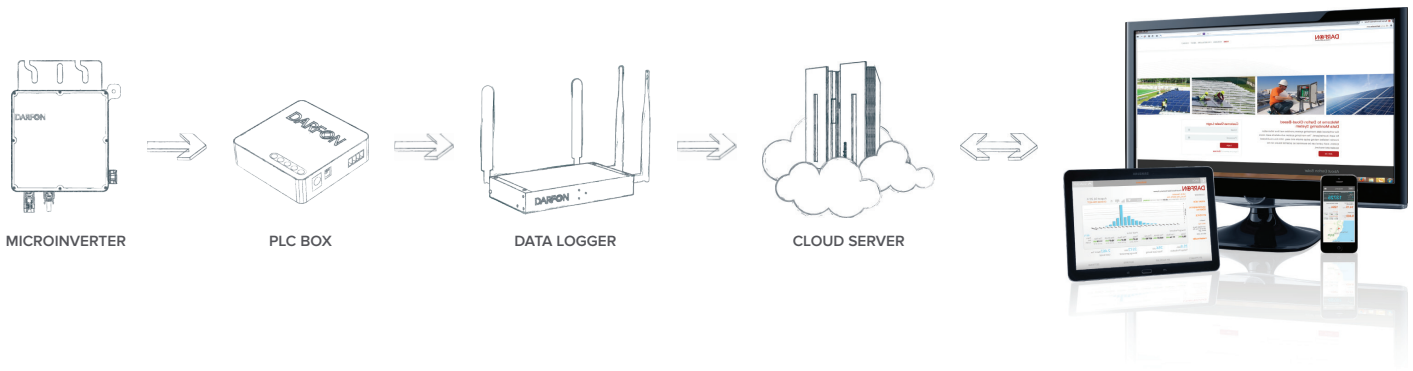
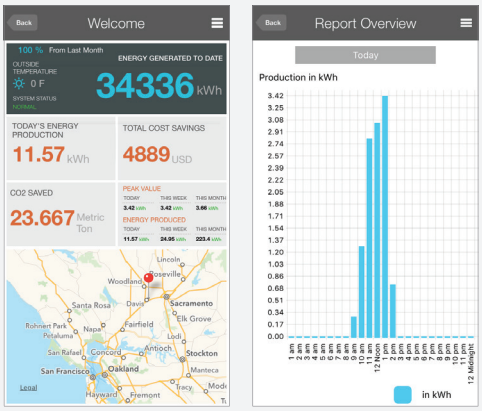
Cloud-Based Monitoring System



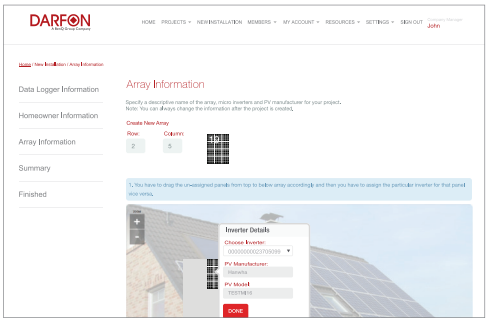
Monitoring for a PV system is a must, whether you are a homeowner, installer or utility. It is the most efficient and inexpensive way to troubleshoot and maintain a PV system. It only makes sense that our monitoring system should be cloud-based for ease of access from anywhere in the world, through a web portal, an Android or iOS mobile app.

With Darfon's monitoring system, each module/microinverter's performance is tracked, so it can be used to pinpoint performance issues and provide guidance for maintenance, ensuring the system is at its optimal performance over the lifetime of the installation.

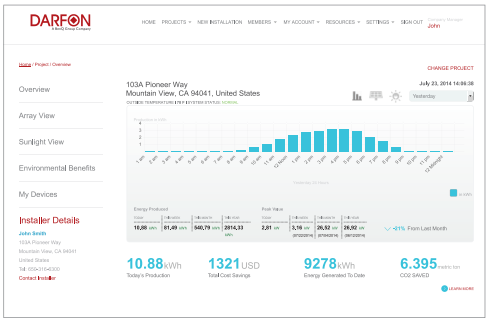
Screenshots from a phone



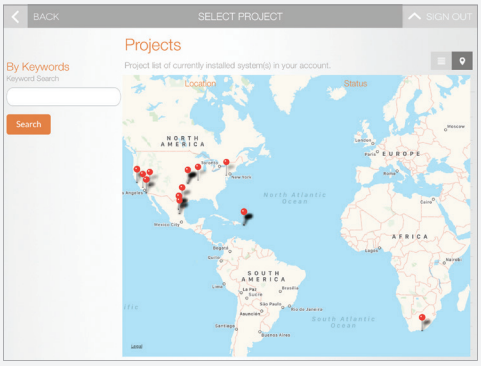
Easy Setup: Drag & drop PV panels to create arrays. System auto-detects microinverters.



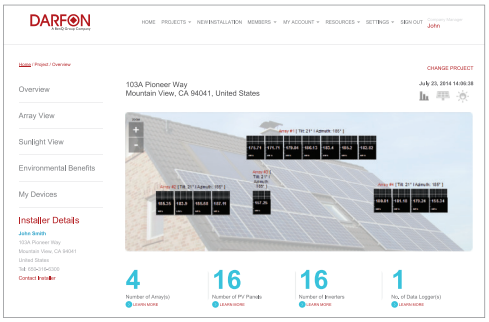
Graph View: An overview of the energy production for the day, month or year.



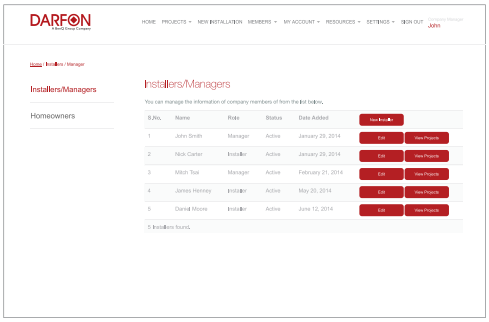
Screenshots from a tablet

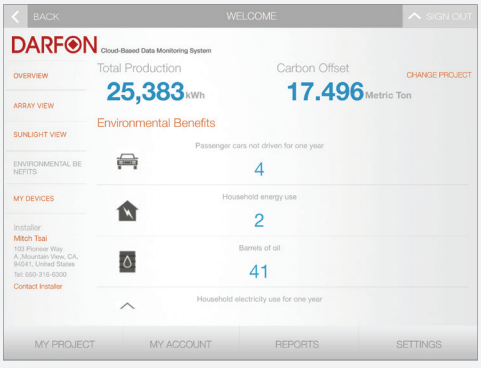


Array View: An overview of the energy production by solar panel.



Manage Access: Manage your company's installers and their PV systems.





For more information, visit/contact us at www.darfonsolar.com or pvsales@darfon.com

DARFON

Cloud-Based Monitoring System

DATA LOGGER SPECIFICATIONS

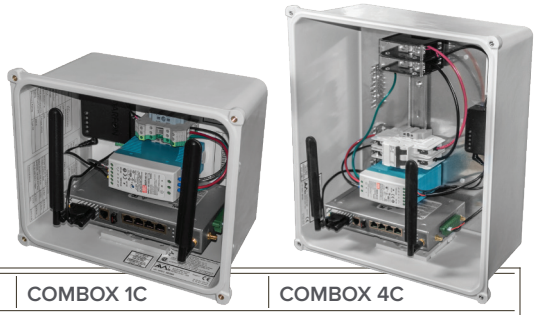
DEVICE INTERFACE	
Uplink	Embedded 3G (dual SIM), RJ45 FE (x4)
Communication Port	DB9 RS485 (Up to 3 PLC Boxes)
Management Port	RJ12 RS232 (Console)
Storage & Log	USB 2.0 (32G Max.)
Cellular Band[1]	UMTS(WCDMA): 2100/1900/850 MHz GSM: 1900/1800/850/900 MHz
Antenna (Detachable)	2x 5dBi (WiFi), 2x 3dBi (3G)
MECHANICAL DATA	
Operating Temperature[2]	-10 to 50°C (14 to 122°F)
Protection Rating	IP20 (Indoor Use Only)
Dimensions (WxHxD)	187x110x31mm (7.4x4.3x1.2in)
Weight	0.67kg (1.5lb)
Compliance	UL 60950-1, EN 301 489, EN 301 511, EN 301 908, EN 55022, EN 61000, FCC Part 15B/C
POWER	
Power Supply Input	Dual 12VDC, 2A Max.

For communication reliability, Darfon Cloud-based monitoring solution separates the communication before it reaches the service panel. The solution includes two hardware pieces: the PLC Box and Data Logger. The PLC Box is installed between the microinverters and service panel then sends information to the Data Logger. By bypassing the service panel, you avoid all the white noise and get a clean, stable signal. This latest generation of Data Logger incorporates WAN and GSM transmission for connecting to the Cloud.

To make installation faster and easier for our installers, Darfon's ComBox prewires the Data Logger and PLC Box into a junction box that is simple to install. ComBox 1C is for one circuit PV systems, whereas, ComBox 4C is for larger installations with up to 4 PV circuits. With ComBox 1C, you just need to bring the grid tie and PV conductors into the box and land them on the quick connect terminals. With ComBox 4C, you will need to install the circuit breakers you need, then land the PV and grid tie conductors. Utilizing the 1C and 4C ComBoxes, you have all the advantages of separating the PLC communications from the noisy house circuitry without the complicated wiring.

PLC BOX SPECIFICATIONS

COMMUNICATION	
Communication Port	RS485 For Data Logger[3]
Number of Devices	Up to 76 Microinverters
Transmission Distance[4]	Up to 50m (164ft)
MECHANICAL DATA	
Operating Temperature	-10 to 50°C (14 to 122°F)
Dimensions (W x H x D)	70x70x20mm (2.8x2.8x0.8in)
Weight	57.1g (2oz), Adaptor 65.3g (2.3oz)
Protection Rating	IP20 (Indoor Use Only)
Compliance	UL 60950-1, FCC Part 15 Class B
POWER	
Power Consumption	7.2W (Maximum)
Power Supply Input	12VDC, 600mA



COMBOX SPECIFICATIONS

MODEL	COMBOX 1C	COMBOX 4C
Number of Circuits	1	Up to 4
Current per Circuit	30A	30A
Number of G320 (240V, 1.25A)	Up to 19	Up to 76
Number of G640 (240V, 2.5A)	Up to 9	Up to 36
Dimensions (WxHxD)	305x254x203mm (12x10x8in)	305x356x203mm (12x14x8in)
Weight	3.7kg (8.2 lb)	5.7kg (12.6 lb)
Field Size Wiring (Class 1)	10-18 AWG, 600V	10-18 AWG, 600V
Integrated Monitoring Hardware	Data logger & PLC Box	Data logger & PLC Box
Enclosure Material/NEMA Rating	Non-metallic/Type 4X	Non-metallic/Type 4X
Enclosure Short Circuit Rating	200A	200A

[1] Supported cellular band is dependent upon regional hardware version.
[2] 3G and Wi-Fi performance will be degraded if device's ambient temperature is above 55°C.
[3] The maximum distance between the Data Logger and PLC Box is 1312ft (400m).
[4] The distance from the PLC Box to the microinverter at the farthest end of the AC branch.

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