Markforged

X7™ Field Edition

The turnkey industrial 3D printer for functional parts in the field

X7 Field Edition (FE) is a rugged, field-deployable carbon fiber 3D printer built for tactical response to supply chain challenges in remote locations. Increase supply chain resilience by printing tools, adapters, and replacement parts for equipment at the point of need. Recover faster when parts break, operate with less on-hand inventory, and minimize equipment downtime with flexible manufacturing. Allow engineers and operators to solve problems in the field — instead of expediting parts from across the globe — at a fraction of the cost, time, and effort.

X7 FE can be fully set up and ready to print in minutes. The unit contains the materials, spare parts, and tools needed to sustain production between resupply opportunities. The custom Pelican™ case arrangement can withstand transportation through harsh environmental conditions. Deploy The Digital Forge to remote locations with X7 FE, and reinvent the way you tackle global supply chain challenges.

X7 Field Edition Overview

Top-of-the-Line Continuous Carbon Fiber Printer

+ **Strong Parts** — Print continuous carbon fiber composite parts that are stronger than 6061 Aluminum and 40% lighter.
+ **Consistent Accuracy** — Integrated laser micrometer enables adaptive bed leveling and pre-print calibrations. Hit the same critical tolerances in-field as you would on-base.
+ **Large Build Volume** — Print parts as large as 13 x 10.6 x 7.9 in.

Field-Ready System

+ **All-in-One System** — Printer pack with all materials, replacement parts, and tools for months in the field.
+ **Rugged Packaging** — Pelican AL3232 single-lid case with custom foam modules and moving component locks to mitigate damage during transport. The X7 FE solution has been included in MIL-STD-810 testing in support of a DoD Program of Record.*
+ **Quick Deployment** — Go from packaged to printing in under three minutes. The fully loaded system weight of 188 lbs is designed for two-person lift.

*Testing performed and reported by the US Military. Individual results may vary and are not guaranteed.

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X7 Field Edition Overview

Simple, Smart Software

+ **Intuitive Print Interface** — Clean, simple user interface for effortless print configuration with a suite of onboard utilities for guided printer calibration and management.
+ **Digital Inventory Management** — Fully-featured offline part library with automated version control.
+ **STIG Compliant Operating System** — Enhanced printer security, whether you're connected to the cloud via satellite hotspot or offline in the middle of the desert.
+ **Optional WiFi** — Available with or without connectivity.

All-in-one system

1 Pelican AL3232 case

+ Rotomolded high-impact polyethylene case protects the printer in harsh environments
+ Eight total spring-back handles for easy carrying
+ Foam padding to protect components during transport

2 Printer layer

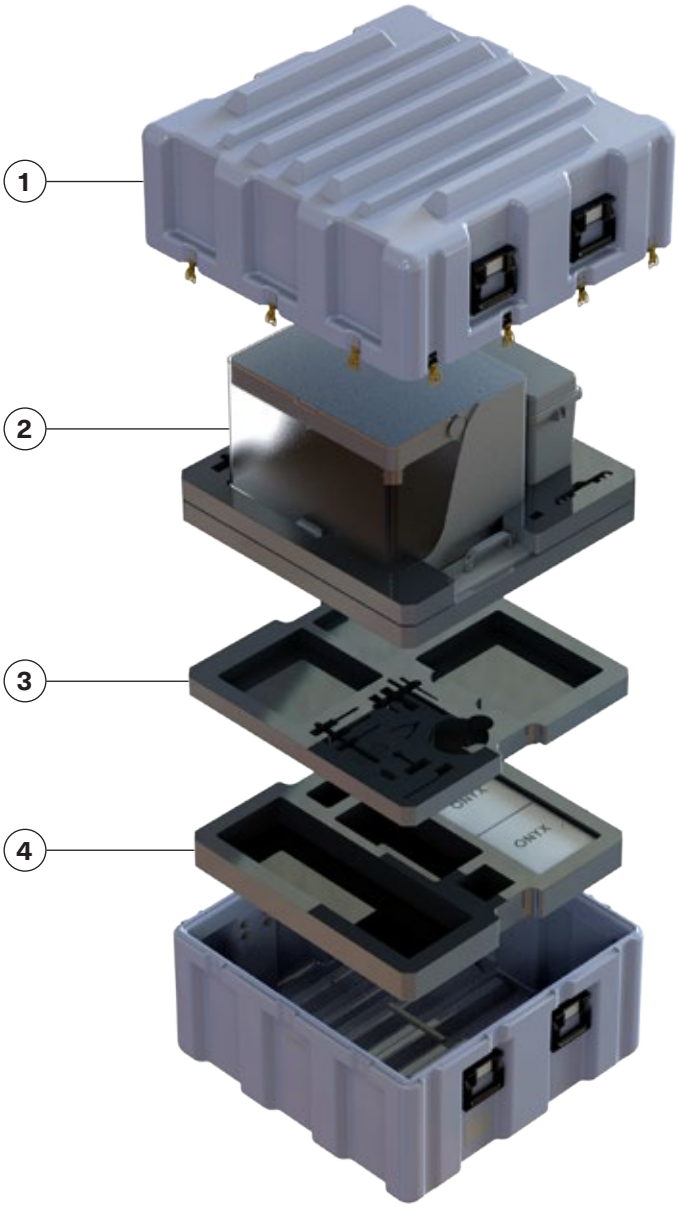
+ X7 industrial printer
+ Moisture-sealed material storage drybox
+ Upper foam for printer protection
+ 6061 aluminum honeycomb lightweight support layer
+ Integrated ventilation and mating geometry for secure placement on top of case

3 Tool layer

+ All tools required for X7 maintenance
+ Consumables storage
+ Main and spare print bed storage
+ Laptop storage area (laptop not included)

4 Material layer

+ 3x 800cc Onyx™ plastic spools
+ 2x 50cc Carbon Fiber spools
+ 1x 50cc Aramid Fiber (Kevlar®) spool
+ 1x 50cc Fiberglass spool
+ 1x 50cc HSHT Fiberglass spool



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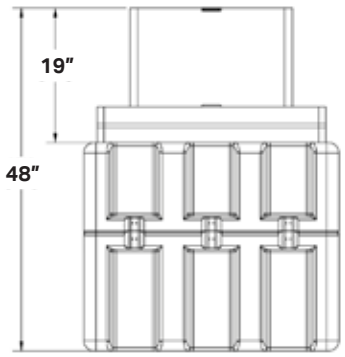
PRODUCT SPECIFICATIONS

X7 (Gen 2) Field Edition

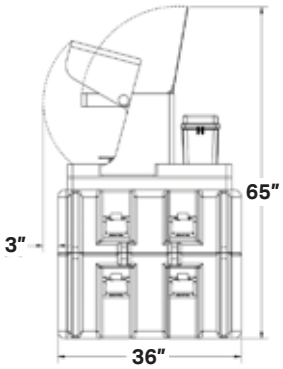
The X7 Field Edition is a ruggedized, field-deployable industrial 3D printer designed for tactical response to inventory challenges in remote locations. Increase supply chain resilience by printing tools, adapters, and replacement parts for equipment at the point of need.

Printer Properties	**Printer Model**	X7 (Gen 2)
	Process	Fused Filament Fabrication, Continuous Filament Fabrication
	Build Volume	330 x 270 x 200 mm (13 x 10.6 x 7.9 in)
	Case Weight	86 kg (189 lbs)
	Case Footprint	914 x 914 x 762 mm (36 x 36 x 31 in)
	Print Bed	Kinematic coupling — flat to within 80 µm
	Laser	In-process inspection, active print calibration, bed leveling
	Extrusion System	Second-generation extruder, out-of-plastic and out-of-fiber detection
	Power	100–240 VAC, 150W (2A peak)
	RF Module	Operating Band 2.4 GHz Wi-Fi Standards 802.11 b/g/n **
Materials	**Plastics Available**	Onyx, Onyx FR, Onyx ESD, Nylon White, P-PLA, S-TPU
	Fibers Available	Carbon Fiber, Carbon Fiber FR, Fiberglass, Aramid Fiber (Kevlar®), HSHT Fiberglass
	Tensile Strength	800 MPa (25.8x ABS, 2.6x 6061-T6 Aluminum) *
	Tensile Modulus	60 GPa (26.9x ABS, 0.87x 6061-T6 Aluminum) *
Part Properties	**Layer Height**	100 µm default, 50 µm minimum, 250 µm maximum
	Infill	Closed cell infill: multiple geometries available
Software	**Eiger Cloud**	Slicer, part / build management (other options available at cost)
	Security	Two-factor authentication, org admin access, single sign-on
	Blacksmith	Adaptive manufacturing platform (additional purchase required)

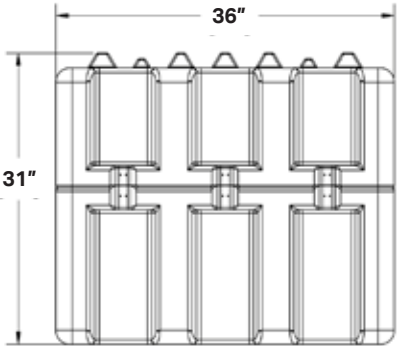
FRONT VIEW (DEPLOYED)



SIDE VIEW (DEPLOYED)



FRONT VIEW (PACKED)



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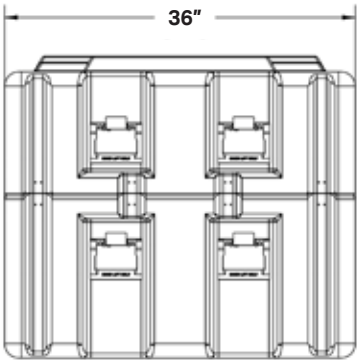

* Continuous carbon fiber data. ** No-wifi version available. **Note:** All specifications are approximate and subject to change without notice.
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