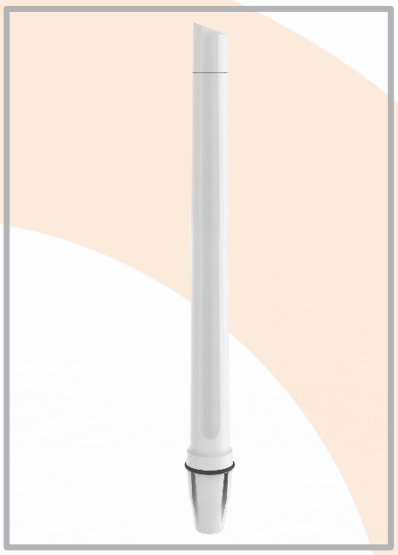
# OMNI-496

POYNTING
BEYOND A CONNECTED LIFE

**ANTENNAS | OMNI-496 SERIES**

## OMNI-DIRECTIONAL, MARINE & COASTAL ANTENNA

Dual-band Wi-Fi, 2400 – 2500 MHz, 3300 – 4200 MHz, 4900 – 7200 MHz; 10 dBi



2400 – 2500 MHz
3300 – 4200 MHz
4900 – 7200 MHz

10 dBi

Increase X Mb/s

Omni-Directional

5G

2.4 – 2.5 GHz
5.0 – 7.2 GHz

CBRS Band

Machine to Machine

Internet of Things

Fire Resistant

-40°C to +80°C

IP 68

APPLICATION AREAS

Urban

Rural/Farm

Marine

Transportation

- **Dual-band Wi-Fi antenna for 2.4 GHz and 5.0 to 7.2 GHz**
- **Supports Wi-Fi/WiMAX/LTE 3.4 – 3.8 GHz frequencies with a max gain of 8 dBi**
- **Compliant with IEEE 802.11ac/ax/b/g/n wireless standards**
- **Easy mounting with feed through 1-inch marine standard mount**
- **Robust and all-weather proof (IP 68)**
- **Various 316 stainless steel mounting brackets available optionally**
- **UV and saltwater protected against tempestuous weather conditions**

### Product Overview

The OMNI-496 is a dual-band Wi-Fi omni-directional antenna, developed by Poynting Antennas. The antenna can connect to any Wi-Fi access point whether it is older Wi-Fi technology or new dual band 802.11ax enabled Wi-Fi technology. The antenna can resolve channel saturation and provide the ultimate in Wi-Fi performance and flexibility. The OMNI-496 is an IP68 marine version of its urban, industrial & commercial counterpart; the OMNI-296. The antenna operates in two frequency bands 2.4 GHz and 5 GHz, offering excellent utilization of the radio spectrum. The antenna has a maximum gain of 7 dBi in the 2.4 GHz band and 10 dBi in the 5 GHz band, which offers the best performance with reliable connections. The antenna has an N-Type female connector at its base which can be terminated to a cable of the desired type and length.

### Features

- Operational in the 2.4 GHz and 5 GHz Wi-Fi bands
- Medium gain omni-directional antenna
- Purpose-built antenna for marine and coastal applications
- Lightweight
- UV and saltwater resistant
- Robust and weather resistant

### Application Areas

- Marine / Yachts / Boats / Ferries
- Enhanced LTE reception
- IoT and M2M
- Poor data signal reception
- Improve data transmission connection reliability & stability
- Wi-Fi applications



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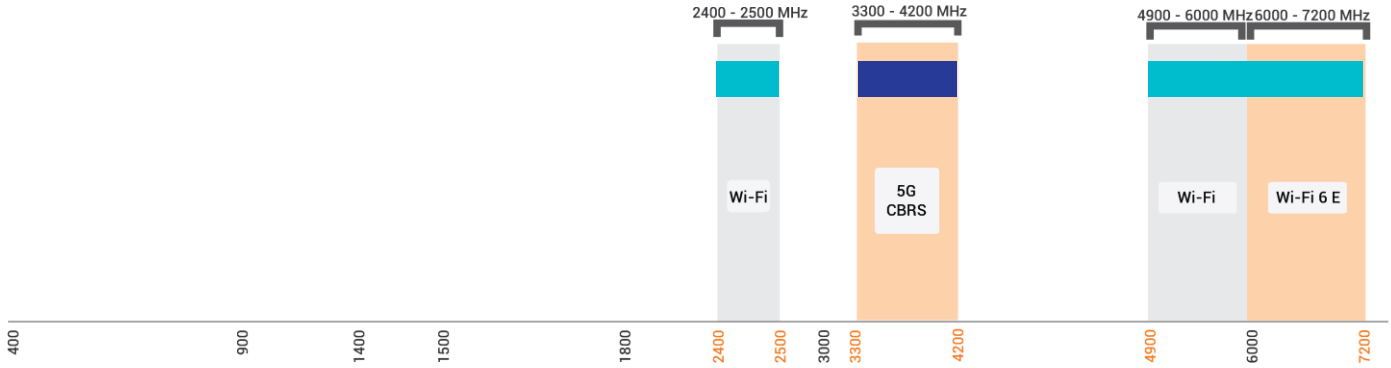
## Frequency Bands

The OMNI-496 is an omni-directional antenna that works from | 2400 – 2500 MHz | 3300 – 4200 MHz | and | 4900 – 7200 MHz |




**Indicates the 5G/CBRS band on which OMNI-496 works**

**Indicates the WI-FI bands on which OMNI-496 works**

## Antenna Overview

| | Wi Fi DUALBAND |
|---|---|
| **Ports** | 1 |
| **SISO / MIMO** | SISO |
| **Frequency Bands** | 2400 – 2500 MHz<br>3300 – 4200 MHz<br>4900 -7200 MHz |
| **Polarisation** | Linear Vertical |
| **Peak Gain** | 10 dBi |
| **Connector Type** | N-Type (F) |
| **Coax Cable Type** | N/A |
| **Coax Cable Length** | N/A |

**The connector is factory mounted to the antenna*



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## Electrical Specifications

| | |
|---|---|
| **Frequency Bands:** | 2400 – 2500 MHz<br>3300 – 4200 MHz<br>4900 – 7200 MHz |
| **Gain (Max):** | 7 dBi @ 2400 – 2500 MHz<br>8 dBi @ 3300 – 4200 MHz<br>10 dBi @ 4900 – 7200 MHz |
| **VSWR:** | <2:1 |
| **Feed Power Handling:** | 10 W |
| **Input Impedance:** | 50 Ohm (nominal) |
| **DC Short:** | Yes |

## Product Box Contents

| | |
|---|---|
| **Antenna:** | A-OMNI-0496 |
| **Mounting Bracket:** | Marine Adapter (1'' -14 TPI)<br>& L-bracket (Ø30-50mm Pole) |

## Ordering Information

| | |
|---|---|
| **Commercial Name:** | OMNI-496 |
| **Order Product Code:** | A-OMNI-0496-V2-01 |
| **EAN Number:** | 6009710925768 |

## Mechanical Specifications

| | |
|---|---|
| **Product Dimensions:** | 560 mm x 75 mm (Incl. BRKT-40) |
| **Packaged Dimensions:** | 580 mm x 95 mm x 95 mm |
| **Weight:** | 0.57 Kg |
| **Packaged Weight:** | 1.3 Kg |
| **Radome Material:** | UV Stable Marine ASA |
| **Radome Colour:** | Brilliant White<br>Pantone P 179-1C |
| **Mounting Type:** | Standard 1'' -14 TPI marine mount &<br>Wall/pole mount |

## Environmental Specifications, Certification & Approvals

| | |
|---|---|
| **Wind Survival:** | ≤186 km/h |
| **Temperature Range (Operating):** | -40°C to +80°C |
| **Environmental Conditions:** | Outdoor/Indoor |
| **Water Ingress Protection Ratio/Standard:** | IP 68 |
| **Salt Spray:** | MIL-STD 810G/ASTM B117 |
| **Operating Relative Humidity:** | Up to 98% |
| **Storage Humidity:** | 5% to 95% - non-condensing |
| **Storage Temperature:** | -40°C to +80°C |
| **Enclosure Flammability Rating:** | UL 94-HB |
| **Impact Resistance:** | IK 08 |
| **Product Safety & Environmental:** | Complies with CE and RoHS standards |



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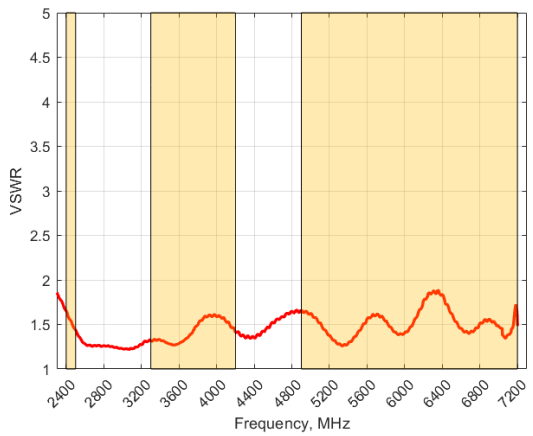
## Antenna Performance Plots

### VSWR



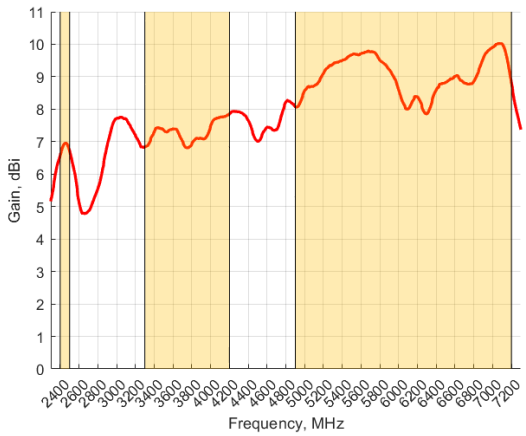

### Voltage Standing Wave Ratio (VSWR)*

VSWR is a measure of how efficiently radio-frequency power is transmitted from a power source, through a transmission line, into a load. In an ideal system, 100% of the energy is transmitted which corresponds to a VSWR of 1:1.

The OMNI-496 delivers superior performance across all bands with a VSWR of <2:1.

**VSWR measured without a cable.*

### GAIN (EXCLUDING CABLE LOSS)




### Gain+ in dBi

10 dBi is the peak gain across all bands from 2400 – 7200 MHz

| | |
|---|---|
| Gain @ 2400 – 2500 MHz: | 7 dBi |
| Gain @ 3300 – 4200 MHz: | 8 dBi |
| Gain @ 4900 – 7200 MHz: | 10 dBi |

*+Antenna gain measured with polarisation aligned standard antenna*



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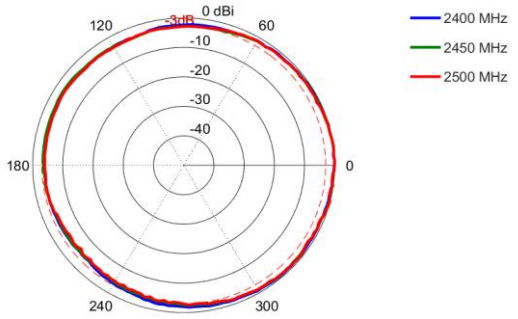
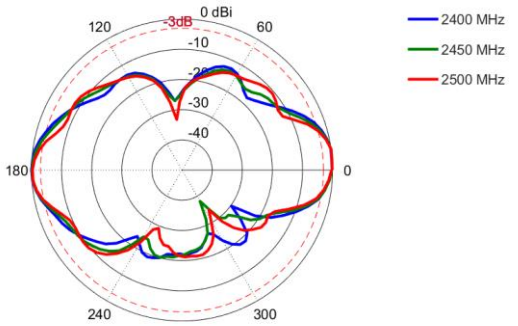
## Radiation Patterns

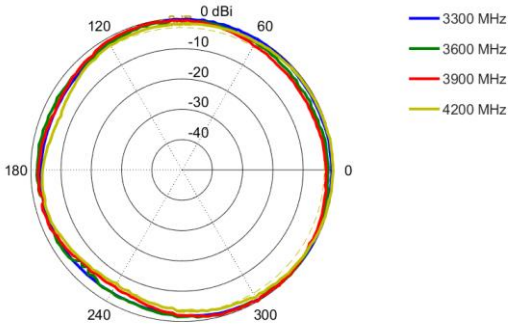
### Azimuth: 2400 - 2500 MHz



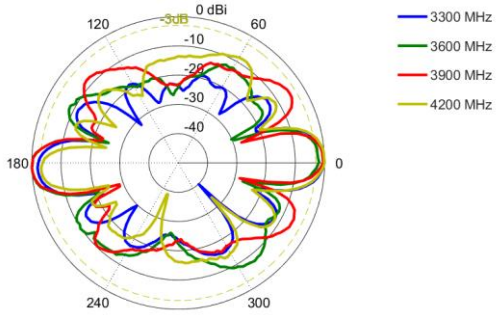

### Elevation: 2400 – 2500 MHz



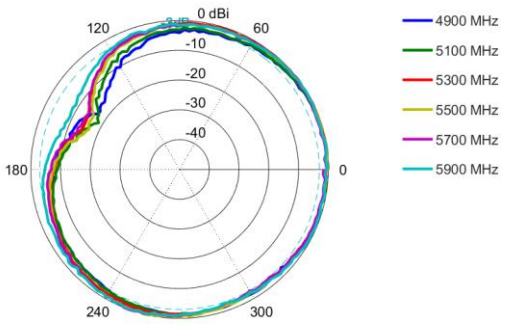

### Azimuth: 3300 - 4200 MHz



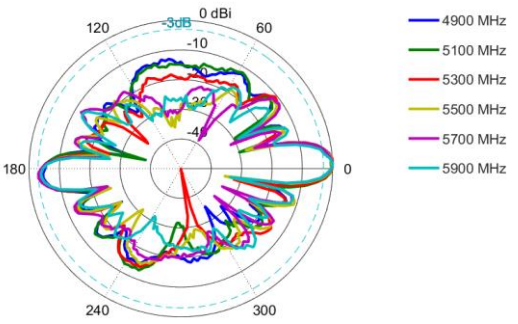

### Elevation: 3300 – 4200 MHz



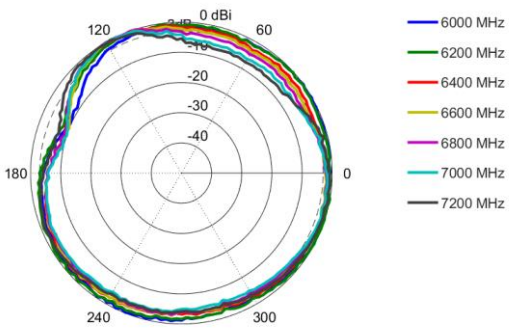

### Azimuth: 4900 - 5900 MHz



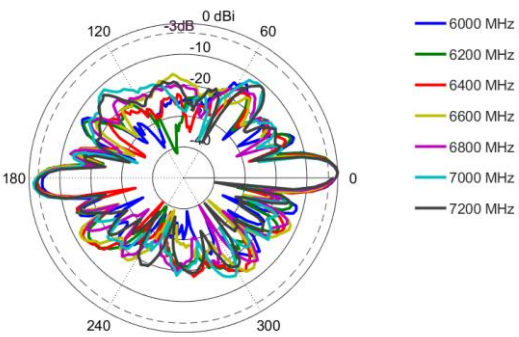

### Elevation: 4900 - 5900 MHz




### Azimuth: 6000 - 7200 MHz




### Elevation: 6000 - 7200 MHz



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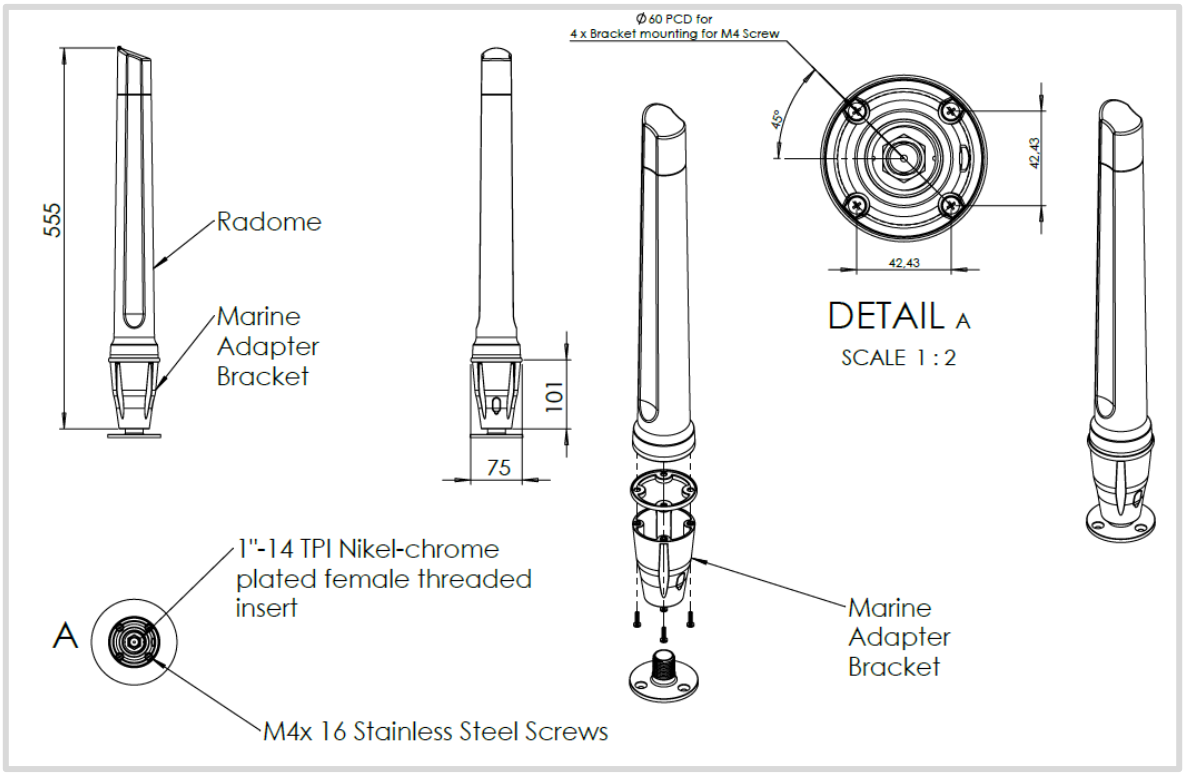
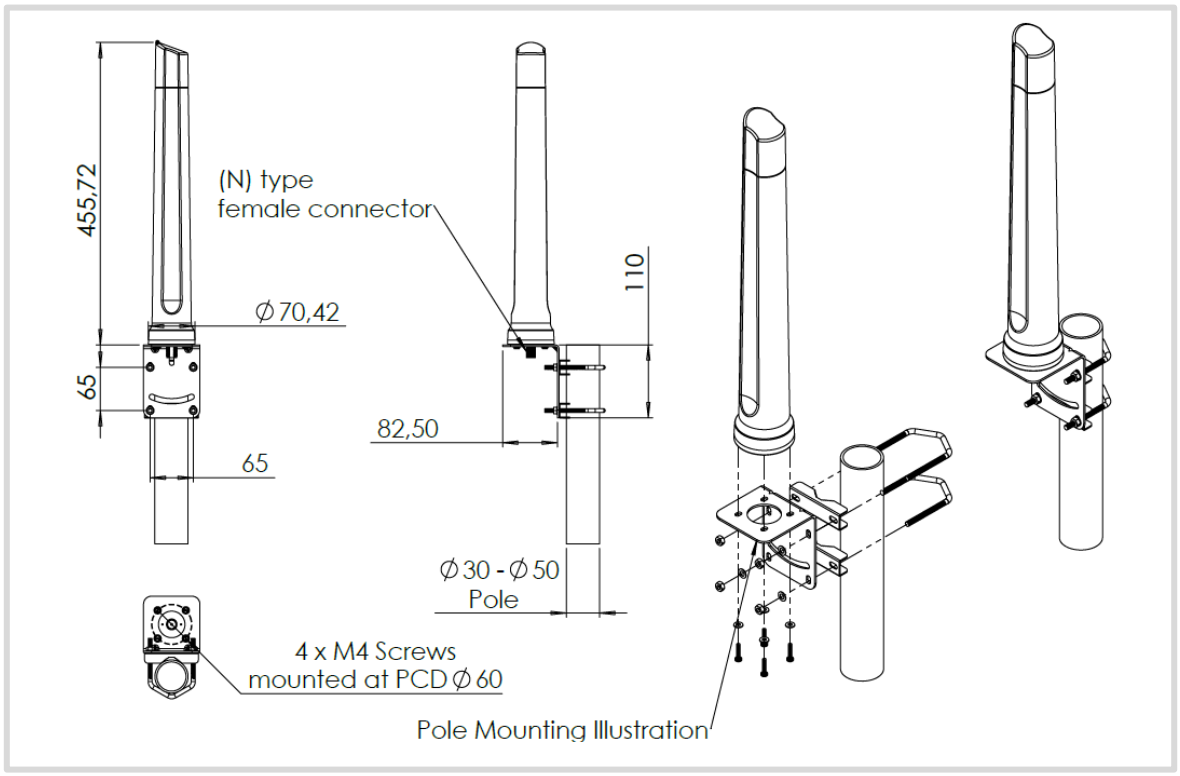
## Technical Drawings

With Standard Marine Mounting:




With Standard L-Bracket Mounting:



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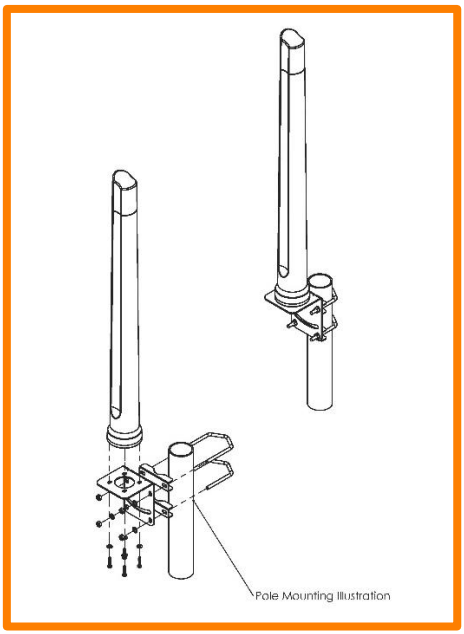
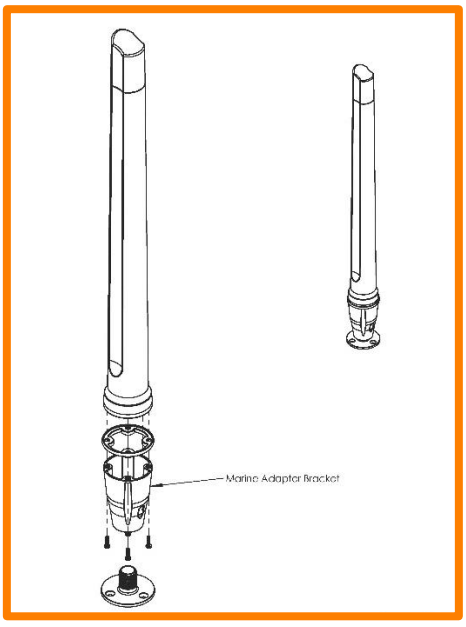
## Mounting Options




### Pole Mount

L-Bracket 316 Stainless Steel – included

(for Ø 30-50mm pole)




### Marine Bracket Mount

1" -14 TPI female adapter – included

Mounts to standard marine brackets:

- BRKT-37: Flat Mount - Optional
- BRKT-38: Ratchet Mount - Optional
- BRKT-39: Rail Mount - Optional

See Optional Accessories below

Also available: BRKT-41 with 1.25" – 11TPI female adapter (Optional)

See Accessories below



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## Optional Accessories

**BRKT-37**

Marine flat mount antenna bracket 1"-14 TPI 316 Stainless Steel

**BRKT-38**

Marine ratchet rail mount antenna bracket 1"-14 TPI 316 Stainless Steel

**BRKT-39**

Heavy duty marine mount antenna bracket 1"-14 TPI 316 Stainless Steel

See accessories technical specifications on www.poynting.tech


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