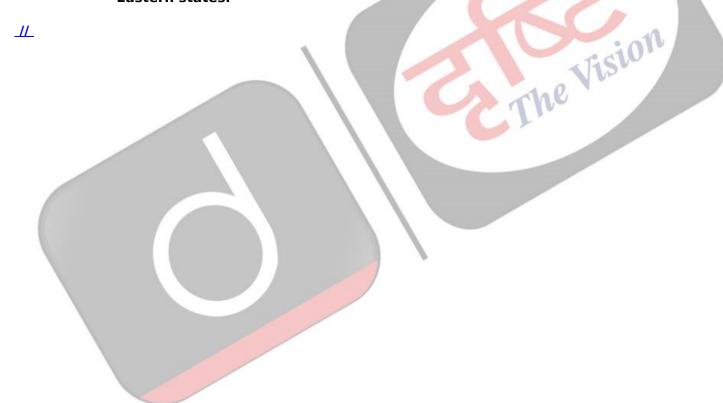


### **Drone Test at World's Highest Pass**

### Source: IE

Recently, a Bengaluru firm, NewSpace Research and Technologies tested a 100-kg Max Takeoff Weight (MTOW) <u>Unmanned Aerial Vehicle (UAV)</u> at 19,024 feet altitude at Ladakh's <u>Umling Lapass</u>, the highest motorable pass in the world.

- According to the firm, this is a new world record for high altitude operations achieved by a 100-kg MTOW class drone.
  - It will greatly improve support logistics, disaster and rescue operations, and medical relief in the mountainous regions of J&K, Uttarakhand, and the North Eastern states.



Drone is a pilotless flying machine, using aerodynamics for lift, can operate autonomously or remotely, and may carry lethal or nonlethal cargo.



- Unmanned aircraft (UA)
- Control system (ground control station GCS)
- Control link (specialized datalink)
- Other related support equipment

## CLASSIFICATION.

#### (as per Drone Rules, 2021)

- Nano: <250 gm
- Small: 25 kg to 150 kg
- Micro: 250 gm to 2 kg
- ▶ Large: >150 kg
- Mini: 2 kg to 25 kg

#### **APPLICATIONS**

- Mapping & Surveying (asset Inspection, roof inspections)
- Agriculture (bird control, crop spraying & monitoring etc)
- Multispectral/thermal/NIR cameras, Aerial Photo/ videography and Live streaming events
- Emergency Response (search and rescue, marine rescue, fire fighting)
- Disaster (zone mapping, disaster relief etc)
- Mining
- Monitoring Poachers
- Meteorology, Aviation, Payload carrying

#### **DRONES IN DEFENCE**

#### **Purpose**

- Surveillance and Reconnaissance
- Search and Rescue
- Maritime Surveillance
- Combat Drones
- Offensive (heterogeneous SWARM drones)
- Counter-Terrorism Operations

#### India's Counter-Drone System

- Indraiaal (India's inaugural autonomous drone-defense dome)
- Procurement of combat-capable Heron drones from Israel
- Acquisition of MQ-9B Armed Drones from the US

#### RELATED REGULATIONS

- Aircraft (Security) Rules, 2023
- Orones Rules, 2021 and Drone (Amendment) Rules, 2022

# INDIA'S INITIATIVES

- Digital Sky Platform
- No-Permission-No-Takeoff (NPNT) framework
- PLI Scheme for Drones
- Drone Shakti Scheme

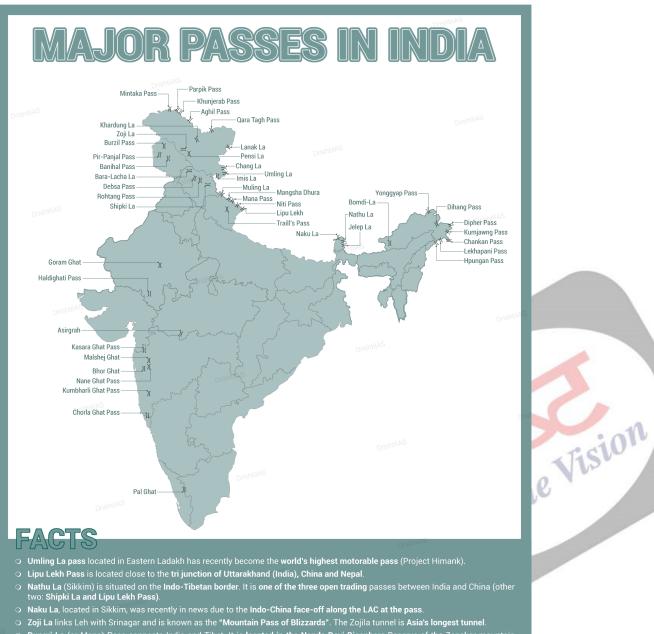


- Increased risk of armed attacks
- Data security
- Cheaper cost enables a larger population to procure drones
- Use of drones in warfare (remote warfare)
- Procurement by non-state actors can pose serious threats
- Ease in delivering mass destruction weapons



#### Umling La pass:

- Umling La in Ladakh is the world's highest motorable road at 19,024 ft, constructed by the **Border Road Organization** as part of "Project Himank".
- The 52-km road connects Chishumle to Demchok villages, which are near the Line of Actual Control (LAC) and a friction point between India and China.



- Dungri La (or Mana) Pass connects India and Tibet. It is located in the Nanda Devi Biosphere Reserve of the Zanskar mountain range (Uttarakhand). Even Indian nationals need prior permits from the Army to travel through this pass.
- Rohtang Pass (Himachal Pradesh) is situated in the Pir Panjal Range of the great Himalayas and connects Kullu Valley with Lahaul and Spiti Valleys.
- O The widest gap of Western Ghats is at Palakkad (or Pal Ghat) in Kerala adjoining Tamil Nadu.



Read More: Air-Launched Unmanned Aerial Vehicle

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