

Commercial Proposal for Supply

Foldable Modular Dwelling 20ft Double-Wing with Panoramic Glazed Facade and Full Interior Fit-Out

Metal-Asia

Procurement Partner: Metal-Asia.pw

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Executive Summary

Metal-Asia.pw presents a premium modification of the 20ft Double-Wing foldable modular dwelling featuring panoramic glazed wing facades. This configuration retains all operational advantages of the base model — 30-minute deployment, 40HQ container compatibility, and full turnkey interior fit-out — while delivering a contemporary architectural statement through front-facing glass curtain walls. The unit is engineered for hospitality mini-hotels, sales pavilions, pop-up offices, and premium residential applications where visual transparency and natural lighting are critical value drivers.

All materials carry CE and ISO9001 certification. The structure withstands seismic events up to Magnitude 8 and wind loads up to 120 km/h. Triple-glazed wing facades with Low-E argon-filled units achieve $U_g \leq 1.1 \text{ W/m}^2\text{-K}$, ensuring thermal performance compliance across temperate and continental climate zones.



Dome architecture modular buildings for commercial hospitality applications

Product Technical Specifications

Parameter	Specification
Product Designation	20ft Double-Wing Foldable House Premium (20)
Expanded Dimensions	5900 × 6300 × 2480 mm (L × W × H)
Folded Dimensions	5900 × 2200 × 2480 mm (L × W × H)
Gross Floor Area	37.2 m ²
Internal Ceiling Height	2240 mm

Parameter	Specification
Unit Weight (Base Structure)	2100 kg
Unit Weight (Full Fit-Out)	2600–3800 kg
Design Service Life	20–30 years
Seismic Resistance	Magnitude 8 (Chinese Standard)
Wind Load Rating	0.6 kN/m ² (up to 120 km/h)
Wall Thermal Conductivity	0.048 W/m ² ·K
Acoustic Insulation	≥ 20 dB
Operating Temperature Range	-45°C to +50°C
Floor Load Capacity	2.0 kN/m ²
Roof Load Capacity	0.9 kN/m ²
Fire Rating	Class A (Non-combustible materials)
Assembly Time	4 workers × 30 minutes = 1 unit

Structural Frame and Load-Bearing Components

Item	Component	Material	Specification	Qty	Remarks
1	Primary Frame	Steel Q235B	Section 80×100 mm, wall thickness 2.5–3.0 mm	1 set	Hot-dip galvanization ≥ 80 g/m ²
2	Floor Joists	Steel Q235B	Section 60×40×1.5 mm	1 set	Spacing 400 mm on center
3	Vertical Posts	Steel Q235B	Section 40×40×1.5 mm	1 set	Bolted connections
4	Corner Castings	Steel	4 pcs., thickness 4 mm	4 pcs.	Crane lifting points
5	Wing Hinges	Stainless Steel 304	Thickness 6 mm	8 pcs.	Reinforced pivot assemblies
6	Frame Finish	Powder Coating	RAL 9005 (Jet Black)	—	Two-layer application
7	Anchor Bolts	Steel Grade 8.8	M16×200 mm	16 pcs.	Foundation anchoring

Wall and Roof Panel Systems

Item	Position	Material	Thickness	Density/Property	Area	Remarks
1	External Walls (Primary)	EPS Sandwich Panel	75 mm	EPS density 12 kg/m ³ , facing 0.35 mm PPGI	30 m ²	Thermal insulation, moisture-resistant
2	External Walls (Facade)	Embossed Metal Cladding	16 mm	PU insulation, "Wenge Wood" grain finish	12 m ²	Decorative facing layer
3	Wing Glazed Facades	Glass Curtain Wall	5+12A+5+12A+5 mm	Tempered glass with Low-E coating, argon-filled	16 m ²	Panoramic glazing on front wings
4	Internal Partitions	EPS Sandwich Panel	50 mm	EPS density 12 kg/m ³ , facing 0.35 mm PPGI	24 m ²	For 2-bedroom layout
5	Ceiling	Bamboo Fiber Panels	8 mm	Density 850 kg/m ³	37 m ²	Eco-friendly interior finish
6	Internal Walls	Bamboo Fiber Panels	8 mm	Density 850 kg/m ³	56 m ²	Moisture-resistant
7	Subfloor	Glass Magnesium Board	18 mm	Density 1200 kg/m ³	37 m ²	Fire rating Class A
8	Floor Finish	SPC Stone-Plastic Composite	4.0 mm	Wear class AC4	37 m ²	Waterproof, anti-static
9	Roof	Galvanized Steel Sheet	2.0 mm	Hot-dip galvanization	37 m ²	With organized drainage

Door and Window Assemblies

Item	Position	Material	Dimensions	Qty	Glazing	Hardware
1	Entrance Door	Aluminum Thermal-Break ()	930×2040 mm	1 pc.	Tempered 5+12A+5 mm, Low-E coating	Lever handle with 3-key cylinder
2	External Windows	Aluminum Thermal-Break ()	930×1030 mm	4 pcs.	Tempered 5+12A+5 mm, Low-E coating	Outward casement + security mesh

Item	Position	Material	Dimensions	Qty	Glazing	Hardware
3	Internal Doors	Aluminum Frame + MDF	800×2000 mm	2 pcs.	—	Magnetic latch, concealed hinges
4	Bathroom Door	Titanium-Magnesium Alloy	700×2000 mm	1 pc.	Frosted glass 8 mm	Sliding track system
5	Bathroom Window	Aluminum Thermal-Break ()	500×500 mm	1 pc.	Tempered 5+9A+5 mm	Tilt-turn with insect screen
6	Wing Glass Facades	Aluminum Thermal-Break ()	2900×2200 mm	2 pcs.	Triple tempered 5+12A+5+12A+5 mm, Low-E	Fixed, with ventilation sashes

Wet Room Package (— Dry/Wet Separation)

Item	Component	Model/Material	Dimensions	Qty	Remarks
1	WC	JOMOO (), Ceramic	680×380×750 mm	1 pc.	Dual-flush 3/6 L, soft-close seat
2	Washbasin	Ceramic, Wall-Mounted	600×450 mm	1 pc.	With mixer tap and siphon
3	Mirror Cabinet	Aluminum + Mirror Glass	600×700×150 mm	1 pc.	LED backlight
4	Shower Set	Stainless Steel 304	—	1 set	Thermostatic mixer, 1.5 m hose
5	Floor Drain	Stainless Steel 304	100×100 mm	1 pc.	Dry trap design
6	Wet Room Walls	UV-Resistant Panels	8 mm	12 m ²	Waterproof, antibacterial
7	Wet Room Floor	SPC Stone-Plastic Composite	4.0 mm	4 m ²	Rubber base, anti-slip
8	Shower Partition	Tempered Glass	900×2000 mm, 8 mm thick	1 pc.	Sliding door, aluminum frame
9	Water Supply	PPR Pipes	Dn20/25 mm	1 set	Hot/cold, reinforced
10	Drainage	PVC Pipes	Dn50/110 mm	1 set	With backflow preventers

Item	Component	Model/Material	Dimensions	Qty	Remarks
11	Water Heater	Electric Storage	50 L, 1.5 kW	1 pc.	Under-basin mounting

Kitchen Module

Item	Component	Material	Dimensions	Qty	Remarks
1	Kitchen Cabinet L-Shape	Particleboard E1 Emission Class	2400×1500×850 mm (overall)	1 set	Soft-close drawers, damper hinges
2	Sink	Stainless Steel 304	600×450×200 mm	1 pc.	Undermount, with siphon and overflow
3	Kitchen Mixer	Brass with Chrome Finish	—	1 pc.	360° swivel spout
4	Water Supply	PPR Pipes	Dn20 mm	1 set	Cold water, coarse filter
5	Drainage	PVC Pipes	Dn50 mm	1 set	With grease trap

Electrical System

Item	Component	Specification	Qty	Remarks
1	Distribution Panel	Plastic IP40, 12 modules	1 pc.	DIN rail mounting
2	Circuit Breakers	16A, 32A, Type C	6 pcs.	30 mA RCD for wet room
3	Cabling	Copper PVC insulated	1.5 mm ² (lighting), 2.5 mm ² (sockets), 4 mm ² (HVAC)	150 m
4	Power Sockets	European Schuko Standard, 16A, 220V	12 pcs.	Grounded, IP44 in wet room
5	Switches	European Standard, 1-gang/2-gang	8 pcs.	With locator LED
6	Ceiling Lights	LED, 18W, 4000K	6 pcs.	Recessed into ceiling
7	Wet Room Light	LED, 12W, 4000K, IP65	1 pc.	Moisture-proof
8	HVAC Socket	16A, 220V	1 pc.	Dedicated circuit

Item	Component	Specification	Qty	Remarks
9	Water Heater Socket	16A, 220V	1 pc.	Dedicated circuit
10	Earthing	Copper Busbar 6×50 mm	1 set	Earth resistance ≤ 4 Ω

Terrace and Canopy

Item	Component	Material	Dimensions	Qty	Remarks
1	Terrace Platform	Aluminum Profile + Composite Decking	2000×5900 mm	1 pc.	2 m width, full facade length
2	Terrace Railing	Aluminum Profile + Tempered Glass	Height 1100 mm	11.8 lm	1.1 m height, 10 mm glass
3	Terrace Canopy	Aluminum Frame + Polycarbonate	2000×5900 mm	1 pc.	Cellular polycarbonate 8 mm, UV coating
4	Fixings	Stainless Steel 304	M10×80 mm	32 pcs.	For attachment to primary frame

Packaging and Marking

Item	Component	Packaging Type	Material	Dimensions (mm)	Gross Weight
1	Primary Module (Folded)	Full Wrap	Stretch film 23 μm + PP straps 19 mm + cardboard corner protectors	5950×2250×2530	2300 kg
2	Side Wings (Separate)	Palletized	Wooden pallet 1200×800 + stretch film	3000×2200×200	450 kg/pc
3	Glass Facade Panels	Reinforced Crate	18 mm plywood + 50 mm foam + corner protectors	3000×1200×200	180 kg/pc
4	Doors/Windows	Crated	12 mm plywood + 20 mm foam	1200×800×150	25–40 kg/pc
5	Sanitary Ware	Crated	5-ply corrugated cardboard + foam	800×600×500	15–30 kg/crate
6	Electrical	Boxed	Corrugated cardboard + PE bags	400×300×200	5–8 kg/box

Item	Component	Packaging Type	Material	Dimensions (mm)	Gross Weight
7	Finish Panels	Bundled	Stretch film + cardboard corners	2400×600×100	15 kg/bundle
8	Terrace/Canopy	Packaged	Stretch film + PP straps	2500×500×300	120 kg/set

Logistics Parameters

Parameter	Specification
Transport Configuration	5900 × 2200 × 2480 mm
Transport Volume	32.2 m ³
Gross Weight (Full Fit-Out)	3300–3800 kg
40HQ Container Capacity	2 units
20GP Container Capacity	Not compatible (5900 mm > 5898 mm internal)
40GP Container Capacity	Not compatible by height (2480 mm > 2393 mm internal)
Recommended Container	40HQ (High Cube)
Incoterms	FOB (China), CIF, DAP
Manufacturing Lead Time	15–25 working days
Sea Freight Transit	25–40 days

Harmonized System (HS) Codes

Component	HS Code	Description
Steel Frame	7308.90.00	Structures and parts of structures, of iron or steel
Sandwich Panels	7308.90.80	Metal structures with filling
Aluminum Windows/Doors	7610.10.00	Doors, windows and their frames and thresholds, of aluminum
Tempered Glass (Facade)	7007.19.00	Safety glass, toughened (tempered)
Ceramic Sanitary Ware	6910.10.00	Ceramic sinks, wash basins, baths, water closet pans
Mixer Taps	8481.80.00	Taps, cocks, valves for pipes
Copper Cables	8544.49.20	Electric conductors, of copper, for a voltage not exceeding 80V

Component	HS Code	Description
Sockets/Switches	8536.50.90	Electrical apparatus for switching or protecting electrical circuits
SPC Flooring	3918.10.00	Floor coverings of plastics
Bamboo Panels	4418.79.00	Builders' joinery and carpentry of wood
Polycarbonate (Canopy)	3920.61.00	Plates of polycarbonate

Global Procurement Services

Metal-Asia.pw operates as a direct procurement gateway for industrial and modular construction supplies sourced from certified Chinese manufacturers. For complex projects requiring technical validation, our [Engineering Audit](#) service delivers detailed specification reviews and risk mitigation prior to order placement. The full spectrum of [B2B Supply Chain Services from China](#) covers manufacturer selection, negotiation, quality control, and end-to-end logistics coordination.

All customs clearance and international freight matters are managed through our dedicated [Customs and Logistics Division](#), ensuring compliance with destination-country regulations. Corporate buyers may engage our [B2B Supplier Audit Program in China](#) for on-site facility verification and production-capacity assessment.

Our engineering team provides [Comprehensive Equipment Sourcing and Procurement](#) tailored to project-specific requirements, alongside [Integrated Engineering Systems Documentation](#) for installation and commissioning.

For buyers developing technical specifications for Chinese manufacturing partners, we recommend reviewing our guide on [Technical Specification Preparation for Chinese Manufacturers](#). A detailed explanation of specification structures and requirements is available in the [Technical Requirements \(TR\) Documentation](#) section.

Commercial Terms

Parameter	Specification
Unit Price (Variant 2)	77,400 CNY
Payment Terms	30% deposit, 70% before shipment (T/T) or L/C
Price Includes	Packaging, container loading
Price Excludes	Freight, insurance, customs duties, VAT, on-site assembly
Structural Warranty	1 year
Frame Coating Warranty	20 years (galvanization integrity)
Minimum Order Quantity	2 units (1×40HQ container)
Contract Currency	CNY / USD / EUR

Product Gallery



Prefabricated residential houses and modular construction systems for building sites

Frequently Asked Questions

Q1: How is thermal insulation achieved with the panoramic glass facade? A: The wing glazing utilizes a triple-pane configuration — 5+12A+5+12A+5 mm with Low-E coating and argon gas fill. The thermal transmittance coefficient $U_g \leq 1.1 \text{ W/m}^2\cdot\text{K}$. The aluminum thermal-break profile () eliminates thermal bridging. For climates below -25°C , external roller shutters are recommended as an optional upgrade.

Q2: Does the glass increase transport damage risk? A: Glass panels are individually crated in 18 mm plywood boxes with 50 mm foam cushioning and corner protectors. Each panel ships vertically. Over five years of export operations, the breakage rate during transit remains below 0.3%.

Q3: Can HVAC units be mounted on the glass facade? A: The outdoor HVAC unit mounts to the primary steel frame (never to glass). The indoor unit installs on an internal partition. The supply includes a dedicated 4 mm² circuit and 16A socket. Outdoor unit brackets are included in the kit.

Q4: What foundation solutions are suitable for this unit? A: For temporary deployment: concrete paving slabs 400×400×200 mm (8 pcs. at corners and centers). For permanent installation: 300×400 mm strip foundation or pile-and-beam system using Ø108 mm screw piles, 1500–2500 mm length depending on soil conditions.

Q5: Is furniture and appliance pre-installation available? A: Yes. Full fit-out packages include beds, wardrobes, table, chairs, sofa, refrigerator, microwave, washing machine, and air conditioning. Turnkey furnishing adds 12,000–18,000 CNY depending on specification level.

Q6: What is the warranty period for glazing and aluminum profiles? A: Glass unit warranty — 5 years (seal integrity, no condensation). Aluminum thermal-break profile warranty — 10 years (dimensional stability, hardware function). Frame warranty — 20 years.

Q7: Can this unit serve as a mobile office or retail point? A: Yes. The configuration is ideal for pop-up offices, pickup points, mini-cafes, and security posts. The panoramic glazing provides visual appeal and natural merchandising display. Signage mounting points and utility connection provisions are included.

Q8: What additional options are available for this variant? A: Available upgrades include: pitched roof (vs. flat), external siding cladding, underfloor electric heating, smart home integration (climate/lighting/access control), rooftop solar panels 300–500 W, rainwater harvesting system, and terrace perimeter lighting.

Contact Information

For comprehensive service details, visit [Metal-Asia.pw](https://www.metal-asia.pw).

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