 02:29:31	syns2.cfg	08-04-2013 10:02:01 07-28-2013 12:51:48
Nano	07-2013 13		2013 03:37:09	LabviewTest4.vpl	07-25-2013 04:02:55	syns.cfg nano1.cfg	07-26-2013 12:51:48
Craig	s chamber th	1-LabviewTest3	08-07-		05-25-2013	th 24.cfg	01-01-1970 12:00:00
Nano	08-06-2013	3 05.19.18	2013 02:31:21	2CE.vpl	07:29:34	_	
Craig		1-LabviewTest3	08-06- 2013	1CE.vpl	05-25-2013 07:11:10		
Nano	08-06-2013	-2013 05.15.16 2013 06:18:15	06:18:15	RALPH-112A.vpl	05-21-2013 03:56:55		
Craig' Nano	s chamber th 08-06-2013	1-LabviewTest3	08-06- 2013		05-21-2013	_	
			06:14:14	auto tune.vpl	08:36:53		
Craig' Nano	s chamber th 08-06-2013	1-LabviewTest3 3 05.07.14	2013 06:10:13	tri2.vpl	05-11-2013 11:47:00		
Oralal	a shambar th	d LabulauTest0	08-06-	cooling4.vpl	05-05-2013 01:52:29		
Craig' Nano	08-06-2013	1-LabviewTest3 3 05.03.13	2013 06:06:13	vplcooling4.vpl	05-05-2013	_	
Craig	s chamber th	1-LabviewTest3	08-06-	vpicooning4.vpi	01:50:04		
Nano	08-06-2013	3 04.59.12	2013 06:02:12	cooling3.vpl	01:49:16		
Craig		11-LabviewTest3	08-06- 2013				
Nano	08-06-2013	3 04.55.11	05:58:11	_			
Craig' Nano	s chamber th 08-06-2013	1-LabviewTest3	08-06- 2013				
			05:54:10 08-06-	-			
Craig' Nano	s chamber th 08-06-2013	1-LabviewTest3 3 04.43.07	2013 05:46:04				
		Copyrig	ht 2013 Tidal En	_ gineering. All Rights Rese	rved.		
			Synergy Se	erver Version 0.9.5			

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To setup your controller to connect to the **Synergy Server**, set the **Synergy Server On/Off** parameter to **Enabled** and then enter the **Synergy Server Address** for your server as shown below.

Comm - TRI	2:53:34 PM	Comm - TRI	2:54:27 PM 📲
LEthernet Network\Sy	nergy Server\Synergy	Ethernet Network	ynergy Server\Synergy
Synergy Server On/Off	Enabled		
Synergy Server Address			
Synergy Server Key	BB0971CC		
Controller Backup	Disabled	172 . 16 .	10 . 200
Description: Help is r	not available for this item.	Accept	Cancel
Chamber Off	-133.0C 0.0 %	Chamber Off	-133.0C 0.0 %

Organizing Synergy Server Test Profiles Page using Filtering

One of the features of the Synergy Server is its large storage capability. At the top of the Test Profiles page is a Filter field that can be used to select specific test profiles on the Synergy Server. For example, you can enter MIL-STD in the Test Name Filter box at the top of the page to select all of the tests whose test name contains "MIL-STD ".

🕒 WebTouch Remote(tm) Er 🗙	WebTouch Remote(tm) Er × (🕒 WebTouch Remote(t	tm) Er 🗙 🕒 Tidal Synergy S	erver ×	
← → C 🗋 172.16.10.200/S	ynServer/profiles.php			☆ =
🐵 OnTime 📋 🚦 ox-social DOT bid	lsy 🏼 🔄 Small Business Mark 🕒 Tidal Engineering	C 🔘 salesforce.com - Cu.	. 👩 Evernote Rememb 🗀 Raspberry Pi	
	Sy	nergy Se	rver	
<u>Tidal Engineering</u>				
Dashboard Users Controllers		Test P	rofiles Page:	
Test Profiles	Profile Na	me Filter:	Max Results: 50 💌 Refresh	
Controller Settings Test Results	Profile	Name	Options	
Logout	Labview	Test5.vpl	Download Delete	
	Labview	Test4.vpl	Download Delete	
	2CE.vpl		Download Delete	
	1CE.vpl		Download Delete	
	RALPH-	112A.vpl	Download Delete	
	auto tun	ie.vpl	Download Delete	
	tri2.vpl		Download Delete	
	cooling4	l.vpl	Download Delete	
	vplcoolir	ng4.vpl	Download Delete	
	cooling3	3.vpl	Download Delete	
	vplcoolin	ng3.vpl	Download Delete	
	cpt.vpl		Download Delete	
	ppt.vpl		Download Delete	
		Ad	d a Profile	
	Copyright	2013 Tidal Engineering. All F Synergy Server Version 0	ights Reserved. .9.5	

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Profiles can be copied from the controller to the Test Profiles Page or from the PC to the page. You can create test profiles on your PC using Synergy Manager Software which is available as a free download from our website. http://www.tidaleng.com/synergyman.htm.

	Program -	1fast wa	ait2	AL	ARM		Open - TRI	3:00:47 PM 📲
New	and the second second second	Save File	 Edit Step	Add Step	Copy Step	X Delete Step	Drive List SynServ	
L#	Cmd	CH1	CH2	Time	JL	,JC	Labvie FlashDis	e 1
1	SetPt	0.0	0.0	00:00:	00		■PROD Storage	or
2	SetPt	100.0	100.0	00:00:	00		PROD	
3	WaitFr	Off	Off	00:00:	00 In	p		
4	SetPt	0.0	0.0	00:00:	10			
Dura							1. 	
24	ime:0:00:10 n, Internal			150).OC 5	0.0 %	File:	Open Cancel

Synergy Controller Backup and Restore

The Synergy Server can provide storage for controller backups. To backup your controller's settings, press the Backup Settings Folder in the Maintenance Screen as shown below, then press on the Browse

Dropdown the Drive List and select SynServer, then press the File text box at the bottom of the window to enter the file name.

Maintenance - LabviewTest3 1:01:13 PM 📓	Select Source File - Labvi 12:56:45 PM 📓
Image: Section Sect	Drive List File List FlashDisk Storage Card SynServer
Chamber Off -133.0C 0.0 %	File: Select Cancel

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Organizing Synergy Server Test Results Page using Filtering

As mentioned above, one of the benefits of the Synergy Server is its virtually unlimited capability to store test results. This capacity combined with Synergy Server's search capabilities make it easy to manage results. The Filter field at the top of the Test Results Page can be used to select specific test records on the server. For example, we can type "BTRC" in the Test Name Filter box at the top of the page to select all of the tests whose controller name or test name contains "BTRC" as shown below.

🗅 WebTouch Remote(tm) Er 🗙 💙 🕒 W	/ebTouch Remote(tm) Er 🗙 🗸 🕒	WebTouch Remote(tm) E 🗙			2				
→ C 🗋 172.16.10.200/Syn	Server/testresults.php								
OnTime 📄 🚦 ox-social DOT bidsy.	 Small Business Mark [🗅 Tidal Engineering C 💿 salesforce.com - Cu 🐚 Evernote R	ememb 🗀 Raspberry Pi						
Synergy Server									
Tidal Engineering									
Dashboard									
Users		Test Results	Page:						
Controllers		Test Name Filter; btrc	Max Results: 500 -	Refresh					
Test Profiles Controller Settings		For Hame Files. Die		Reneon					
Test Results	Controller Name	Test Name	Upload Date	Test Log	Test Plot	Options			
Logout	BTRC	LabviewTest5	05-31-2013 03:35:47	No Log	Download Plot	Delete			
	BTRC	LabviewTest5	05-31-2013 01:40:08	Download Log	Download Plot	<u>Delete</u>			
	BTRC	LabviewTest5	05-31-2013 01:39:16	Download Log	Download Plot	<u>Delete</u>			
	BTRC	tri2	05-25-2013 05:02:40	No Log	Download Plot	<u>Delete</u>			
	BTRC	tri2	05-22-2013 03:56:30	Download Log	Download Plot	Delete			
	BTRC	tri2	05-22-2013 03:55:53	Download Log	Download Plot	Delete			
	BTRC	tri2	05-22-2013 03:37:21	Download Log	Download Plot	<u>Delete</u>			
	BTRC	btrc-benchmaster test full cool 85c 06-05-2012 16.25.06	05-21-2013 08:35:33	Download Log	Download Plot	<u>Delete</u>			
	BTRC	btrc-benchmaster test full cool 85c 06-05-2012 16.25.06	05-20-2013 03:56:56	Download Log	Download Plot	<u>Delete</u>			
	BTRC	btrc-benchmaster test full cool 85c 06-05-2012 16.25.06	05-20-2013 12:53:01	Download Log	Download Plot	Delete			
	BTRC	CASCADE TEST 02-18-2013 03.33.31	05-13-2013 11:09:18	Download Log	Download Plot	<u>Delete</u>			
	BTRC	CASCADE TEST 02-18-2013 08.27.16	05-13-2013 11:06:36	Download Log	Download Plot	<u>Delete</u>			
	BTRC	btrc-benchmaster test full cool 85c 06-05-2012 16.25.06	05-13-2013 10:43:24	Download Log	Download Plot	<u>Delete</u>			
	BTRC	btrc-benchmaster test full cool 85c 06-05-2012 16.25.06	05-13-2013 10:31:55	Download Log	Download Plot	<u>Delete</u>			
	BTRC	TRI 05-11-2013 09.21.12	05-11-2013 08:21:56	Download Log	Download Plot	<u>Delete</u>			
		Add a Test R	esult						
		Copyright 2013 Tidal Engineering. All Rights Res Synergy Server Version 0.9.5	erved.						

In addition to automatic delivery options in the **Deliver Test Results** folder (below left), delivery can also be triggered manually by selecting the Results file and the Action from the list in the **SETUP\Logging\Actions** folder (below right).

Setup - LabviewTest5 3	:47:13 PM 🔰 🚆	Maint	enance - LabviewTest4	3:17:27 PM 📲
Logging\Profiles\Deliver Test Re	sults\	eack	File Utilities\Logging Utilities	\Actions\
Deliver Test Log to e-mail	No	Action:	Upoad to SynServer	▼ Execute
Deliver Test Plot to Printer	No		Export Log to USB	
Deliver Test Plot to e-mail	Yes	*HISTORY	E-Mail Log	
Deliver Test Log to Synergy Server	Yes		Copy Log to FTP Clear Log	· .
Deliver Test Plot to Synergy Server	Yes		Plot Log to Printer	
Description: Help is not availab	le for this item.		E-Mail PDF Plot Delete All Profile Logs Upoad to SynServer	
Steady State 26	5.3 F 0.0 %	Chamber (Off	-133.0C 0.0 %

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To retrieve log files from the Synergy Server in CSV (Comma Separated Variable) format, click on the **Download Log** link next to the test results.

Test Log example	
📄 btrc-benchmaster test full cool 85c 06-05-2012 16.25.06.txt - Notepad	x
<u>Eile E</u> dit F <u>o</u> rmat <u>V</u> iew <u>H</u> elp	
<pre>File Edit Farmat Yew Help Chamber Name: Double Name: Chamber Name: Double Name: Doubl</pre>	

Tost Log overnlo

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All Synergy Controllers have the ability to Deliver Test Results (test logs and test reports in PDF format) via e-mail. Using this Synergy Controller functionality in conjunction with a free Gmail account, engineers and managers can create cloud based archives of test results at virtually no cost.

Setup - P	RODUCT1	3:25:36 PM	Setup - LabviewTest5	3:47:13 PM 🛛 📓
Back /Lo	gging\Profiles\		Logging\Profiles\Deliver Test I	Results\
		-	Deliver Test Log to e-mail	No
			Deliver Test Plot to Printer	No
			Deliver Test Plot to e-mail	Yes
Options	Deliver Test	Plot Setup	Deliver Test Log to Synergy Server	Yes
	Results		Deliver Test Plot to Synergy Server	Yes
			Description: Help is not availa	able for this item.
RunningLine2.	Time: 0:05:33	-133.0C 0.0 %	Steady State	26.3 F 0.0 %

For detailed e-mail setup instructions, see the following application note: <u>Application Note 84</u>.

Once your Synergy controllers are delivering their results to your Gmail account, you will need to access a particular test or group of test results. Since the Synergy Controller will automatically generate file names to identify the results using time data stamps, test program, and test chamber information, there are many ways that the results can be selected using the Gmail search features:

- Results in chronological order
- Results from a specific Test Chamber/Process Oven
- Results for a specific Test Program
- Results from a specific Test date or time
- A specific test chamber, test program, and test date.

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When the Gmail account is viewed the results are in chronological order as shown below:

M Inbox (3,076) - craig.bora			
← → C ^I 🔒 https://r	mail.google.com/mail/u/0/#inbox		⊛☆ ≡
🔛 Apps 🥖 OnTime 🗋	🗧 ox-social DOT bidsy 🛛 🌊 Small Business Mark	. 🕒 Tidal Engineering C 🕒 salesforce.com - Cu 🕒 👩 Evernote Rememb 🗀 Raspberry Pi 🛛 🔹 📄	Other bookmarks
Google		- Q Craig	0 😩
Gmail -	□ · C More ·	1-50 of 3,349 < > 😝 👻	¢.
COMPO SE	Primary	Social Bree Promotions 2 new + VouTube, Google+ (Jeremy Simon),	
Inbox (3,076) Starred	□ 📩 □ Synergy_130	micro2_130 - Synergy System Alarm - SYSTEM ALARM: TempGard Alarm DIN 8 Chamber Name: micro2_130 Application	Jun 18
Important	□ ☆ □ Synergy_96 (28)	micro2_96 - Synergy Scheduled Test Results Log - Scheduled Test Results Log Attachment: "micro2_96-0hrs 06-16-2015 @	Jun 17
Sent Mail Drafts (17)	□ ☆ □ Synergy_96 (39)	micro2_96 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_96-lv 06-16-2015 23.42.23.pdf" Chamber № @	Jun 17
Circles	□ ☆ □ Synergy_96 (40)	micro2_96 - Synergy Test Results Log - Test Results Log Attachment: "micro2_96-lv 06-16-2015 23.39.52.txt" Chamber Nr @	Jun 17
Notes	□ ☆ □ Synergy_96 (26)	micro2_96 - Synergy Scheduled Test Results Plot - Scheduled Test Results Plot Attachment: "micro2_96-0hrs 06-16-201f; @	Jun 17
Personal Travel	□ ☆ □ Synergy_96 (61)	micro2_96 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_96-lv 06-16-2015 21.08.36.pdf" Chamber N 📼	Jun 16
More -	□ 📩 □ Synergy_96 (61)	micro2_96 - Synergy Test Results Log - Test Results Log Attachment: "micro2_96-lv 06-16-2015 21.06.04.txt" Chamber Nr 😅	Jun 16
	□ ☆ □ Synergy_96 (61)	micro2_96 - Synergy Scheduled Test Results Plot - Scheduled Test Results Plot Attachment: "micro2_96-1hrs 06-16-2011; @	Jun 16
	□ 📩 □ Synergy_96 (61)	micro2_96 - Synergy Scheduled Test Results Log - Scheduled Test Results Log Attachment: "micro2_96-0hrs 06-16-2015 @	Jun 16
	□ 📩 □ Synergy (40)	micro2_87 - Synergy Scheduled Test Results Log - Scheduled Test Results Log Attachment: "micro2_87-0hrs 06-16-2015 @	Jun 16
	Synergy (2)	micro2_87 - Synergy Test Results Log - Test Results Log Attachment: "micro2_87-Iv 06-16-2015 22.36.10.txt" Chamber Ni @	Jun 16
	□ 📩 □ Synergy (4)	micro2_87 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_87-lv 06-16-2015 22.28.36.pdf" Chamber № 座	Jun 16
	🗌 📩 🕞 Synergy (37)	micro2_87 - Synergy Scheduled Test Results Plot - Scheduled Test Results Plot Attachment: "micro2_87-0hrs 06-16- Take me	to Inbox ×

You can search your test results by the Chamber or Process Oven Name. The screen below shows the selection of results from the chamber Synergy_96.

M Search results - craig.bo	ra ×	Le	
	/ mail.google.com /mail/u/0/#search/Syner	57-	
👯 Apps 🥖 OnTime 🗋	📮 ox-social DOT bidsy 🛛 🛃 Small Business Mark	🗋 Tidal Engineering C 🗭 salesforce.com - Cu 🗋 🥘 Evernote Rememb 🧰 Raspberry Pi 🛛 » 🛅	Other bookmark
Google	Synergy_96	- Q Craig 🏭	2 💄
Gmail +	□ - C More -	1–50 of about 158 < > 📰 👻	\$ -
COMPOSE	□ ☆ □ Synergy_96 (28)	Intex micro2_96 - Synergy Scheduled Test Results Log - Scheduled Test Results Log Attachment: "micro2_96-1hrs 06- @	Jun 17
Inbox (3,076)	□ ☆ □ Synergy_96 (39)	Inbox micro2_96 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_96-lv 06-17-2015 01.18.10.pdf" Ch @	Jun 17
Starred Important	□ 1 Synergy_96 (40)	Inbox micro2_96 - Synergy Test Results Log - Test Results Log Attachment: "micro2_96-lv 06-17-2015 01.18.10.txt" Cha 🧔	Jun 17
Sent Mail	□ ☆ □ Synergy_96 (26)	Inbox micro2_96 - Synergy Scheduled Test Results Plot - Scheduled Test Results Plot Attachment: "micro2_96-0hrs 06 @	Jun 17
Drafts (17)	□ ☆ □ Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_96-lv 06-16-2015 23.39.52.pdf" Cir @	Jun 16
 Circles Notes 	☐ ☆ ○ Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results Log - Test Results Log Attachment: "micro2_96-lv 06-16-2015 23.37.21.txt" Cha @	Jun 16
Personal	□ ☆ □ Synergy_96 (61)	Inbox micro2_96 - Synergy Scheduled Test Results Plot - Scheduled Test Results Plot Attachment: "micro2_96-0hrs 06 @	Jun 16
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More -	□ ☆ □ Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_96-lv 06-16-2015 21.06.04.pdf" Ch 🍙	Jun 16
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	□ ☆ □ Synergy_96 (3)	Inbox micro2_96 - Synergy System Alarm - SYSTEM ALARM: TempGard Alarm DIN 9 Chamber Name: micro2_96 Appl	Jun 16
Blair Borax	□ 📩 □ Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results Plot - Test Results Plot Attachment: "micro2_96-lv 06-16-2015 18.32 18.pdf" Cf @	Jun 16
Craig Borax David Beck	□ ☆ □ Synergy_96 (61)	Index micro2_96 - Synergy Test Results Log - Test Results Log Attachment: "micro2_96-lv 06-16-2015 18.29.47.txt" Cha @	Jun 16
HP Printer	□ 📈 □ Synergy_96 (61)	nicro2_96 - Synergy Scheduled Test Results Plot - Scheduled Test Results Plot Attachment: "micro2_96-0hrs 06 @	Jun 16
•		Take m	e to Inbox ×

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You can search your test results by the Chamber or Process Oven Name and test name. The screen below shows the selection of results from the chamber micro2_96 and test lv.

M Search results - craig.bora	× 📃		
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Inbox (3,075)	□ ☆ □ Synergy_96 (40)	Inbox micro2_96 - Synergy Test Results Log - : "micro2_96-lv 06-17-2015 01.18.10.bd" Chamber Name: micro2_96 Ap	© Jun 17
Starred Important	🗌 📩 📄 Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results Plot - : "micro2_96-lv 06-16-2015 23.39.52.pdf" Chamber Name: micro2_96 A	c Jun 16
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	🗌 ☆ 📄 Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results Log - : "micro2_96-lv 06-16-2015 10.48.33.bt" Chamber Name: micro2_96 Ap	⊂ Jun 16 e me to Inbox ×

Searching for test results by the test date "06-05-2015".

M Search results - craig.bo	a ×		
← → C 🔒 https://	/mail.google.com/mail/u/0/#search/06-05	-2015	
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COMPOSE	□ 📩 □ Synergy_123 (35)	Inbox micro2_123 - Synergy Test Results Plotlv 06-05-2015 20.01.15.pdf" Chamber Name: micro2_123 Application Vr @	Jun 7
Inbox (3,075)	□ ☆ □ Synergy_123 (35)	Inbox micro2_123 - Synergy Test Results LogIv 06-05-2015 20.01.15.txt" Chamber Name: micro2_123 Application Ve @	Jun 7
Starred Important	□ 📩 □ Synergy_96 (61)	Inbox micro2_96 - Synergy Test Results PlotIv 06-05-2015 20.43.27.pdf" Chamber Name: micro2_96 Application Vers @	Jun 7
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Drafts (17)	🗌 📩 📄 Synergy (61)	Inbox micro2_87 - Synergy Scheduled Test Results Plot1hrs 06-05-2015 23.04.21.pdf" Chamber Name: micro2_87 A @	Jun 6
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Personal	□ ☆ □ Synergy_96 (11)	index micro2_96 - Synergy Scheduled Test Results Log1hrs 06-05-2015 19.44.30.txt" Chamber Name: micro2_96 Ar @	Jun 5
Travel	□ ☆ □ Synergy_96 (56)	Inbox micro2_96 - Synergy Test Results PlotIv 06-05-2015 20.40.56.pdf" Chamber Name: micro2_96 Application Vers @	Jun 5
More 🕶	□ 📩 □ Synergy_96 (56)	Inbox micro2_96 - Synergy Test Results LogIv 06-05-2015 20.40.56.txt" Chamber Name: micro2_96 Application Versiv @	Jun 5
	□ ☆ □ Synergy_96 (10)	Inbox micro2_96 - Synergy Scheduled Test Results PlotOhrs 06-05-2015 20.34.40.pdf" Chamber Name: micro2_96 A @	Jun 5
	□ 📩 □ Synergy (61)	micro2_87 - Synergy Scheduled Test Results PlotOhrs 06-05-2015 20.20.01.pdf" Chamber Name: micro2_87 A @	Jun 5
	□ 🕹 D Synergy (60)	micro2_67 - Synergy Scheduled Test Results LogOhrs 06-05-2015 20.13.59.txt" Chamber Name: micro2_67 Ag @	Jun 5
	□ ☆ □ Synergy_123 (28)	Inbox micro2_123 - Synergy Scheduled Test Results Log1hrs 06-05-2015 19.00.55.txt" Chamber Name: micro2_123 @	Jun 5
	☐ ☆ □ Synergy_123 (27)	Inbox micro2_123 - Synergy Test Results Plotlv 06-05-2015 19.58.45.pdf Chamber Name: micro2_123 Application V(Jun 5 e to Inbox ×

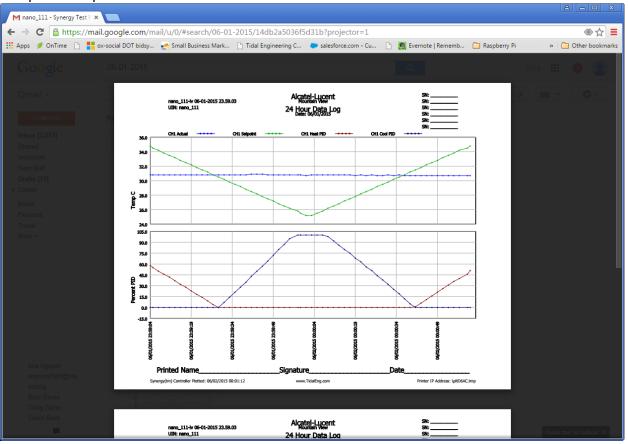
To view or download the test results, click on the test results e-mail, then the attachment.

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Gmail -	Here I Move to Inbox Here Here Here Here Here Here Here Her		
COMPOSE	micro2_123 - Synergy Test Results Plot		
Inbox (3,071) Starred	Synergy_123 <synergy@tidaleng.com> to me</synergy@tidaleng.com>		
Important	Test Results Plot Attachment: "micro2_123-lv 06-05-2015 20.01.15.pdf"		
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Drafts (17)	micro2_123 Application Version:		
Circles	4.1.4 Build 1026 Help Version:		
Notes	3.0.16b Operating System Version:		
Personal	5.0.E1 Olympic Version:		
Travel	V2.0.42 Serial Number:		
More v	05/0816 RunTime: 172:09 (hh:mm) Chamber Definition: Generic Temp Humidity Log Used: 7470 of 8000 Kpt IP Address: http://172.16.10.123 Date, Time: 06/07/2015, 14:15:54		
	(c)2015 Tidal Engineering Corporation, <u>www.tidaleng.com</u>		
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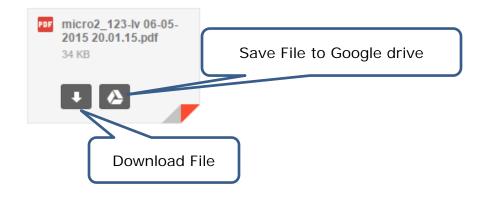
Application Note 129

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The plot will open in Gmail.



Alternatively, you can hover your mouse over the compressed plot and select "Download File" or "save to Google Drive" options as shown below.



Application Note 129

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About the Synergy Controller Family

Tidal Engineering's Synergy Controllers, both the Synergy Micro 2, Synergy Quattro, and the ¼ DIN Synergy Nano provide state-of-the-art usability and connectivity for environmental test control and data acquisition and combine the functions of a chamber controller and a data logger. These controllers are designed to improve test efficiency by supporting both factory automation and test and measurement protocols and standards.

Synergy Controller feature highlights includes:

- ➔ Color touch screen
- → Ethernet, RS-232 and GPIB communications
- → Built in 100 MB Data logger with USB drive support
- → Data Acquisition, up to 64 T-type thermocouples (Optional)
- → Built-in Web Server for remote control; WebTouch Remote ™
- → Compatible with Synergy Manager for PC based control, monitoring and programming.
- → Built-in FTP Server for factory automation and test and measurement applications

For more information regarding these controllers please see the full Synergy Controller Technical Manual on our website at http://www.tidaleng.com/synergy.htm

About Tidal Engineering

Headquartered in Randolph, NJ, Tidal Engineering Corporation has been designing and building awardwinning embedded hardware and software for test and measurement and data acquisition applications since 1992. The company is recognized for technical expertise in such areas as Embedded IEEE 488, and turnkey SCADA (Supervisory Control and Data Acquisition) systems.

> Tidal Engineering Corporation Randolph, NJ 07869 Tel: 973-328-1173 www.TidalEng.com info@tidaleng.com

