



**GoodWe Smart Solution for Module-level  
Monitoring, Rapid Shutdown & Optimization**

**Tigo**<sup>®</sup>



**GOODWE**  
YOUR SOLAR ENGINE



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## Highest ROI with Selective Deployment

Optimize only the shaded modules



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## Higher Recovery

36% recovery of energy loss



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## Module-level Monitoring

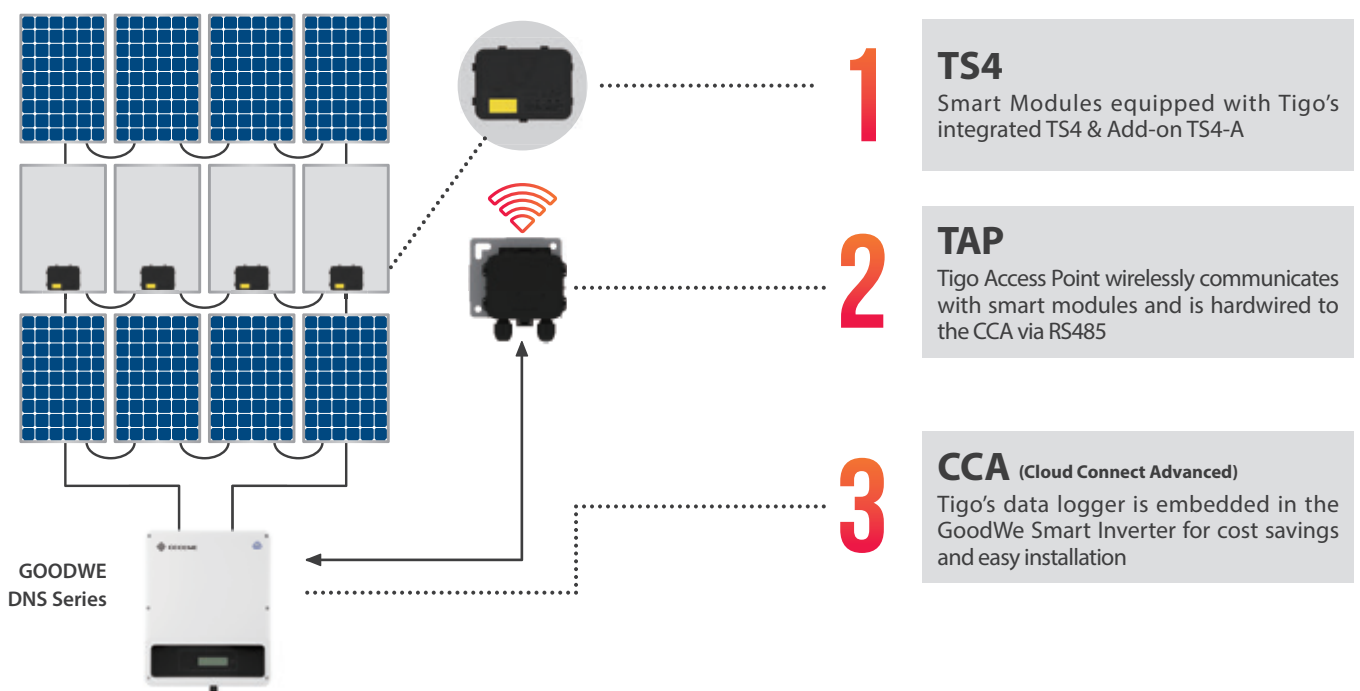
Pinpoint issues remotely without going on site



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## Cost Savings

Less hardware thanks to seamless integration of CCA Datalogger





## Higher Energy Yields

- Maximum energy yields even in challenging conditions
- Compatible with virtually any PV Module
- Pinpoint issues without going on site with module-level monitoring



## Lower Installation Costs

- Less hardware thanks to seamless integration
- Easier & faster installation with the elimination of a box
- Plug and play - No grounding needed



## Increased Safety

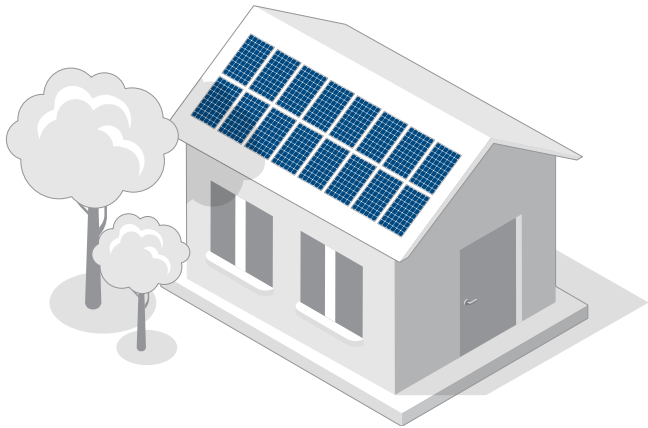
- NEC 2014 & 2017 690.12 rapid shutdown compliance
- Module-level deactivation
- Automatic or manual shutdown
- Over-voltage protection

# Applications

## Highest ROI with Selective Deployment

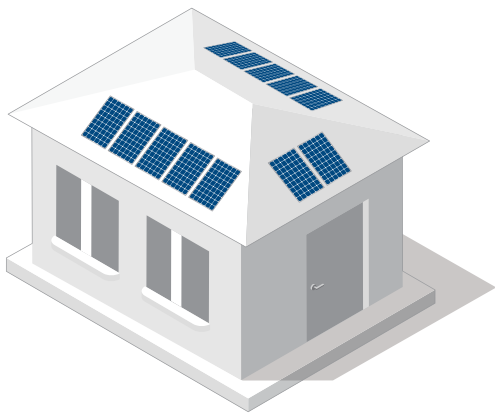
Solve only the problem that interests you, optimize when and where needed

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### System optimization with partial shading

Only the modules affected by shading need to be equipped with Tigo TS4



### System optimization on complex roofs

In systems with different orientations, only the modules outside the main orientation need to be equipped with Tigo TS4

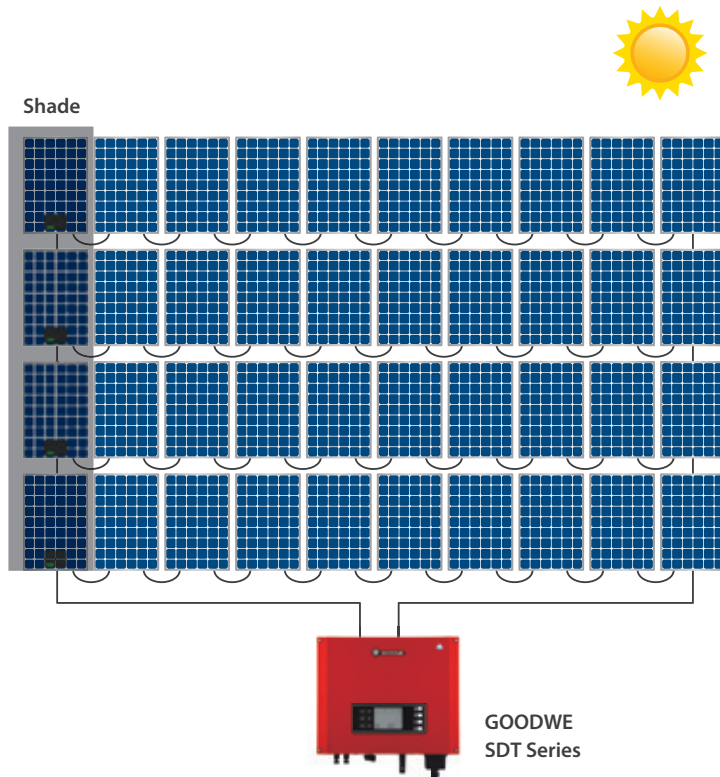
## Improve power savings and energy efficiency



**36%**

Using optimizers on shaded modules recovers an average of 36% energy loss due to mismatch.

# Generate more yield and higher ROI



## Case scenario

**10 kW GoodWe SDT Series  
with 40 modules (270W)**

40 modules, 4 shaded modules are  
on the same MPPT on 1 string

## Production without optimization VS with optimization

Strong current: shaded MPPT (16 x 270W + 4 x 0W) + unshaded MPPT (20 x 270W) = 9720W

Weak current: shaded MPPT (16 x 220W + 4 x 135W) + unshaded MPPT (20 x 270W) = 9460W

**With optimizers: 16 x 270W + 4 x 135W + 20 x 270W = 10260W**

**8.5%**

Optimized by 8.5%

**1200kWh**

Over 1200KWh more generation per year

# On-grid Inverter

**DNS Series** (Dual-MPPT, Single-Phase)

**SDT Series** (Dual-MPPT, Three-Phase)



Technical Data		GW3000D-NS	GW3600D-NS	GW4200D-NS	GW5000D-NS	GW6000D-NS	GW4000-DT	GW5000-DT	GW6000-DT	GW8000-DT	GW10KN-DT
PV String Input Data	Max. DC Input Power (W)	3900	4680	5460	6500	7200	5200	6500	7800	9600	12000
	Max. DC Input Voltage (V)	600					1000				
	MPPT Range (V)	80~550					200~800	200~800	200~800	200~850	200~850
	Start-up Voltage (V)	120					180				
	MPPT Range for Full Load (V)	150~550	180~550	210~550	250~550	280~550	195~800	240~800	285~800	380~850	480~850
	Nominal DC Input Voltage (V)	360					620				
	Max. Input Current (A)	11/11					11/11				
	Max. Short Current (A)	13.8/13.8					13.8/13.8				
	No. of MPP Trackers	2					2				
	No. of Input Strings per Tracker	1					1/1				
	AC Output Data	Nominal Output Power (W)	3000	3680	4200	5000	6000	4000	5000	6000	8000
Max. Output Apparent Power (VA)		3000	3680	4200	5000	6000	4000	5000	6000	8000	10000
Nominal Output Voltage (V)		220/230					400, 3L/N/PE				
Nominal Output Frequency (Hz)		50/60					50/60				
Max. Output Current (A)		13.6	16	19	22.8	27.3	8.5	8.5	10	12.1	15.2
Output Power Factor		~1 (Adjustable from 0.8 leading to 0.8 lagging)					~1 (Adjustable from 0.8 leading to 0.8 lagging)				
Output THDi (@Nominal Output)		<3%					<2%				
Efficiency	Max. Efficiency	97.8%					98.0%	98.0%	98.0%	98.3%	98.3%
	Euro Efficiency	97.5%					97.5%	97.5%	97.5%	98.0%	98.0%
Protection	Anti-islanding Protection	Integrated					Integrated				
	Input Reverse Polarity Protection	Integrated					Integrated				
	Insulation Resistor Detection	Integrated					Integrated				
	Residual Current Monitoring Unit	Integrated					Integrated				
	Output Over Current Protection	Integrated					Integrated				
	Output Short Protection	Integrated					Integrated				
	Output Over Voltage Protection	Integrated					Integrated				
General Data	Operating Temperature Range (°C)	-25~60					-25~60				
	Relative Humidity	0~100%					0~100%				
	Operating Altitude (m)	≤4000					≤4000				
	Cooling	Natural Convection					Natural Convection				
	Noise (dB)	<25					<30				
	User Interface	LCD & LED					LCD & LED				
	Communication	WiFi or Ethernet					WiFi or Ethernet				
	Weight (kg)	14					24				
	Size (Width*Height*Depth mm)	354*433*147					516*415*192				
	Protection Degree	IP65					IP65				
	Night Self Consumption (W)	<1					<1				
Topology	Transformerless					Transformerless					
Certifications & standards	Grid Regulation	VDE-AR-N 4105, VDE0126-1-1, EN50438(PL), EN50438(SW), AS4777.2, G83, IEC61727, IEC62116				VDE-AR-N 4105, VDE0126-1-1, EN50438(PL), EN50438(SW), AS4777.2, G59, IEC61727, MEA, PEA, IEC62116		—			
	Safety Regulation	IEC62109-1&2					IEC62109-1&2				
	EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4					EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4				

# GoodWe Tigo Solution VS Other Optimizer Solutions

	GoodWe Tigo Solution	Other Optimizer Solutions
<b>Flexibility</b>	Mix & Match	1 size fits all
<b>Deployment</b>	Optimize where needed	All modules must be deployed
<b>Features</b>	Predictive IV Technology	Not Interchangeable
<b>Monitoring Granularity</b>	Data is gathered every two seconds and reported every minute	15 min, hard to know the status
<b>Functionality</b>	Compatible with Tigo TS4-L, -O, -S, -F, -M, and -D	Only 1 choice
<b>Installation Cost</b>	Only shaded panels need to be installed, short installation time	All panels needed to be installed, at least 30 min more time needed

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