

NX Horizon

Smart Solar Tracking System

Serving as the backbone on over 35 gigawatts of solar power plants around the world, the NX Horizon™ smart solar tracker system combines best-in-class hardware and software to help EPCs and asset owners maximize performance and minimize operational costs.

Flexible and Resilient by Design

With its self-aligning module rails and vibration-proof fasteners, NX Horizon can be easily and rapidly installed. The self-powered, decentralized architecture allows each row to be commissioned in advance of site power, and is designed to withstand high winds and other adverse weather conditions. On a recent 838 megawatt project in Villanueva, Mexico, these design features allowed for the project to go online nine months ahead of schedule.

TrueCapture and Bifacial Enabled

Incorporating the most promising innovations in utility scale solar, NX Horizon with TrueCapture™ smart control system can add additional energy production by up to six percent. Further unlocking the advantages of independent-row architecture and the data collected from thousands of sensors across its built-in wireless network, the software continuously optimizes the tracking algorithm of each row in response to site terrain and changing weather conditions. NX Horizon can also be paired with bifacial PV module technology, which can provide even more energy harvest and performance. With bifacial technology, NX Horizon outperforms conventional tracking systems with over 1% more annual energy.

Quality and Reliability from Day One

Quality and reliability are designed and tested into every NX Horizon component and system across our supply chain and manufacturing operations. Nextracker is the leader in dynamic wind analysis and safety stowing, delivering major benefits in uptime and long-term durability. NX Horizon is certified to UL 2703 and UL 3703 standards, underscoring Nextracker's commitment to safety, reliability and quality.

Features and Benefits

5 years in a row

Global Market Share Leader (2015-18)

35 GW

Delivered on 5 Continents

Best-in Class

Software Ecosystem and
Global Services

Up to 6%

Using TrueCapture Smart
Control System



GENERAL AND MECHANICAL

Tracking type	Horizontal single-axis, independent row.
String voltage	1,500 V _{DC} or 1,000 V _{DC}
Typical row size	78-90 modules, depending on module string length.
Drive type	Non-backdriving, high accuracy slew gear.
Motor type	24 V brushless DC motor
Array height	Rotation axis elevation 1.3 to 1.8 m / 4'3" to 5'10"
Ground coverage ratio (GCR)	Configurable. Typical range 28-50%.
Modules supported	Mounting options available for virtually all utility-scale crystalline modules, First Solar Series 6 and First Solar Series 4.
Bifacial features	High-rise mounting rails, bearing + driveline gaps and round torque tube.
Tracking range of motion	Options for $\pm 60^\circ$ or $\pm 50^\circ$
Operating temperature range	SELF POWERED: -30°C to 55°C (-22°F to 131°F) AC POWERED: -40°C to 55°C (-40°F to 131°F)
Module configuration	1 in portrait. 3 x 1,500 V or 4 x 1,000 V strings per standard tracker. Partial length trackers available.
Module attachment	Self-grounding, electric tool-actuated fasteners.
Materials	Galvanized steel
Allowable wind speed	Configurable up to 200 kph (125 mph) 3-second gust
Wind protection	Intelligent wind stowing with symmetric dampers for maximum array stability in all wind conditions
Foundations	Standard W6 section foundation posts

ELECTRONICS AND CONTROLS

Solar tracking method	Astronomical algorithm with backtracking. TrueCapture™ upgrades available for terrain adaptive backtracking and diffuse tracking mode
Control electronics	NX tracker controller with inbuilt inclinometer and backup battery
Communications	Zigbee wireless communications to all tracker rows and weather stations via network control units (NCUs)
Nighttime stow	Yes
Power supply	SELF POWERED: NX provided 30 or 60W Smart Panel AC POWERED: Customer-provided 120-240 V _{AC} circuit

INSTALLATION, OPERATIONS AND SERVICE

PE stamped structural calculations and drawings	Included
Onsite training and system commissioning	Included
Installation requirements	Simple assembly using swaged fasteners and bolted connections. No field cutting, drilling or welding.
Monitoring	NX Data Hub™ centralized data aggregation and monitoring
Module cleaning compatibility	Compatible with NX qualified cleaning systems
Warranty	10-year structural, 5-year drive and control components.
Codes and standards	UL 3703 / UL 2703 / IEC 62817