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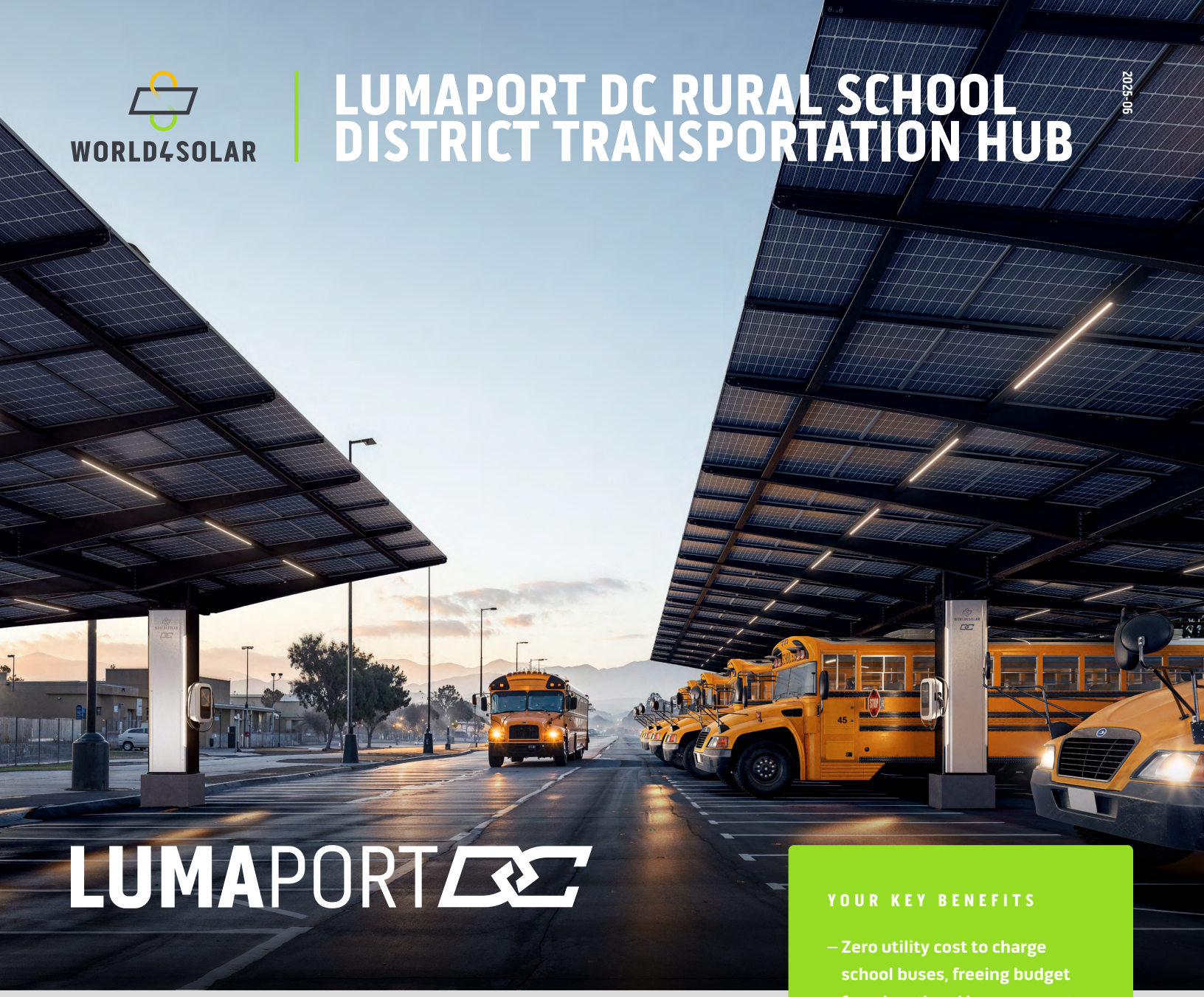
LUMAPORT DC RURAL SCHOOL DISTRICT TRANSPORTATION HUB

2025-06



LUMAPORT DC

1. INITIAL SITUATION

A rural school district in New Mexico adapts to newly passed federal laws to electrify student transportation. It now operates a small fleet of new electric school buses, but the area lacks reliable grid infrastructure and DC fast-charging options.

Power outages are frequent, and grid upgrades are prohibitively expensive. The fleet is unreliable in operation, resulting in students arriving late to school or being forced to look for alternative transportation in particular situations.

2. LUMAPORT DC SOLUTION

Two arrays of LumaPort DC are installed as a solar-powered charging hub at the district's bus depot. Charging the buses and a secure parking location are the two key factors, allowing the system to operate disconnected from the grid and making the installation very affordable.

The batteries in the columns store solar energy during the day and deliver DC power directly to the bus chargers once they return from service by dawn, ensuring fast and efficient overnight top-offs. The clean and futuristic presentation of the LumaPort is welcomed by the community of the district.

YOUR KEY BENEFITS

- **Zero utility cost to charge school buses, freeing budget for educational improvements**
- **Full off-grid independence from unreliable infrastructure**
- **Reliable and resilient student transportation, enhancing security of the children and guaranteeing timely arrivals**
- **Zero emissions, supporting clean energy mandates and overall well-being of the community**
- **Enhanced fleet readiness for a growing DC infrastructure, driven by renewable energies**

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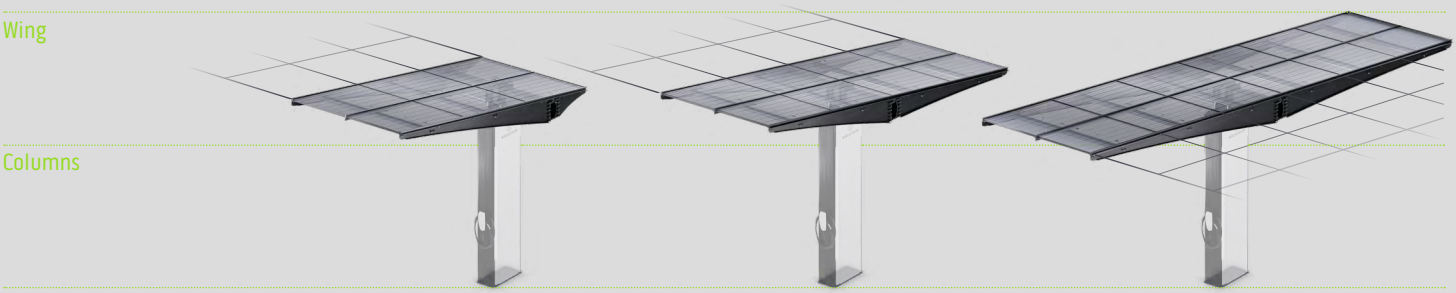
SALES SHEET
LUMAPORT DC WING SEGMENTS

2025-06

SCALE TO YOUR NEEDS



SPECIFICATIONS	LUMAPORT 5	LUMAPORT 7	LUMAPORT 10
Solar Output (Max) per Wing Segment	**2.46 kWp ***	**3.28 kWp ***	**4.92 kWp ***
Gapless Solar Roof per Wing Segment	**125 sq ft**	**167 sq ft**	**250 sq ft**
Amount of Panels per Wing Segment	**6 (at 67.7" x 44.6" x 1.3" each)**	**8 (at 67.7" x 44.6" x 1.3" each)**	**12 (at 67.7" x 44.6" x 1.3" each)**
Min. Clearance	**11.0 ft**	**9.5 ft**	**9.7 ft**
Wing Segment Width	**7.5 ft**	**7.5 ft**	**7.5 ft**
Covered Depth	**16.9 ft**	**22.3 ft**	**33.8 ft**
Tilt Angle	**10 degrees**	**10 degrees**	**7.4 degrees**
Minimum System Size	**5 Wing Segments w/ 2 Columns**	**5 Wing Segments w/ 2 Columns**	**5 Wing Segments w/ 2 Columns**
Design Loads	**ASCE 7-16**		
Material Structure	**Bulletproof, Black Steel (Powdercoated)**		

- LumaPort is a modular system, scalable in the above 7.5 ft increments up to 150 ft length
- Columns can be placed individually, but must be within a maximum distance of 28ft
- Output is calculated using World4Solar's recommended panels APTOS DNA-108-BF10 410W

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SALES SHEET
LUMAPORT DC COLUMNS

2025-06

Outside Presentation

Inside Components

SPECIFICATIONS

Max. PV Power per Column	**22kWp**
Max. Battery Power per Column	**24kWp**
Storage Capacity per Column	**72kWh**
Battery Type	**LFP (LiFePO4)**
Cooling / Heating	**Forced Air / Integrated Heating Plates**
Operating Ambient Temperature	**-4°F – 122°F / -20°C – 50°C**
Ingress Protection	**Battery Block: IP67 / BMS: IP54**
Compliance	**UL9540A, CEC, UL1973, CE-EMC, CB62619, IEC62040, IEC63056, VDE2510**
Column Footprint	**16“ x 33“ (Width x Depth)**
EV Charger Continous Charging Power	**25kWp**

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SALES SHEET
LUMAPORT DC VERSATILITY

2025-06

HARNESS THE RAW POWER OF THE SUN

LumaPort DC is the most advanced energy hub on the market. By offering unaltered DC power output, it is the most efficient solar-powered EV charging and energy storage system available.

FASTER EV CHARGING

Direct DC fast Level 3 qualified charging, up to 30 kW

MAXIMIZED USABLE ENERGY

Eliminates AC/DC conversion inefficiencies

COST SAVINGS

Use stored solar energy to avoid peak rates

ENERGY INDEPENDENCE

Works off-grid or as a backup / microgrid system

SCALABLE & MODULAR

Modular system for small to large-scale deployments

SMART DISTRIBUTION

Smart energy management balancing charge / discharge to maximize longevity

IDEAL APPLICATION FOR:

- **EV FLEET CHARGING:** Ideal for logistics hubs and municipal transport fleets
- **COMMERCIAL PROPERTIES:** Offer premium EV charging services
- **APARTMENT COMPLEXES:** Provide off-grid, resilient EV charging
- **PUBLIC & WORKPLACE CHARGING:** Reliable solar-powered charging solutions
- **DISASTER RESILIENCE HUBS:** Emergency power for blackouts