



User Manual of Omnik TL2 Internal Data Collector

Omnik New Energy Co., Ltd.





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1. Unpacking

If your inverter had installed the WiFi card, please go to **6. Register on monitoring website.**

After unpacking the box, please check the parts according to the below list. Contact the manufacturer immediately, should if you find any damage, missing or wrong model.



Picture 1-1

No.	Name	Quantity
Α	PV data collector	1
В	WiFi antenna	1

2. PV Data Collector



Picture 2-1

No.	Name
А	10 pin connector
В	Reset Button
С	I-PEX Interface



3. S/N Label



Picture 3-1

4. WiFi Card Installation

Warning: Before installing the WiFi module to inverter, you must turn off both the AC side and DC side of inverter to make sure personal safety.



Picture 4-1

Unscrew the four screws on the interface panel with the screwdriver as shown in **Picture 4-1** and keep the screws aside.





Picture 4-2

Insert the WiFi antenna through the gland and screw the hex nut with a torque of 2.0 N.m as **Picture 4-2**.





Plug the PV antenna connector into the socket circled in **Picture 4-3**.





Fix PV data collector to the case with two screws as **Picture 4-4**.





Picture 4-5

Turn the switch on the communication board inside of the inverter to the upside as **Picture 4-5**.



Picture 4-6

Connect the PV data collector to the communication board with communication bus cable as **Picture 4-6**.





Picture 4-7

Tighten the water-proofing case tightly to the inverter with 4 screws as **Picture 4-7** and the installation is completed. Antenna is properly mounted and can be turned in 360 degrees.

5. WiFi Card Information

After installation of WiFi Module, turn on AC side of inverter to display the WiFi information.





Click "**ENTER**" button at the display panel until the screen shows WiFi information. It includes S/N: xxxxx and IP address as **Picture 5-1**.



IP address has three kind values:

Picture 5-2: 0.0.0.0 (router SSID & password is not found by WiFi card, if you have not set connect your router, factory value)

Picture 5-3: 10.10.100.254 (restore default value)

Picture 5-4: 192.168.40.20 (after setting ok)



SN:606648068 IP:10.10.100.254

Picture 5-3



Picture 5-4



6. Register on Monitoring Website

Omnik's PV monitoring system is supported by: IE8, Firefox, Chrome, and Safari. Login the website <u>http://www.omnikportal.com</u>, click register to enter the user registration page, follows the requirements for registration; please fill in the information for register. After successful registration, enter the mailbox and activity the account, then to complete the registration.

6.1 Register New Account



Picture 6-1

6.2 Fill in User's Information

reate a New Account			
Email:		*	Please input a valid Email address, used for login and password refrieving
Confirm Email:		*	Please re-input a valid Email address
Account Type:	End User		Choose End User
Password:		*	6-16 characters, case sensitive
Confirm Password:		*	6-16 characters, case sensitive
	I accept <u>Terms of Service</u>		
	Next Cancel		
	click and enter the configure interfa-	ce	

Picture 6-2

Remarks: please read the < Omnik service agreement > carefully, the enclosure is the cost list for all the countries; please choose your operators **End User** means the final user "*" you must fill it

"End User" Account

Site Name	1	*Maximum 20 Letters
Upload Image	Default.jpg	Click and Choose the Picture
Country	OX Afghanistan	Click "OK" to Save pic
Province/State	Anhui	
Trovince/State		
City	SUZHOU	*
Street		Locate Your Site On Map
ZIP Code	1	
Timezone	(GMT +08:00) Beijing	g,Chongqin
Number Format	1234567.89	Choose your Country Format
Temperature Unit	°Е	
System Size(kWp)		*

Temperature Unit	°F	
System Size(kWp)	E	change Unit *
Feed-in Tariff(FIT)		AUD AUS 💌 *
Panel Type	3S	
Inverter Type	Omnik	
Description		
F	Make This Site P	ublic
Registration	Fill in WiFi see picture 4	Card S/N Code, I-1
Registration Datalogger S/N	Fill in WiFi see picture 4	Card S/N Code, I-1 * 🖨
Registration Datalogger S/N Installer	Fill in WiFi see picture 4	Card S/N Code, -1 *
Registration Datalogger S/N Installer Contact	Fill in WiFi see picture 4	Card S/N Code, I-1
Registration Datalogger S/N Installer Contact Name	Fill in WiFi see picture 4	Card S/N Code, I-1
Registration Datalogger S/N Installer Contact Name Phone	Fill in WiFi see picture 4	Card S/N Code, I-1

Picture 6-3

After the register, you may enter next chapter **7. Network Settings** (In AP mode by WiFi)

7. Network Settings

Make sure the AC side of inverter is connected to the grid and keep the display on.

- 1) Prepare a computer or device, e.g. tablet PC and smart phone that enables WiFi.
- 2) Obtain an IP address automatically:
- > Open Wireless Network Connection Properties, double click "Internet Protocol Version 4(TCP/IPv4)".
- > Select Obtain an IP address automatically, and click "OK".

vetworking Sharing	General Alternate Configuration
Connect using:	You can get IP settings assigned automatically if your network suppor
Microsoft Virtual WiFi Miniport Adapter	this capability. Otherwise, you need to ask your network administrato for the appropriate IP settings.
Configure	Obtain an IP address automatically
This connection uses the following items:	() Use the following IP address:
VMware Bridge Protocol	1P address:
 Image: Scheduler Image: File and Printer Sharing for Microsoft Networks 	Subnet mask:
Internet Protocol Version 6 (TCP/IPv6)	Default gateway:
A Link-Layer Topology Discovery Mapper I/O Driver A Link-Layer Topology Discovery Responder	Obtain DNS server address automatically
*	O Use the following DNS server addresses:
Install Uninstall Properties	Preferred DNS server
	(Alternate DNS server)
Description	
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Advanced.

Picture 7-2

3) Open wireless network connection and click "View Wireless Networks":

Select wireless network of the data logging module, no passwords required as default. The network name consists of **AP** and the **serial number** of the product. Then click

"Connect".

Wireless Network allen Connected tplinkserver jerny's dlink AP_601184936 Information sent over this network might be visible to others. CMCC Open Network and Sharing Center	No net	work access	
allen Connected tplinkserver jerny's dlink AP_601184936 Connect automatically Connect CMCC Open Network and Sharing Center	Wireless I	Network *	
tplinkserver jerry's dlink AP_601184936 Information sent over this network might be visible to others. Connect automatically <u>Connect</u> CMCC Open Network and Sharing Center	allen	Connected	
jerry's	tplinkserver	dis.	
dlink AP_601184936 Connect automatically CMCC Open Network and Sharing Center	jeny's	liter	
AP_601184936	dlink	511	#
Information sent over this network might be visible to others. Connect automatically <u>Connect</u> CMCC Open Network and Sharing Center	AP_601184936	311	
	CMCC Open Ne	twork and Sharing Center	
		009	
0 0 9			

Picture 7-3

	omnik.com	Acc		
	connect-me No Internet Unidentif	e access fied Netwo	rk	w
Virele	Identifyi No Internet	ng (AP_60118 access ork	\$4936)	
Virele	Identifyi No Internet ess Netw 184936	ng (AP_60118 access ork Connect	ed 🚮	
Wirele AP_601 allen tplinkse	Identifyi No Internet ess Netw 184936 Franks Ar Signal Sim Security T	ork Connect Connect United by Connect Connect Connect Connect Connect Connect Connect	ed 31	

Picture 7-4 Connection successful

Notice: If **AP_ (serial number of product)** is not available in the wireless network list, there may be problems in the connection or setting of data logging module. Please check if the WiFi had installed ok, and inverter has been powered on.

Before troubleshooting, please inquire with your inverter installer whether you are allowed to remove the cover of the inverter to trouble shoot the module. If not allowed, please contact customer service.

4) Set parameters of WiFi module:

(a) Open a web browser, and enter 10.10.100.254 (the Default IP address of WiFi card, you may set domain name access as **picture 7-5**), then fill in username: **admin** and password: **admin**, both of which are admin as default.

Recommended browsers: Internet Explorer 8+, Google Chrome 15+, Firefox 10+

Note:

- If the IP address shows 0.0.0.0 (factory value) on your LCD (Picture 5-2), it is not a correct address. There are 2 cases show 0.0.0.0:
- Not connect router rightly, you need reset to connect you router to make it right. You can reset data collector by press reset button for about 5s or reset it in the wizard interface
- Card loose in the inverter, please check your inverter according chapter **4.WiFi Card** Installation
- ② The default username & password : admin, admin, we suggest modify the username & password:

Step: choose Account; input your username &password.

Authentication	n Required	X
0	A username and password are being requested by http://10.10.100.254. The site says: "GoAhead"	
User Name:	admin admin	
Password:	admin	
	OK Cancel	

Picture 7-5

(b) In the configuration interface of WiFi module, you can view general information of the module.

Follow the setup wizard to start quick setting.

Picture 7-6

Click "Start" to continue

		📕 中文 🌉 🎇 Englis
	Please select your current wireless network:	Help
Status		This step will help to connect
Wizard		WLAN. If you do not find your
Wireless		please refresh several times or
Advanced		add it manually.
Account.		Please check your wireless
Update		method and encryption
Restart		algoninin.
Reset		If your wireless router does not broadcast SSID, please set the desired wireless network in Wireless interface.
	Note: When RSSI of the selected WIFI network is lower than 15%, the connection may be unstable, please select other available network or shorten the sistence between the device and router. Refresh.	

Click "Refresh" to search available wireless networks, or add it manually input

Picture 7-9

Select the wireless network you need to connect, and then click "Next"

Notice:

 \bigcirc If the signal strength (RSSI) of the selected network is <10%, which means unstable connection, please adjust the antenna of the router, or use a repeater to enhance the signal.

② We recommend router setting:

- Security setting: WPA2-personal
- Encryption type: AES

Status	Please enter the wireless netwo	rk password:	Please make sure you have
Wizard			entered the correct password
Wireless			
Advanced		CONTRACTOR OF A DESCRIPTION OF	
Account	Password (8-64 bytes) (Note: case sensitive)	•••••	
Update	Re-enter password		
Restart		Show Password	
Reset			
		Back Next	

Picture 7-10

Enter the password for the selected network, and then click "Next"

Status	Please fill in the following inform	Most systems support the	
Wizard	Obtain an IP address	Enable 👻	function of DHCP to obtain IF address automatically. Please
Wireless	automatically		select disable and add it manually if your router does
Advanced	IP address	0. 0. 0. 0	not support such function.
Account	Subnet mask	0, 0, 0, 0	
Update	Gateway address	0, 0, 0, 0	
Restart	DNS server address		
Reset			
		Back	
		ardar s	

Picture 7-11

Select "Enable" to obtain an IP address automatically, then click "Next"

Notice:

- $(\ensuremath{\mathcal{D}}\xspace$ Turn off the firewall of the router
- ② Make sure the DHCP function of the router is enable

Status	Setting complete!	Help After clicking OK, the system
Wizard		will restart immediately.
Wireless		
Advanced		
Account	Click OK, the settings will take effect and the system will restart immediately.	
Update	If you leave this interface without clicking OK, the settings will be	
Restart	ineffective.	
Reset		
	Back	
	2 2 4 5	

Picture 7-12

If setting is complete, the above page will display. Click "OK" to restart.

Picture 7-13

If setting is complete, the above page will display after about 10s.

After your WiFi card set ok and get IP address from your router for example: 192.168.40.20, (You may see the IP address from LED as **picture 5-4**)

Input: http://192.168.40.20/ will display the following page:

Ciatua	Inverter information Inverter serial number	NLDN50201378T012	Help
Magaal	Firmware version (main)	Ø∳0-V6 5-298	The device can be used as wireless access point (AP
vvizaru	Firmware version (slave)	V3.2-767	mode) to facilitate users to configure the device, or it ca
vvireless	inverter model	omnik5000TL2	also be used as a wireless
Advanced	Rated power	5000 W	mode) to connect the remo
Account	Current phwer	10 W/	server via wireless router.
Update	Yield tuday	100.7 KWK	
Restart	Total ÿield	100.7 kWh	
Reset	Alarms		
	Last updated	0 Min Ago	
	Firmware version Wireless AP mode SSID IP address	114.01.06Y1.0.05W1.0.04 Enable AP_606648068 10.10.100.254	
	Wireless STA mode Router SSID Signal Quality IP address	Connect router, STA will enable MNIK-314 Get IP from router	
	MAC address	AC:CF-23:13:3D:21	
	∧ Remote server inform Remote server A	ation Pingable	
	Remote server B	Connected to remote router Unpingable	
	Parata casar C	Lingingable	

Picture 7-14

You may also add your domain name of WiFi card to easy access according below picture, after you set ok, input **http://wifi**, you may also access the related page:

		neih
Network mode	11b/g/n mixed mode -	In this page, you can configure the parameters of
Network name(SSID)	AP 606648068	the device when it works under the wireless access
Module MAC address	AC:0E:23:13:30:20	point mode.
Select channel	Auto-select -	Please do not change the
Transmission power	High -	parameters change will
	Save	cause device manunction.
eless access point security setting		restaned.
Encryption mode	Disable 👻	
	Save	_
l parameters setting		
IP address (DHCP gateway setting)	10, 10, 100, 254	
Subnet mask	255, 255, 255, 0	
DHCP Server	Enable 🗸	
Domain name	wifi	
(The domain name should be w	ithin 1-30 characters, and	
	Network mode Network name(SSID) Module MAC address Select channel Transmission power eless access point security setting Encryption mode I parameters setting IP address (DHCP gateway setting) Subnet mask DHCP Server Domain name The density setting	Network mode 11b/g/n mixed mode • Network name(SSID) AP_606648068 Module MAC address AC:CF:23:13:3D:20 Select channel Auto-select • Transmission power High • Save eless access point security setting Encryption mode Disable • Save Parameters setting IP address (DHCP gateway 10:10:100.254 setting) Subnet mask 255.255.0 DHCP Server Enable • Domain name wifi

Picture 7-15

Now we finish the network setting, then you may login <u>www.omnikportal.com</u> to browse your data.

8. Login Monitoring System

After the successful register and account activation, open the login interface as below **picture 8-1**, input the correct email and code and enter the PV monitoring system, then you can monitor and manage the power station.

omnik Logout Solar Inverter Public Sites Account Home My Site Mar OmnikSol 4K WiFi Map Satell te (1) Address: xinghu Road No.218 Biobay Country: China Peak Power: 5.68 KW Edit Delete 2) 501000014 Address: Kazakhstar Mon **Power station list** Country: 阿根廷 Turkey Peak Power: 0.23 KW Edit Delete Pakistan Egypt India 3 Andy to europe Address: Country: 比利时 Kenya Peak Power: 0.14 KW Papua New Guinea Tanzania Edit Delete

"End User" User Interface

Picture 8-2

Navigation Bar

Picture 8-5

Main interface of Power Station

0	nnikSol 4K \	WiFi 🗷	1				Overview	Real	Time Histo	ry Ale	nt S	ystem
5	5/23 Chance of Rain 6	4-75F 🎴	5/24 Chanc	e of Rain 63-7:	2F 🔀	5/25 Chance	of Rain 61-72F			Inter	Alerts: nal tem	563 items p erature
No.	Inverter S/N	Channel	DC Input Voltage(V)	Current(A)	Phase	Voltage(V)	AC Outp Current(A)	out Power(W)	Frequency(Hz)	Total Energy (kWh)	Temp- erature(°C)	Time
		PV1	255.5	2,2	R	231,8	2,2	529				
1	DEDN402011B00003	PV2	0.0	0.0	S	0.0	0,0	0	50.04	1288.6 23.0	23.0	2012-05-23
		PV3	ū	Q	Ť	0.0	0.0	D.			1	08132156
		PV1	247,4	0,3	R	231.0	0.3	0	La	test data	a collect	ting time
2	GBDN202011800031	PV2	0.0	0.0	ŝ	0.0	0,0	0	50,05	442	30.0	2012-04-16
		PV3	0	0	T	0.0	0,0	0				17:34:48

Picture 8-6

Real Time Interface

Picture 8-7 History Interface

omnikSol 4K Wil			Overview	Real Time History	Alert	System
5/23 Chance of Rain 64-75	F 🥌 5/24 Chance of Rain 63-72F ew All 🛛 🔣 🚺 Page 1	of 57 2 20 C	Rain 61-72F		4	Alerts: 563 item
Inverter	Inverter Manufacturer	Information	Code	Alert Time	Status	View History
DEDN202011800912	Default	Utility Loss	F09	3/8/2012 16:10:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:9;3	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 12:56:36	Unhandled	History
DEDN202011800912	Default	Utility Loss	F09	3/8/2012 16:11:38	Unhandled	History
GBDN202011800031	Default	Utility Clic	k. turn	to picture 8-7	Unhandled	History
GBDN202011800031	Default	Utility	,		Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:19:10	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/13/2012 13:6:38	Unhandled	History
GBDN202011800031	Default	Utility Loss	F09	2/11/2012 11:24:14	Unhandled	History
CRDN202011800031	Default	Litility Loss	FN9	2/13/2012 13:11:42	Unbandled	History

Picture 8-8

Alert Interface

System Setting Interface

3 Chanc	e of Rain 64-75F S724 Chance	e of Rain 63-72F 🎦 5/25 Chance of Rai	n 61-72F	📥 Alerts: 5
	Datalogger 5/N	Datalogger Name	Manufacturer	Operate
Ľ	601230010		Unfound	Delete Edit
2	300000012	网关1	Unfound	Delete Edit
	Add			

Picture 8-10

System Setting Interface

9. iPhone & iPad Application

9.1 Auto Mode

After registration of the power station, you can input the key words: Omnik, solar, inverter, PV, energy, plant, monitor at the app store, then you can download the Omnik solar (iPhone) and Omnik Solar HD (iPad) at app store.

After the download input your user name and password, then visit your station, (we supply a free demo, for the users who do not register) choose the power station and enter the main interface, and then you the daily energy etc. will be displayed.

Meanwhile, you can view the relevant date to view the curve as below:

Picture 9-1

- 1. Log in interface
- 2. Power station list interface
- 3. Main interface
- 4. Daytime curve interface

9.2 Manual Mode

1) Step for monitoring without Internet connection (Manual Mode)

Search the WiFi list on your smart device and connect to the relevant Inverter WiFi data logger beginning with AP_6xxxxxx (as shown in the example below).

Open "**Solar View**" on your device (which you should have downloaded from Apple APP store), and choose "**Manual Mode**". You are now able to monitor the inverter and the power being generated through it.

This example shows device connection to an inverter with 601184936 WiFi:

Both the Inverter WiFi and monitoring device (Smart Devices using IOS) connected to the LAN (not Internet) via the wireless router. Please follow instructions from 7. Network Settings (In AP mode by WiFi).

After finishing the above procedures, launch the **"Solar View"** on your device and click **"manual mode"**. You are now able to monitor the inverter and the power being generated through it.

Picture 9-2

2) Features

- a. Monitoring WiFi device without internet connection.
- b. Display all the relevant data from the inverter.
- c. Local access is much faster, and does not rely on external networking.
- d. Same functions as online monitoring system.

Picture 9-3

- 1.Choose interface
- 2.Connect WiFi card ok
- 3.Setting page
- 4. Inverter information

10. Contact

If you have any technical problems about our products, please contact us, you should confirm the follow things before contact us:

- Device model
- Data collector serial number
- The number of connected inverter

Add: Xinghu Road No.218 bioBAY Park A4, Suzhou China

Zip code : 215213 Fax: +86 512 6295 6682 Tel: +86 512 6295 6676 Mail: Sales@omnik-solar.com

Appendix.

1. LED Indicators

Picture A1

LED Name	Status	Description
	On/Blinking	Module is working
KUN	Off	Module is not working
	On	Module is successfully connected to the server by WiFi under STA mode
LINK	Blinking	The WiFi module is in AP mode
	Off	In STA mode; No WiFi connection or no connection to the server
	On	Communication with the inverter is working
STATUS	Blinking	Communicating with the inverter (transferring data)
	Off	Communication with the inverter is not working

2. Troubleshooting

Status					
RUN	LINK	STATUS	Possible Causes	Solution	
On/Blinking	On	On	Connection is successful	No need	
On/Blinking	On	Blinking	Communicating with the inverter	No need	
Off	Off	Off	No power connection	Check if the connecting fingers are contacting properly	
	On	Oli		Check if the inverter is working properly	
On/Blinking	Off		Inverter connection is abnormal	Check if the inverter is working properly	
		Off Off	Resetting or initializing	Check the LEDs again after 1 minutes	
			WiFi connection is not successful	Change the position of the inverter or the antenna to get better signal reception	
				Antenna is not properly connected	Check if antenna is connected properly. Screw tight if loose
On/Blinking	On	Off	Communication with the inverter is abnormal	Check if the connecting fingers are contacting properly	
On/Blinking	On	On X	Connection of the data	Check the setting of AP wireless router	
				Check the WiFi settings	

Note 1 : X means status unknown.

Note 2 : If the device is still not working after above operations in the table, please try resetting the device. If it is still not working after the reset, please contact customer service of the manufacturer.