

# NARMA



**Fly for People**

# FLY for PEOPLE



## MISSION

To offer equal welfare with drones

## VISION

The world's first tilt-rotor technology company

## GOAL

Become the world's top delivery service provider by 2030 and embark on the development of UAM (Urban Air Mobility)

## VALUE

UAVs with reliability  
Commercialized future technology | Electric dual tilt-rotor  
Standard platform for drone delivery | D-Nuri

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# HISTORY

- 2025** Selected for drone commercialization project to develop high-performance drones  
Commenced test flights for maturity level certification  
Delivered an IR presentation at Plug & Play  
Listed for online sales on AliExpress  
Demonstrated test flights in Kazakhstan  
Granted patent for UAV Delivery and UAV Operation System (USA)  
Exhibited at 2025 CES (AF100-AGRI) & Drone Show Korea (Drone Station)
- 2024** Developed Liquefied H<sup>2</sup> Fuel Cell-driven (AF200FC)  
Completed the basic design of the high-weight drone (AF400)  
Developed automatic takeoff and landing system for ships (AF100)  
Granted patent for Drone System (USA)  
Obtained flight permission in Kenya as the first Korean company (EVL0S)  
Executed the 2024 SW Safety Innovation Project (AF200)  
Supplied to Korea Expressway Corporation (AF100-AED)  
Established NARMA US Inc. (Texas, USA) and Daejeon branch (Yu-seong)  
Delivered mobile device services for Samsung and LG U+ (Jeju Island)  
Exhibited at 2024 CES (Medical delivery service), IFA, AAD Expo, MICE  
Named Excellent Research Institute by the Ministry of Science & ICT  
Awarded the Minister of SMEs and Startups Award  
Selected as Legend 50+
- 2023** Raised Series A investment  
Launched Korea's first commercial drone delivery service (Jeju-Gapado)  
Performed maiden flight of H<sup>2</sup> fuel cell tilt-rotor UAV  
Obtained safety certification (AF160)  
Signed on KOICA CTS Seed 1 Program (Medical delivery in Kenya)  
Participated in drone demo city project (Ministry of Land, Infrastructure & Transport)  
Selected as 2023 Gyeong-buk & Daejeon Unicorn and Pre-Unicorn company  
Exhibited at 2023 CES (AF200FC, D-Nuri)
- 2022** Raised capital (Investment from Hana Ventures & POSTECH Holdings)  
Developed D-Nuri and registered trademark  
Started development of H<sup>2</sup> fuel cell-equipped UAV  
Certified as FCC & CE (AF200) and FAA Part 107  
Delivered antidotes between hospitals in Daejeon  
Exhibited at 2022 CES (AF200)
- 2021** Raised capital (Investment from KIBO)  
Performed BVLOS demonstration flight at Korea Drone Expo (Yeouido, Seoul)  
Signed MOU for cooperation with Daejeon Yuseong Police (AF100-POLICE)  
Acquired the Korean government's R&D project  
Selected as Excellent Product by MOTIE (AF200)
- 2020** Raised Seed Investment  
Acquired the Korean Drone Direct Production Certificate  
Certified as a Venture Business
- 2019** Certified as an Innovative Company  
Selected as a smart SME
- 2018** Established NARMA Inc.  
Registered as a research institute company  
Completed the development of tilt-rotor drone control technology



2024 Johannesburg, South Africa (AF200)

## NARMA Inc.

has been established as the first spin-off company of KARI (Korea Aerospace Research Institute) and has launched the world's first electric tilt-rotor drone.

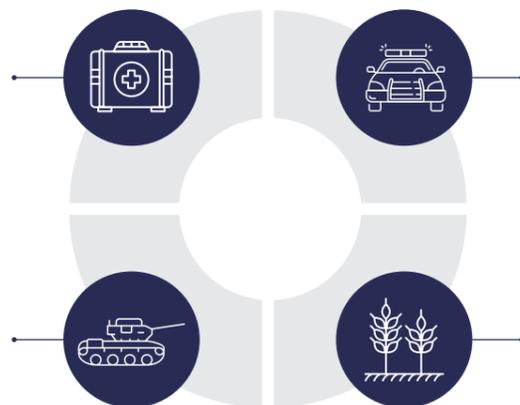
Our in-house capabilities in design, manufacturing and training, enable us to realize everything you can imagine about VTOLs.



# BUSINESS

## MEDICAL

By delivering AEDs and emergency supplies using drones, we contribute to saving lives.



## POLICE

By efficiently conducting surveillance and reconnaissance in urban areas, we support the creation of safer cities.

## MILITARY

By utilizing drones for surveillance and reconnaissance, we enhance the efficiency of military operations.

## AGRICULTURE

By contributing to smart agriculture initiatives, we enable the quick and easy management of information from vast landscapes.

# STRENGTH

WORLD'S STANDARD DELIVERY DRONE SOLUTIONS

- Technology** Based on the tilt-rotor technology acquired from KARI, NARMA has independently advanced its own technology development
- Certificates** CE, FCC, KC Safety Certification, DO-178C
- Manufacture** In-house production and assembly
- Design** Create designs that integrate NARMA identity
- Network** Established a global network across Europe, Africa, and the Americas

# PARTNERS

## INVESTORS



## INSTITUTION



## DOMESTIC PARTNERS



## OVERSEAS PARTNERS



# ACHIEVEMENTS

## Patents

Registration	Title	Remarks
PCT/KR2024/17955652	UAV Delivery and UAV Operation system	Registered
10-2024-0182358	Tilt-rotor drone with improved fixed wing and tilting section structure	Filed
10-2024-0181338	Drone Landing Method and System with Human Detection Capability	Filed
10-2024-0147122	Modular Drone for Delivery and Surveillance Reconnaissance	Filed
10-2024-0123965	Waterproof, Dustproof, and Highly Modular Tilt-Rotor Drone Structure	Filed
10-2024-0123972	Tilt-Rotor with Parachute Module for Vertical Takeoff and Landing	Filed
10-2024-0111715	Quad Tilt-Rotor Unmanned Aerial Vehicle	Filed
10-2024-0082440	Liquid Hydrogen Fuel Cell Power Pack Device for UAV	Filed
10-2024-0082433	High-Pressure Hydrogen and Liquefied Hydrogen Dual-Fuel Cell Tilt-Rotor UAV System	Filed
10-2024-0082447	Dual Blade Rotor Assembly for Unmanned Aerial Vehicles	Filed
10-2023-0151405	Multirotor Drone with Adjustable Lift Fixed Wings	Filed
10-2023-0133252	Delivery Device Using Drones and Its Delivery Method	Filed
10-2023-0142629	Drone Delivery Device Equipped with a Winch	Filed
PCT/KR2023/013546	Reverse Thrust Over-Tilting Drone	Filed
PCT/KR2023/009332	Drone Operation System Provide with Kiosk and Station for Drone Control	Filed
2022-0189455	Hydrogen Fuel Cell Aircraft	Filed
2022-0126744	Drone Operation System with Drone Control Kiosk and Station	Filed
2022-0104954	Reverse Thrust Over-Tilting Tilt-Rotor Drone	Filed
2022-0104937	Military Supplies Drone Delivery and Drone Operation Station	Filed
10-2021-0169758	Micro Spray Device	Registered
PCT/KR2021/003898	Drone Station	Registered
10-2020-0177969	Winch for Drones	Registered
10-2020-0118462	Tilt Rotor UAV	Registered
10-2020-0118460	Drone Station	Registered
10-2019-0162619	Drone Landing Gear	Registered
10-2018-0136611	Electronic Drone Battery Coupling Device	Registered
30-2025-0009381	Drone Station	Registered (Design)
30-2024-0009365	UAV	Filed (Design)
30-2023-0047248	Multi-Drone Operation Kiosk	In Progress (Design)
30-2023-0047247	Charging Station for Drones	In Progress (Design)
30-2023-0038535	Package Box	Registered (Design)
30-2021-0010123	Aircraft	Registered (Design)
30-2021-0010122	Aircraft (AF100)	Registered (Design)
40-2022-0203194	Category (09)	Registered (Mark)
40-2019-0012796	Category (09)	Registered (Mark)
40-2019-0012797	Category (42)	Registered (Mark)

## Certifications

Title	Expiration Date
CE	European Certification (AF200) 2022. 12. 01
FCC	US Certification (AF200) 2022. 11. 01
KC	Korea Certification (AF100) 2021. 07. 07
KC	Korea Certification (AF200) 2020. 06. 30
Safety Certification	Safety Certification for Ultra-Lightweight Flying Device (AF160) 2025. 02. 20



# TILT-ROTOR



AF200 SERIES

VTOL Drones



Delivery Service



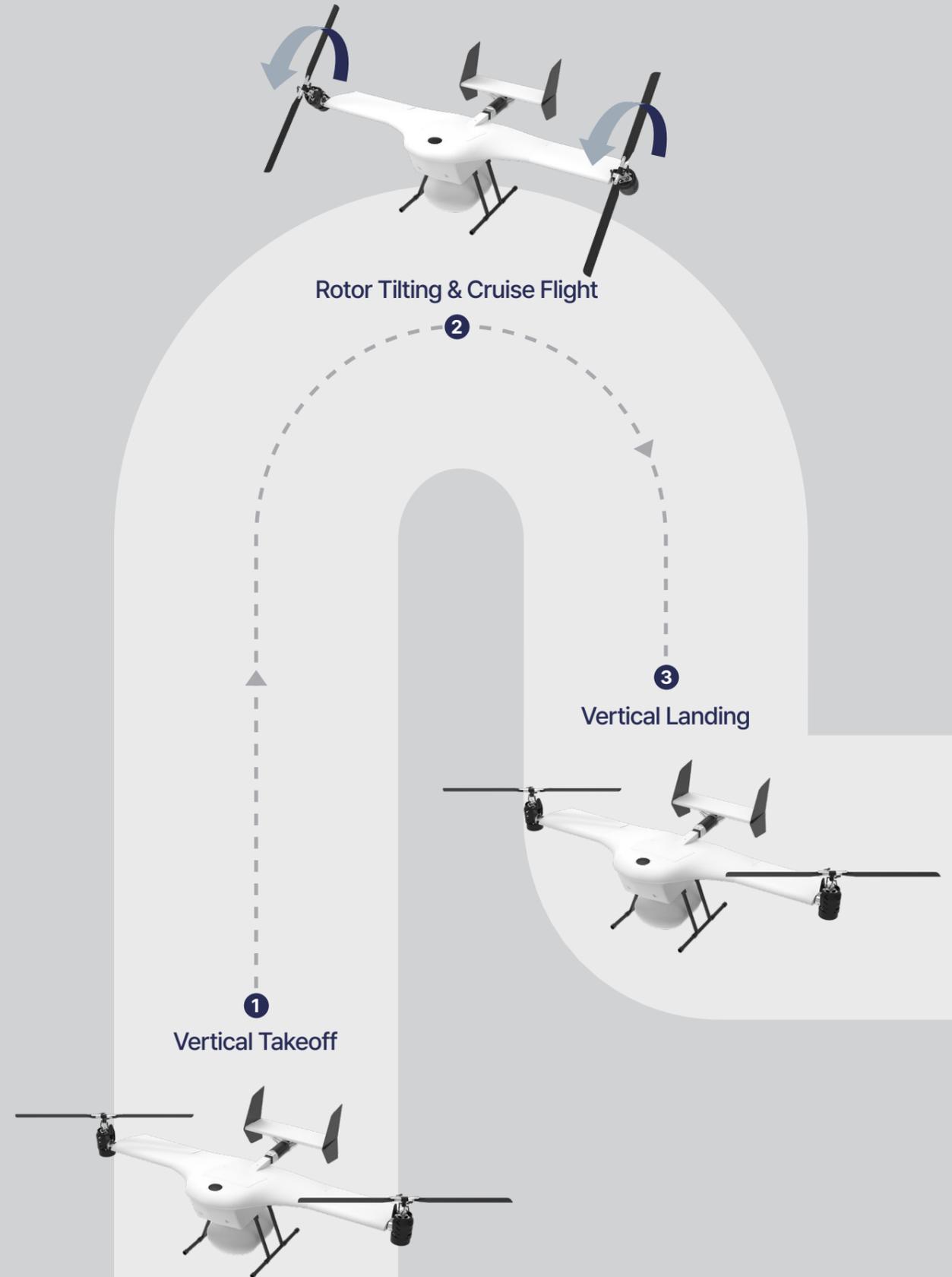
AI Edge Computing



Auto Landing on Moving Vehicle



- High-speed flight by tilt-rotors after vertical take off
- Overcome the disadvantages of multicopter drones and fixed-wing drones
- High-speed, long-distance flight, making it the best for delivery services
- AI Edge computing technology for surveillance etc.



1 Vertical Takeoff

2 Rotor Tilting & Cruise Flight

3 Vertical Landing

## KEY TECHNOLOGIES & PRODUCTS

### Key features

- NARMA's tilt-rotor drone offers higher wind resistance (up to 15 m/s) compared to ordinary VTOLs (up to 12 m/s), resulting in greater annual usage.
- AF100 series and AF200-AMBULANCE can fly up to 30 km and 40 km respectively, with a maximum speed over 100 km/h. This allows them to fly 4~6 times further and at 2~3 times the speed of ordinary multicopter drones (average 10 km flight distance, 50 km/h flight speed).
- Breaking away from traditional drone operation using manual controllers, NARMA has developed a KIOSK system that enables drone operation with simple touch on the KIOSK screen.
- Enabled flight control and monitoring of drones anywhere in the country using LTE communication.
- Damage can be minimized in the event of an accident with the parachute automatically deployed on the AF200-AMBULANCE.
- Easier maintenance and various mission equipments can be mounted on customer request.

**AF100 SERIES**



**AF200 SERIES**



### Our Value

- Emergency medication delivery with long-range, high-speed flight capability
- Surveillance of vast areas with a built-in camera
- Performance and safety levels verified through various demo flights in Korea and overseas

### Usecase

- Capable of taking off and landing on a moving ship with high landing accuracy, making it highly useful for maritime operations
- Quick delivery of goods to islands or mountainous areas that are difficult to access

# AF100 SERIES

AF100 series supports versatile payload options, including cameras and AEDs, enhancing functionality across various fields such as precision agriculture, surveillance and emergency.



## HARDWARE

Drone Type	Electric dual tilt-rotor (eVTOL)
Size	W1,000 X L860 X H300 mm
Payload / MTOW	1.2 kg / 6.99 kg (with batteries)
Propulsion	2 rotors during operation
Battery	1 LiPo battery (16,000 mAh)
Avionics	1 GNSS system 2 Magnetometers
Connectivity	1 Cellular data link (4G) 1RF data & video link (5.8GHz 5km max.)

## CERTIFICATION

Korea Certification

## OPERATION

Flight Speed	around 80 km/h nominal cruise speed
Climb Speed	7.2 km/h climb, 5.4 km/h descent
Max. Speed	over 100 km/h
Flight Distance	30 km
Flight Time	25 min
Max. Altitude	2,000 m AMSL
Landing Accuracy	1.5 m (0.1 m with RTK-optional)
Operating °C	-5 ~ 40 °C
Wind Resistance	9 m/s average wind, 15 m/s gusts
Weather Limits	No operation during rain

## AF100-AED

[AED]

Payload HeartSine PAD 350P / 360P

Size W184 X L234 X H48 mm

Reach a heart attacker within 5km in 3 minutes.  
Easy to control with KIOSK, D-Nuri.



## AF100-AGRI

[Spectral Camera]

Payload MicaSense RedEdge-P dual

Size W132 X L88 X H96.7 mm

Capture and analyze crop conditions across vast lands, and manage the data smartly.



## AF100-PATROL

[EO&IR Camera]

Payload SIYI A8 mini

Size W55 X L55 X H70 mm

Experience the convenience of departing a drone from a moving vehicle



# AF200-AMBULANCE

AF200-AMBULANCE is specifically designed for medical supply delivery, providing reliable performance in critical situations.



## HARDWARE

Drone Type	Electric dual tilt-rotor (eVTOL)
Size	W1,830 X L1,010 X H520 mm
Payload / MTOW	3.8 kg / 23 kg (with batteries)
Propulsion	2 rotors during operation
Battery	4 Li-ion batteries (16,000 mAh each)
Avionics	2 GNSS system, 2 Batteries 2 Magnetometers
Connectivity	1 Cellular data link (4G) 1RF data & video link (5.8 GHz)

## CERTIFICATION

Korea Certification, European Conformity, FCC

## OPERATION

Flight Speed	around 75 km/h nominal cruise speed
Climb Speed	7.2 km/h climb, 5.4 km/h descent
Max. Speed	over 100 km/h
Flight Distance	40 km
Flight Time	35 min
Max. Altitude	3,000 m AMSL
Landing Accuracy	1.5 m (0.1 m with RTK-optional)
Operating °C	-5 ~ 40 °C
Wind Resistance	12 m/s average wind, 17 m/s gusts
Weather Limits	No operation during rain





## AF200 FC (under development)

<b>Drone Type</b>	Electric dual tilt-rotor (eVTOL)
<b>Size</b>	W1,830 X L1,335 X H750 mm
<b>Empty Weight</b>	18 kg
<b>Payload/MTOW</b>	2 kg / 23 kg
<b>Flight Speed</b>	70 km/h max. speed / 55 km/h cruise speed
<b>Flight Distance</b>	150 km (based on 5L liquid hydrogen)



<b>KIOSK</b>	Multi-drone operation / Touch screen
<b>Size</b>	W402 X L350 X H1,000 mm
<b>Characteristics</b>	Reduces pilot's burden Pre-defined flying path Deployment time under 30sec. US & Korea Patent



## AF400 (under development)

<b>Drone Type</b>	Electric lift tilting (VTOL)
<b>Size</b>	W4,000 X L3,500 X H1,000 mm
<b>MTOW</b>	110 kg
<b>Payload</b>	20 kg
<b>Cruising Speed</b>	80 km/h
<b>Flight Distance</b>	50 km (standard conditions with full charge)



<b>Station</b>	Always on & charged (battery 70%)
<b>Size</b>	W420 X L420 X H450 mm
<b>Characteristics</b>	US & Korea Patent



## AF100 STATION (for outdoor)

<b>Station</b>	Always on & charged (battery 70%)
<b>Size</b>	W1,400 X L860 X H640 mm
<b>Characteristics</b>	Outdoor Installation Available Manual Operation Korea Design Patent



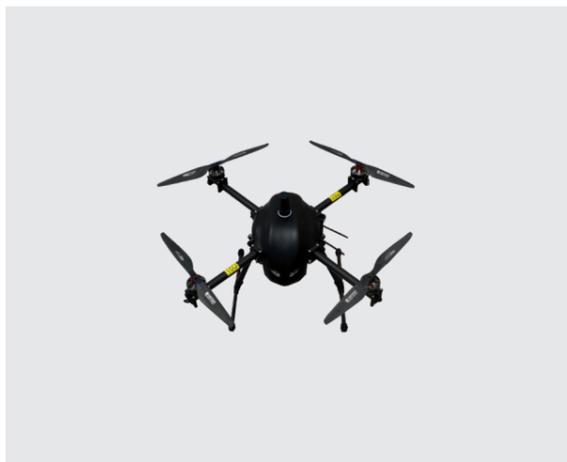
## AF160

Drone Type	Hexa-copter
Size	W2,392 X L2,392 X H690 mm
Weight	21 kg (with battery)
Payload	30 kg
Communication	RF / LTE
Connectivity	2.4 GHX/SKT (B1/3/5) / Requency range
Flight Speed	43 km/h max. speed / 36 km/h cruise speed
Flight Time	30 min. hovering
Drone Battery	4x Li-po battery (16,000 mAh)



## AF70

Drone Type	Quad-copter
Size	W1,040 X L940 X H360 mm
Weight	3.5 kg (with battery)
Payload	2.5 kg
Communication	RF / LTE
Flight Speed	36 km/h max. speed / 18 km/h cruise speed
Flight Time	20 min. hovering
Operation	Mission flight / Real-time monitoring



## AF60

Drone Type	Quad-copter
Size	W980 X L700 X H360 mm
Weght	2.2 kg (with battery)
Payload	1.5 kg
Communication	RF / LTE
Flight Speed	36 km/h max. speed / 18 km/h cruise speed
Flight Time	20 min. hovering
Operation	Mission flight / Real-time monitoring





**You can fly a drone  
for people.**



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