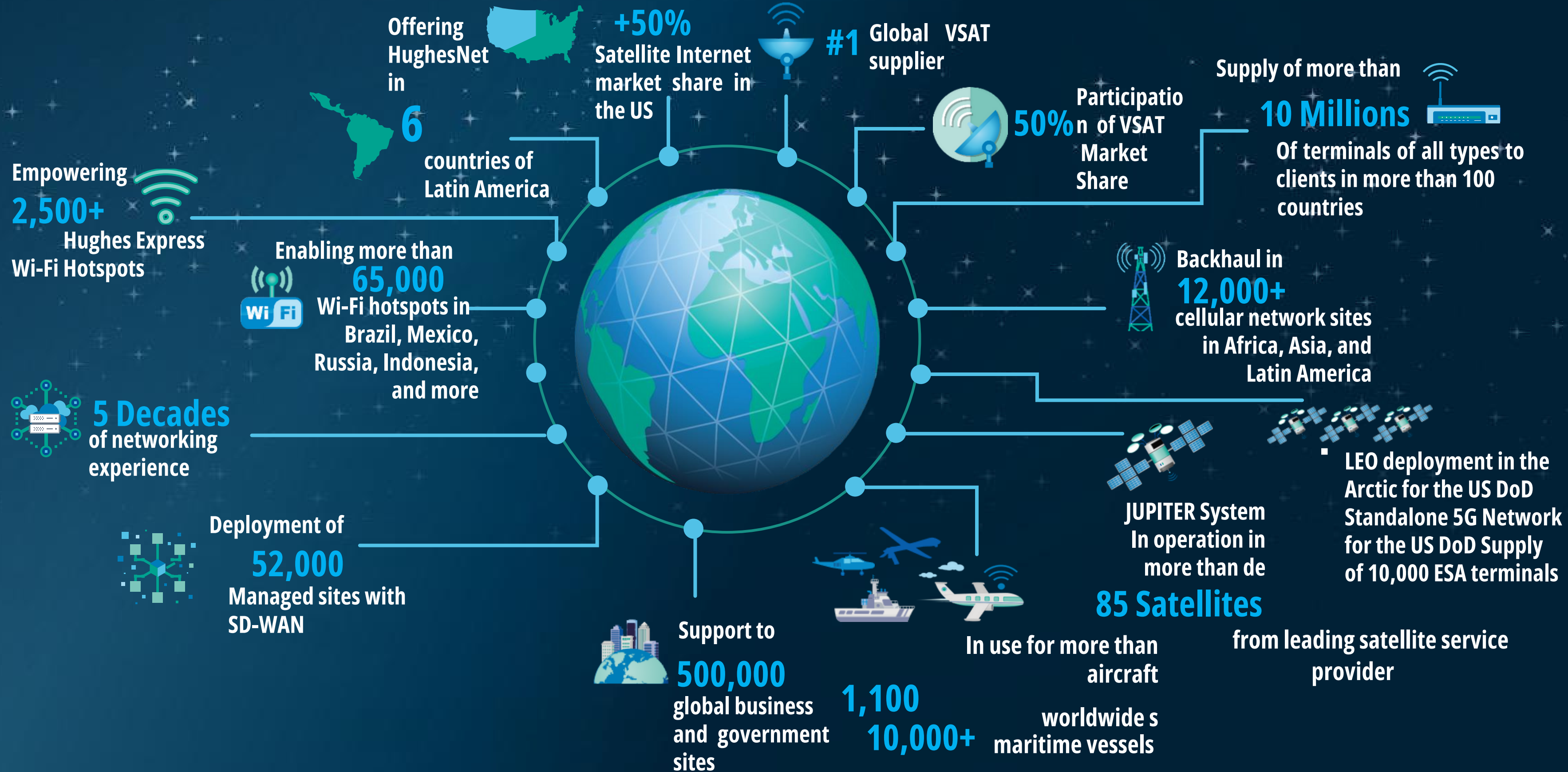




global
satellite
GROUP

HUGHES

Business Status



This is Hughes



- Hughes Service Presence
- Hughes Partnership Presence
- Hughes Joint Venture Presence

Hughes: Your OneWeb Partner of Choice



Technology partner
Hughes engineered, deployed and manages OneWeb system gateway electronics and core modules



Hardware Manufacturer
Electronically Steerable Antenna (ESA) engineered for OneWeb



Global Distribution Partner
Hughes built value-added services around its POP and interconnection with OneWeb



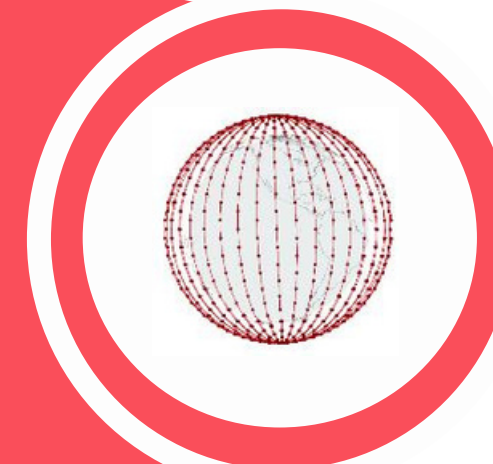
\$5+ billion invested in a LEO network – Low Earth Orbit
Merged with Eutelsat in Sep 2023



Dedicated enterprise capacity
648 Satellites in orbit



Launched in 2022 in 50+ North
Global Launch 2023 – Early 2024



Hughes Managed LEO - A new broadband transport available everywhere



Low Earth Orbit Satellites

LEO

700 Miles



OneWeb
Constellation

Hardware – Hughes ESA

- 1 Outdoor Unit (Dual panel antenna)
- Indoor Unit+ Power Supply
- 2 Mount (various options)
4. IFL Cable (Provided by Installer)
- 3

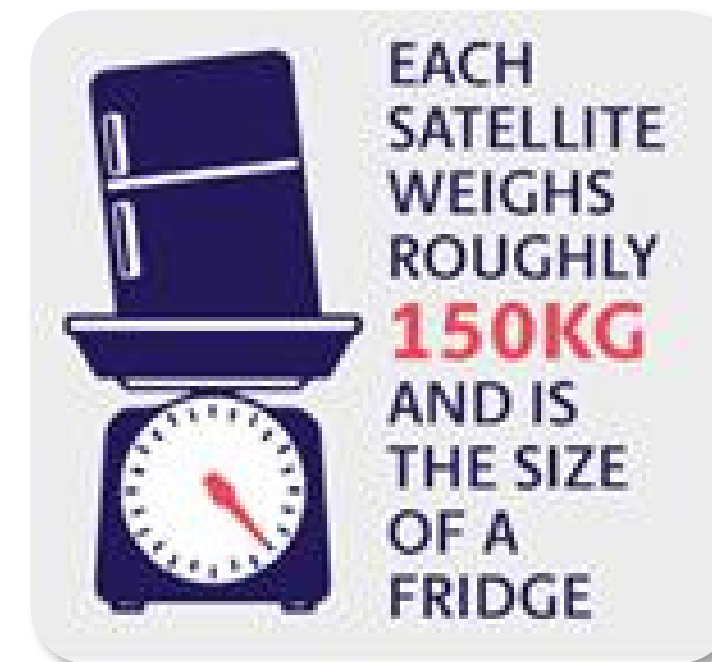
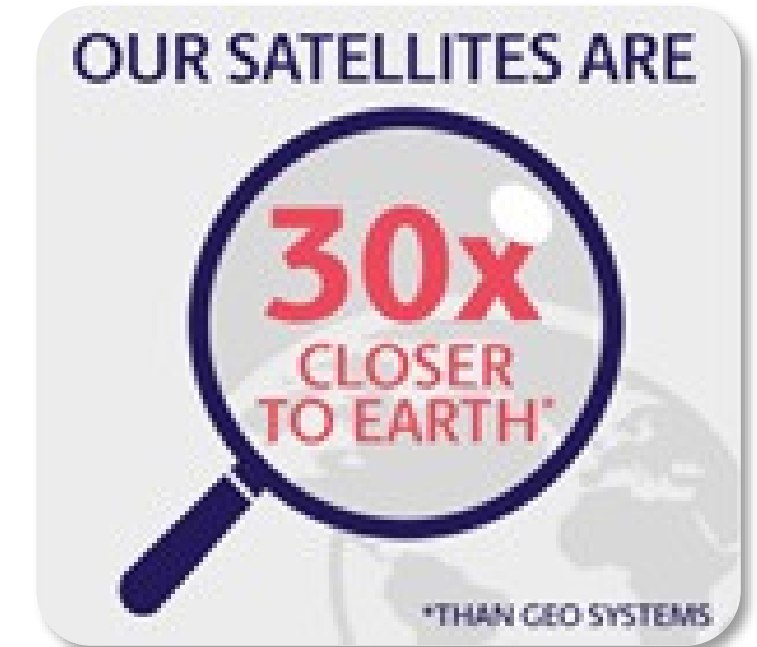
Service

- Service Plans ranging from 25/5Mbps to 100/20
- Mbps Latency: 40 ms to 100 ms
- average Fully Managed by Hughes

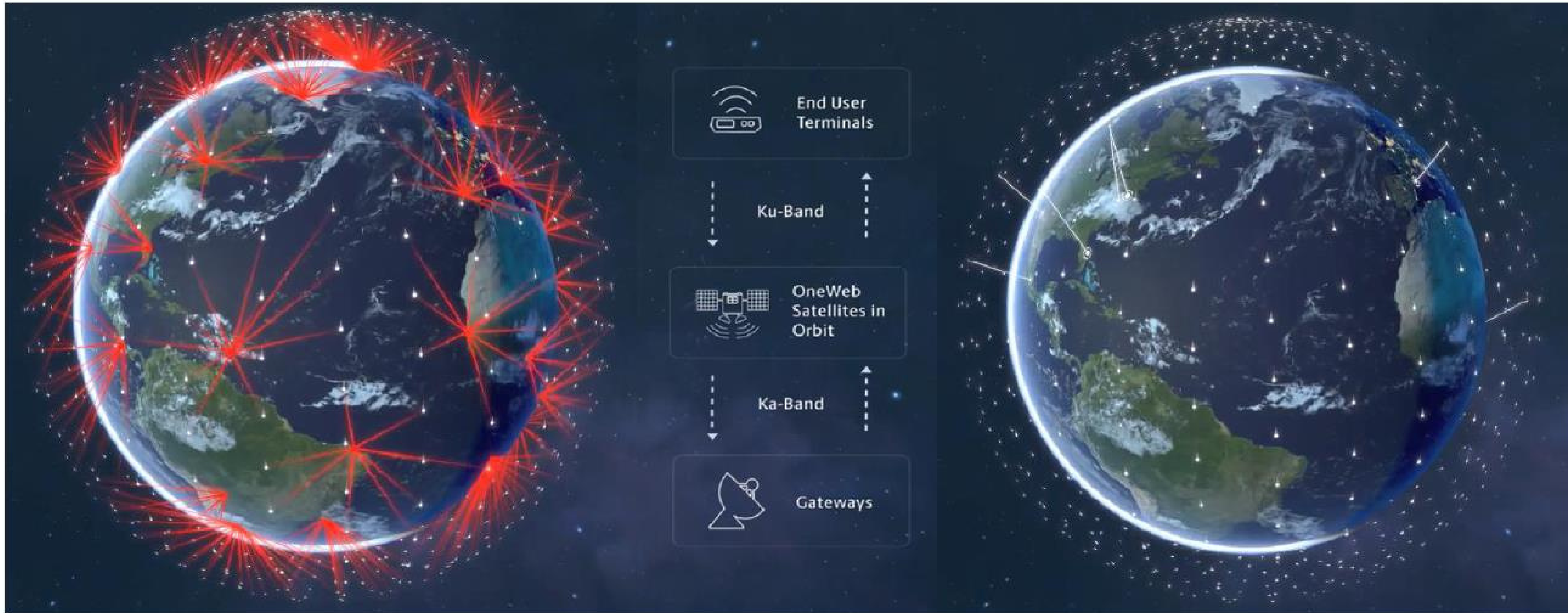


Benefits of the OneWeb Network

- A Global Low Earth Orbit (LEO) constellation
- Provides low latency (<70ms) broadband access
 - 4G/LTE Cellular Service is also <100ms
 - A VSAT using a GEO satellite has latency of ~600ms
- Delivers up to 100 mbps to a terminal
- Enterprise grade capacity
 - Network is not shared with consumer
 - traffic Security
- Delivers a superior Customer Experience (CX)
 - Plug and play applications compared to a GEO VSAT solution
 - Higher speeds than 4G/LTE cellular service



Hughes Managed LEO Terminals are KU-Band



Hughes LEO App



9:41 English

HUGHES
An EchoStar Company

Enter your Password to
Login

Username:
ssm-admin

Password:

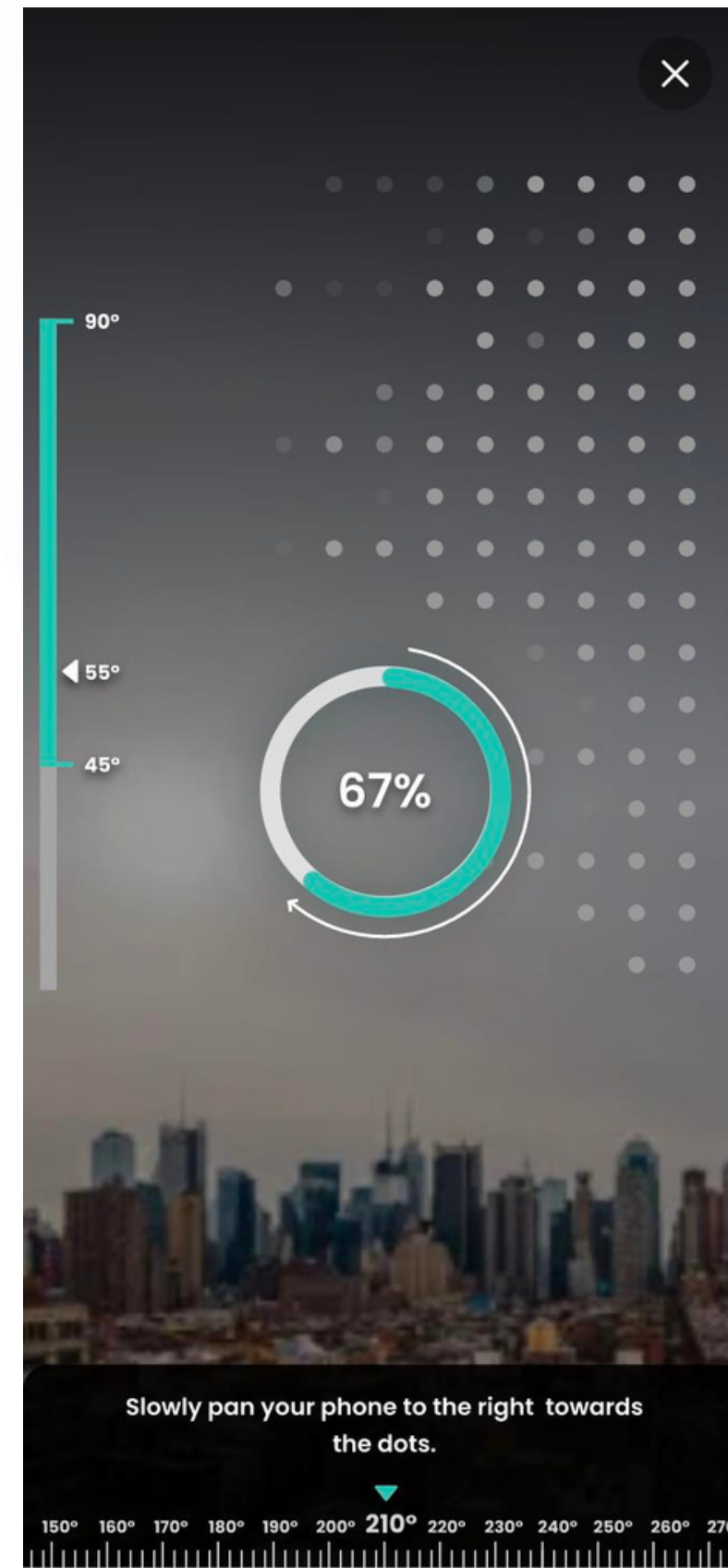
Login

[Change Password?](#)

[New Install](#) [Start Survey](#)

[Terms of Use](#) [Privacy Policy](#)

Version 1.0.0



- ### Installation Steps
- ✓ Start Install
 - ✓ Site Survey
 - ✓ Software Upload
 - ✓ Ephemeris
 - ⋮ GPS/GNSS
 - ⌚ Antenna Orientation
 - ⌚ Commissioning
 - ⌚ Tests
 - ⌚ Install Complete /Results

OneWeb/Hughes Ground Network



All terminal traffic passes from the satellite to a local OneWeb Gateway (GW).



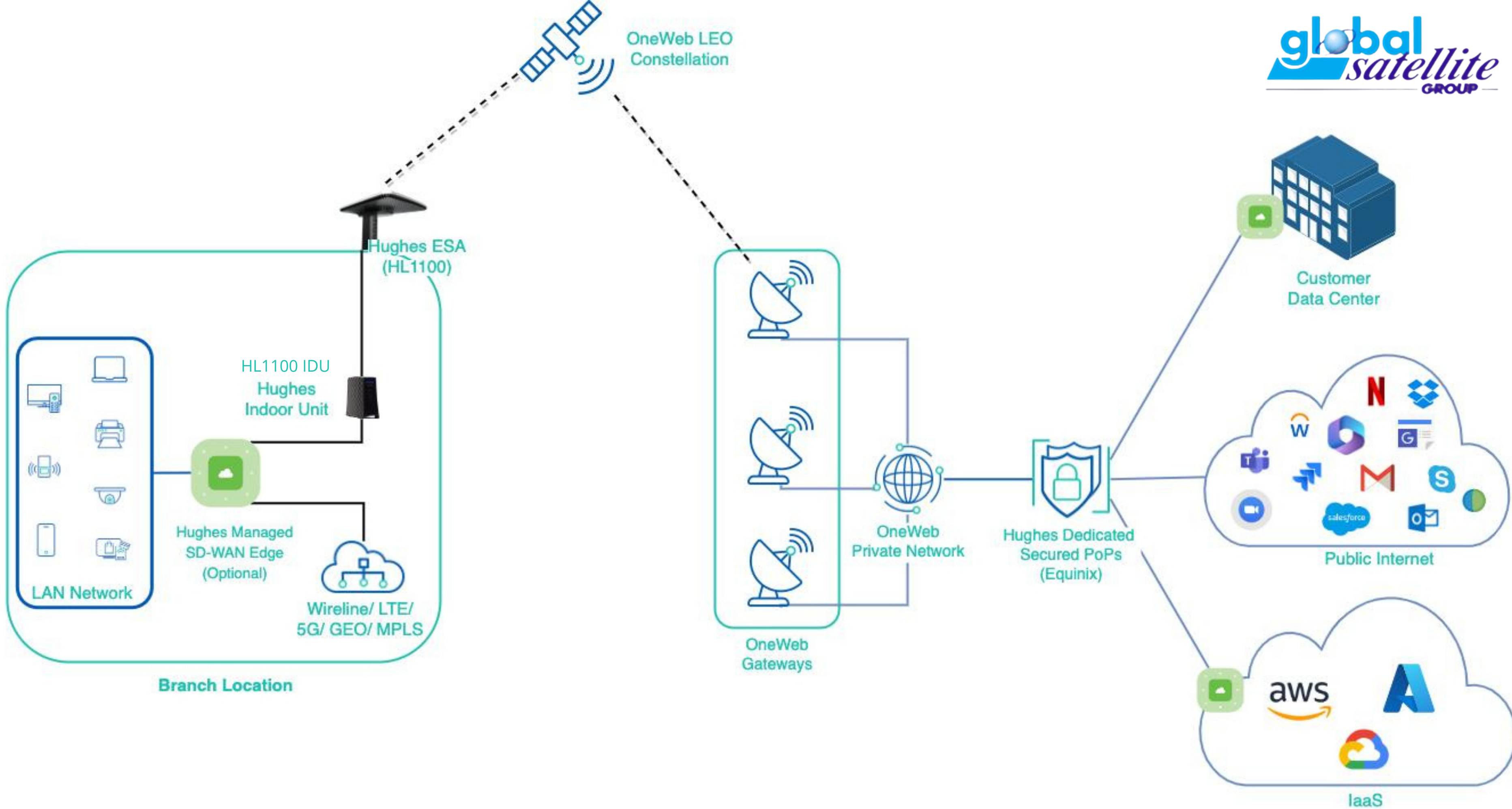
OneWeb Baseband GW Equipment is designed, built and operated by **Hughes**



All traffic will pass to a **Hughes PoP**.



OneWeb GWs Hughes  Equinix PoPs



Hughes ESA Hardware HughesLeo HL-1xxx



HL1100 (Fixed)
57x14 maximum Mbps
Service Plan: 57x5



HL1120 (Fixed)
190x30 maximum Mbps
Service Plan: 100x20



HL1200 (Land Mobile)
Availability TBD
57x14 maximum Mbps
Service Plan: 57x5

| Lightweight | Easy Installation | Self Alignment | Made in USA

Service Level Objectives (SLOs)



1. Link Availability SLO of 99.5%
 - Between the Approved User Terminals and the hand-off point to the internet at the Hughes PoPs

2. Round-Trip Latency SLO of 140ms
 - Between the Approved User Terminals and the hand-off point to the internet at the Hughes PoPs.

3. Packet Loss SLO of 1%
 - for the LEO constellation and associated baseband components of the service

4. 90% SLA for Partial CIR and 100% CIR speeds
 - Applies to networks over 100 sites

The Hughes advantage



Hughes Managed LEO Service

Enterprise-Grade Service

From the Most Qualified OneWeb Partner

With Managed Service Delivery

- Available across the Americas, India and globally, for enterprise, mobility, operator and gov/defense applications
- Dedicated enterprise capacity – not shared with consumer traffic
- Variety of plans to fit every business need
- Buy service from the company that knows the system better than anyone
- Use Hughes innovative ESA technology
- Managed service ensures availability, reliability and performance
- Includes 24/7 support, pane-of-glass monitoring portal, ability to integrate with other Hughes solutions and hundreds of other transports
- Private Network options

Hughes and OneWeb : A Strong Partnership



Hughes

Commitment *As Investor*

Expertise *As Ground Network Manufacturer*

Success *As Premier Global Distributor*

Innovation *As Antenna Manufacturer*

OneWeb

LEO Network \$5B Invested

Dedicated to Enterprise

Strong Financial Backing

Focused Segments



Enterprise

Consumer
Packaged Goods
Financial Services
& Banking
Energy & Industry



Maritime

Merchant
Offshore / Rigs
Super Yachts
Passenger
Fishing
Leisure



Aviation

Commercial
Business
(Private)



Government

Civil
Government
Non –
Government
organizations



Cellular Backhaul

Macro - Cell
Satellite
Integrated Small
Cells

Focused Segments



Mobility

Vehicles on the move



IoT

Smart City, Agriculture, predictive maintenance, security



Disaster Recovery

Support in case flood, earthquakes, fires



Network Backup

Higher Availability and low latency



Energy

Mission critical applications, low delay

Hughes ESA Hardware Hughes LEO Terminals



HL1100 (Fixed)
57x14 maximum Mbps
Service Plan: 50x10 Mbps





HL1120 (Fixed)
190x30 maximum Mbps
Service Plan: 100x20



Lightweight | Water Resistent | Low Power | Easy To Install | Self Aligning | Made in USA

Hughes ESA Overview

for Fixed or "On-the-Pause" Service

	HL1100W ESA & Integrated Modem	HL1120W ESA & Integrated Modem
		
Max mbps	57x10 mbps	190x30 mbps
(down/up)	24" x 18" x 3"	24" x 33" x 3"
Dimensions	30 lbs	53.2 lbs
Weight	140 Watts	350 Watts
Power Consumption	✓	✓
IP67	✓	✓
Wifi Built-In	May 2024	Today

Availability

HL1120W Indoor Unit & Power Supply



- IDU
 - 2 GigE Ports
 - Built-In WiFi
 - Can be disabled via GUI
 - Dual IFL to the HL1120W
 - Single IFL to the HL1100W



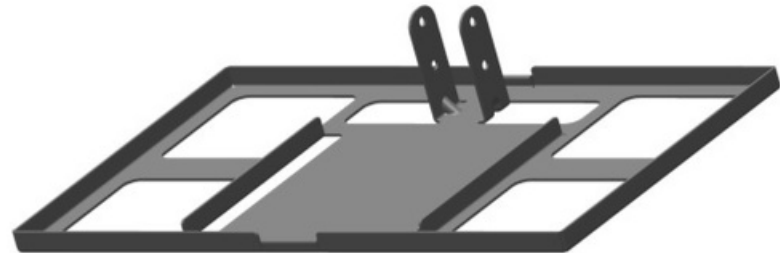


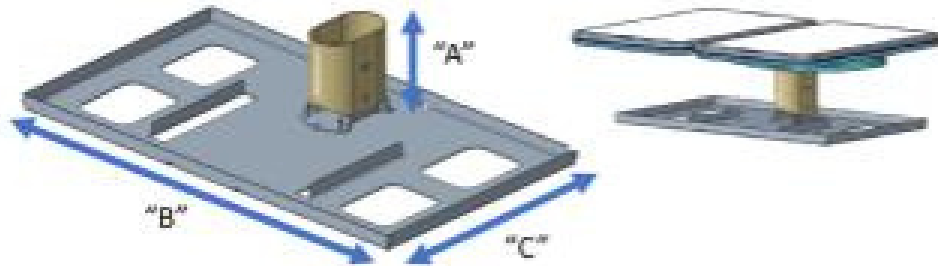
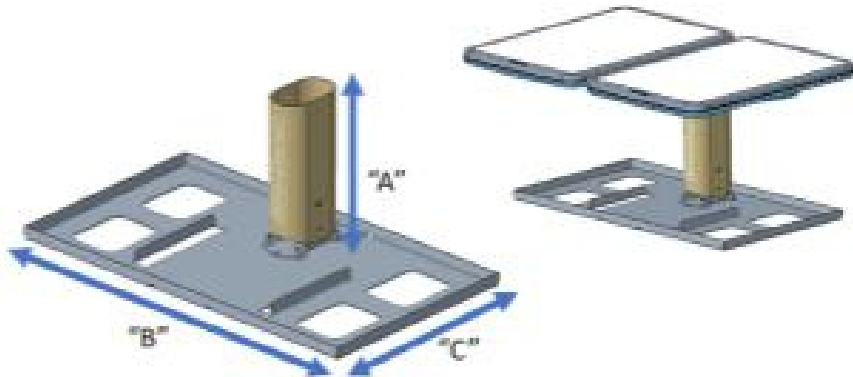
- Power Supply
 - 110VAC
 - 450W Max

Model & P/N Breakdown

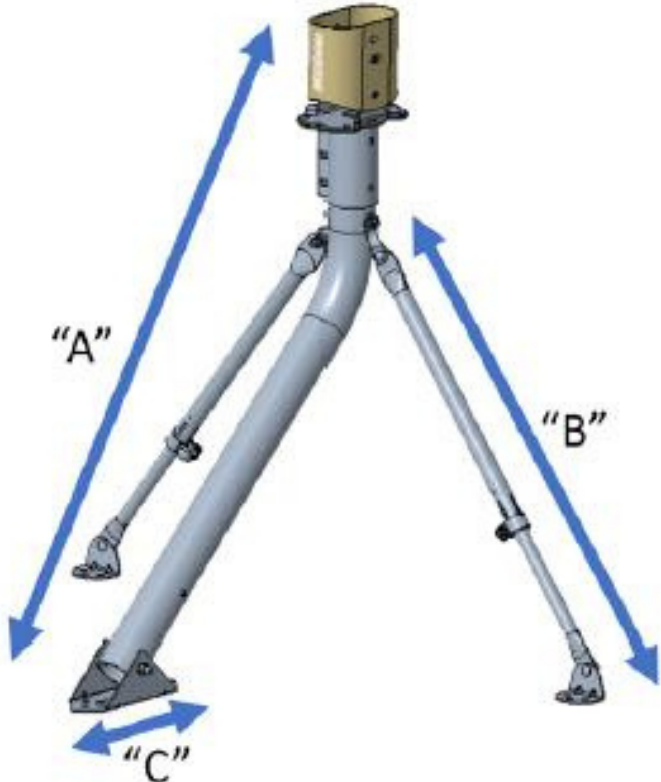

5 parts must be ordered: ODU + IDU + PSU + Mount + Cables

Box	Part	HL1100W	HL1120W
1	ODU	 <p>Model: HL1100-ODU P/N: TBD</p>	 <p>Model: HL1120-ODU P/N: 1508517-0001 or 1508517-0011 Bracket is included</p>
2	IDU	 <p>IDU</p>	<p>Model: HL1120W-IDU P/N: 3501609-0002 Kit includes A/C Power Cable, Grounding Block and Connectors Non-Wifi IDU available in 2024</p>
	PSU		
3	Mount	Trimast, Non-Pen, Pen, Plate - details to follow	
4	IFL	Dual IFL for HL1120, Single IFL for HL1100 - details to follow	


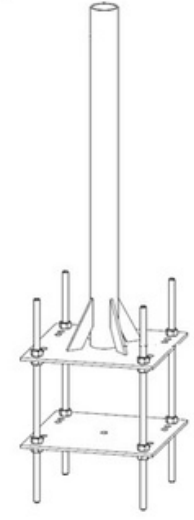

Non-Pen Mounts

Type	Short Stanchion – 4.7" High	Tall Stanchion – 10.6" High
Non-Pen Mount	 <p>Requires 2 bricks</p>	
Stanchion		
Combined Image		
Dimensions	A = 5.5" x B=28.83" x C=16.25"	A = 11.41" x B=28.83" x C=16.25"
Weight (lbs)	13.3	14.2
P/N	1508557-0001	1508556-0001

Pen Mounts

Type	Tri-Mast w/Mast Adapter	Pen Mount with Short Stanchion
Mount		
Height (in.)	A = 29.9" x B=23.3" x C=7.9"	A = 5.4" x B=3.6" x C=5.9"
Weight (lbs)	14.7	1.8
P/N	1508654-0001	1508559-0001

Other Mounts

Type	Eave Mount	Plate Mast Mount
Mount		
P/N	9505142-0001	9012285-0001
Requires Mast Adapter w/Short Stanchion	 <p>Supports 2 3/8" OD</p>	
P/N	1508555-0001	



Thank You!