QUILTY

UPDATES & QUICKTAKES ON THE MEGACONSTELLATIONS MAKING HEADLINES

PWSANNOUNCEMENTS

- as T3 Ground Control> On Aug. 1, the Space Development Agency (SDA) posted a Notice of Intent (NOI) to sole-source Tranche 3 ground ops to General Dynamics Mission Systems (GDMS). The award, once inked, extends the company's grip on the PWSA ground game – a role it first landed in 2022 with a ~\$325M Tranche I contract to build the Ground Operations and Integration (O&I) segment. Two years later, that award ballooned with a \$491M extension through 2029, increasing the potential payday to \$1.1B. Teamed with Iridium, which later disclosed a \$239M, five-year share, GDMS stood up two main command centers for the SDA in 2024: OC-North at Grand Forks AFB in North Dakota and OC-South at Redstone Arsenal in Alabama. Most notably, the NOI is for T3 *Tracking* only. <u>T3 *Transport*</u> has been shelved - zeroed out in FY26 budgets and shoved into an "Analysis of <u>Alternatives"</u> study (i.e., the Pentagon is kicking the tires on Starshield as a plugand-play alternative).
- □ York Opens for T1> York Space Systems just delivered 21 Tranche 1 Transport Layer (TITL) birds to the pad for SDA's debut launch for Tranche 1, slated for September out of Vandenberg. This is the operational debut of Transport Layer capability, arriving a year later than SDA's original September 2024 target but still on the right side of the budget cycle. This marks the full payload for this ride and the opening salvo of the PWSA's comms backbone... for now. York clinched the 42satellite, \$382M order back in 2022, alongside Northrop Grumman (\$692M) and Lockheed Martin (\$700M). TITL includes two near-polar planes, each with 42 birds per vendor. This flight fills one plane; the second 21 T1 spacecraft will launch later. If this feels like the payoff to a slow-burn arc, it is. York is OG PWSA:
- √ T0TL: 10 spacecraft awarded in 2020. Eight of the first 10 that flew in <u>April 2023</u> were York-built, and T0 also logged the first space-to-ground Link 16 transmission in <u>November 2023</u>, as well as a precedent-setting vendor-to-vendor crosslink demo with SpaceX in <u>January 2025</u>.
- ✓ TITL: <u>42</u> spacecraft on contract.
- T1DES: 1 experimental "Dragoon" launched in <u>June 2025</u> (first of 12 <u>"risk-reduction"</u> satellites).
- ✓ T2TL: <u>62 Alpha</u> + <u>10 Gamma</u> birds.
- ✓ All in, 136 satellites across three tranches.

MEGACONSTELLATION MONTHLY

AUGUST 2025

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As the department proposes increasing the budget for commercially owned proliferated LEO satellite communications, it is also proposing decreasing the budget for DOD-owned proliferated LEO satellite communications. Specifically, the FY 2026 request would cut the Space Development Agency's transport layer by 20 percent (or \$340 million) from the FY 2025.

"

 Aerospace Corp.'s Center for Space Policy and Strategy, "FY 2026 Defense Space Budget: Emergence of Golden Dome" (August 2025)

- □ Tracking L3> L3Harris just advanced the PWSA's Tranche 2 Tracking schedule from design to production in August after clearing the CDR and PRR for 18 infrared (IR) satellites under a \$919M contract awarded in January 2024. Using a Maxarsupplied bus, L3's T2TRK design builds on its four TOTRK satellites, launched in February 2024, alongside a Hypersonic & Ballistic Tracking Space Sensor (HBTSS) prototype for the Missile Defense Agency (MDA). Together, these demonstrated wide- and medium-field-of-view sensing against maneuvering threats. For T1, L3Harris won \$800M to deliver 16 tracking satellites equipped to carry IR payloads and onboard algorithms to fuse and distribute tracking data in real-time. L3 is also supplying eight EO/IR payloads for SDA's FOO Fighter program under Millennium's \$414M prime contract, which cleared dCDR and PRR in April. Backed by \$250M in factory upgrades across Indiana, Massachusetts, and Florida – which includes a \$100M, 94,000-sq-ft Palm Bay expansion - L3 is clearly going for gold. Not a surprise considering President Trump literally name-dropped the HBTSS program in his EO.
- Golden Gag Order> The Space and Missile Defense Symposium scrubbed its Golden Dome panel after Defense Secretary Pete Hegseth barred public discussion about it, forcing the MDA to host a no-press, <u>closed-door</u>, single-day summit instead. Apparently, Golden Dome was everywhere – and nowhere – all at once. Leaked <u>slides</u> from the event outlined a four-layer architecture: one space-based sensing/interceptor layer and three land-based tiers (NGI silos, THAAD/Aegis, and Patriot/common launchers), plus a new Midwest missile field, and 11 short-range batteries nationwide. Al-enabled fire control and suborbital testing rounded out the GD's new "Go Fast, Think Big" mantra.



ECHOSTAR

LIFELINE OR LAST STAND?

EchoStar's stock roared back this month with shares up nearly 150% since the beginning of the year — after announcing a \$23B all-cash spectrum sale to AT&T. Investors read it as validation: liquidity at last, and credibility for the <u>Aug. 1</u> bombshell that EchoStar would fund a 200-satellite DTD constellation with MDA Space. For a vision that was being interpreted as vapor under the current FCC fire, the AT&T deal was a narrative reset.

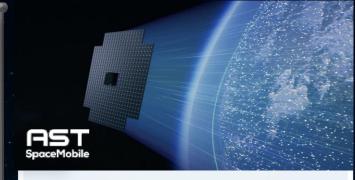
But the plot is messy. Selling off 50 MHz of 600 MHz/3.45 GHz spectrum effectively shutters Charlie Ergen's Open RAN dream, leaving AWS, Mavenir, and Samsung stranded with "lightly used radios" and a reminder that the U.S. government's Open RAN experiment just flamed out. Boost Mobile survives only as a hybrid MNO piggybacking on AT&T's towers.

The pivot leaves one real card on the table: EchoStar's 2 GHz portfolio. That spectrum exclusive U.S. AWS-4 rights plus holdings in Europe, Canada, Mexico, and Brazil — is both the foundation and the wild card of the DTD play. With FCC Chair Brendan Carr still doubling down on EchoStar's spectrum hoarding claims, the risk is regulatory expropriation or forced leasing. With Trump urging resolution, the upside is a deal that secures EchoStar's NTN licenses and clears the way for full commercialization.

Execution risk is still high. The \$1.3B MDA contract is only the entry ticket, with ~\$5B in total constellation costs and first service not even expected until 2029. Yet the timing of the AT&T sale signals that Ergen is betting regulators will let (nay, encourage) him to <u>cash in</u> on the 2 GHz band — whether by deploying it in a LEO system, selling off slices to carriers (Verizon, T-Mobile), or partnering with big tech (Google), an OEM like <u>Apple</u>, a DTD stakeholder (<u>Starlink</u> is likely out given the <u>regulatory jousting</u>, but stranger things have happened), or even the USG. "We continue to evaluate strategic opportunities for our remaining spectrum portfolio in partnership with the U.S. government and wireless industry participants," said EchoStar CEO Hamid Akhavan, leaving the door ajar for government-linked deals. For rivals, the takeaway is two-fold:

- as AT&T just cemented a mid-band lead by buying what Ergen couldn't use.
- 📭 EchoStar is now an all-in 2 GHz NTN bet a binary outcome hinging on FCC politics and capital markets' patience.

Either way, August proved that EchoStar is back in play, no longer circling bankruptcy court, but hardly free of gravity. The company essentially sold the wings to keep the engine fueled, and now the 2 GHz band determines whether it climbs...or keeps taxiing on the runway.



A BLOCK OF BLUEBIRDS CLEARED FOR FLIGHT

August finally gave AST SpaceMobile a regulatory lane and a bigger spectrum play. The DTD OG scored a partial FCC nod on Aug. 29, clearing it to launch 20 Block-2 satellites (licensed fleet now 25) and run TT&C. But the real goal - SCS | MSS service rights (including <u>Band 14</u>) is still parked in review. So, AST can throw birds up and talk to them, but flipping the switch on commercial service in the low/mid bands still awaits the FCC's blessing.

The other headline was its unexpected spectrum play. On Aug. 6, AST agreed to acquire global S-band ITU priority rights covering up to 60 MHz at 1980-2010 / 2170-2200 MHz, for \$64.5M in staged cash or stock. Management says the BlueBirds and ASICs were designed with S-band in mind, so this is likely capacity insurance layered on top of AST's low-band 3GPP path and the Ligado L-band strategy for the U.S. and Canada (now <u>under fire</u> by Viasat).

The near-term <u>wobble</u> is <u>FM1</u>. India's <u>ISRO</u> signaled a 3-4 month slip, likely pushing the Block-2 prototype to NET late Q4. Management downplayed single-provider dependency and reiterated a multilaunch cadence.

Aug. 11's Q2 earnings call skewed positive. AST is aiming for nationwide intermittent U.S. service by year-end, followed by AT&T and Verizon, and then the U.K., Japan, and Canada in early 2026. The target architecture remains ~45-60 satellites for continuous service in key markets, ~90 for global continuity, with launches of 6-8 satellites every 45-60 days once the train leaves the station. AST's cash cushion is real: more than \$1.5B pro-forma at Q2 close after raising \$575M in a low-coupon convert, adding a \$550M delayed-draw loan tied to Ligado, and lining up a \$100M equipment facility. AST used part of that to retire \$360M of older converts, leaving just \$100M outstanding. Management is still guiding to \$50–\$75M of 2H25 revenue from gateways, USG milestones, and early service. Of course, all of this is launchdependent.

AST now has the legal permission to launch 20 Block-2s, a multi-band spectrum stack that scales, and the funding to make it happen. But the reality is that launch cadence and FCC service authorizations still remain the choke points for anyone not named SpaceX.

QUILTY

@ eutelsat group

ONEWEB'S SECOND WIND

On Aug. 5, Eutelsat Group reported full-year 2024–25 results showing LEO revenues up 84% y/y to €187M, now 15% of the group's top line. Sovereign demand drove the surge — a €1B, 10-year framework deal with the French armed forces, steady government usage in Ukraine, a contract to support UK government operations worldwide through NSSLGlobal, and new wins in Asia. Overall government services revenue climbed 24%.

Earlier in the Summer, Paris and London anchored a €1.5B capital raise, recapitalizing the balance sheet and funding both OneWeb's expansion and IRIS² – a political and financial backstop for the company's LEO ambitions. That recapitalization coincided with Eutelsat replacing CEO Eva Berneke with Jean-François Fallacher on June 1 and appointing Eric Labaye as chairman on Aug. 4.

Mobility was a second bright spot. While Air France defected to Starlink, Fallacher revealed new airline contracts including Delta (via Hughes) and an undisclosed South American carrier, plus 100+ aircraft already fitted with OneWeb antennas out of a backlog of ~1,000. A distribution deal inked with India's Nelco on Aug. 11 added weight in Asia. OneWeb has held regulatory approval in India since 2023, making it the first foreign LEO operator with a legal foothold and local partners in place. The Nelco deal follows OneWeb's 2022 partnership with Hughes Communications India (HCIPL), which was the first to distribute OneWeb services domestically and deploy its Indian gateway infrastructure. Together, Hughes and Tata's Nelco give Eutelsat dual anchors in India's connectivity market — one with Airtel | Bharti lineage, the other with Tata's enterprise and government reach — further embedding OneWeb as demand for sovereign, secure connectivity accelerates. Maritime traction also ticked up, with India-based Station Satcom bringing OneWeb into the global shipping sector.

The constellation remains steady at ~650 satellites, but the bottleneck is on the ground: five gateways still need to be built for full global coverage. That pushes service readiness into 2026. Looking ahead, Eutelsat has 100 satellites already ordered and plans to launch a second tranche of up to 340 more by 2029, conditional on secured financing (~€1.2B in capex). That rollout ties into a broader €2B−2.2B commitment to its LEO constellation "continuity" through 2029.

Backed by <u>sovereign capital</u>, locked into IRIS², and now licensed in India with marquee partners, Eutelsat has put itself in the slipstream of geopolitical demand for secure LEO connectivity, and now seems ready to hit the ground (pun intended) running.

MEGACONSTELLATION MONTHLY



ULA is targeting Sept. 25 to launch the next batch of 27 Kuiper satellites. It will be the third of eight missions for Kuiper on the Atlas V and the fifth overall since KA-01 launched its first production mission on <u>April 28, 2025</u>.

KUIPER HITS TRIPLE DIGITS

Amazon's Project Kuiper crossed the 100-satellite mark on <u>Aug. 11</u> with its latest Falcon 9 launch, bringing the constellation to 102 Kuipersats on orbit. Another 27 are slated to launch aboard ULA's Atlas V on Sept. 25, which would push Kuiper to 129 satellites by the fall. Amazon says it's on track to kick off a commercial beta by late 2025 or early 2026.

For now, the constellation is a minor prelude to a bigger pitch. Kuiper doesn't need to win the satellite count race against Starlink. Its edge is integration with AWS, and wrapping cloud services, analytics, and content into the satcom pipe. CEO Andy Jassy is banking on LEO being big enough for two players, especially as Kuiper is less a standalone ISP than a way for Amazon to render AWS indispensable from orbit.

Globally, Kuiper's go-to-market plan is starting to take shape. On Aug. 29, Kuiper committed \$570M for a Vietnam rollout building six ground stations and a terminal plant in Bac Ninh province, with a pilot program awaiting the Prime Minister's nod. In India, Kuiper is priming the pump for market entry as early as next year, which is ...optimistic. In Germany, Kuiper has a clearer runway, with local gateways built and service flagged to start in 2026. Kuiper sparked early interest from the <u>UK Defense</u> Ministry and has secured contracts with <u>Vrio's DIRECTV</u> in South America, as well as Australia's NBN. And, in aviation, Amazon just hired longtime IFC exec <u>Dave Bijur</u> and signed an MoU with Airbus to add Kuiper to its <u>HBCplus</u> linefit catalog, teeing up a direct challenge to Starlink Aviation.

While expected FCC waivers will <u>buy Kuiper</u> more time, launches still have to come fast enough to turn a string of demo passes into continuous service. Then, the biggest question becomes whether Amazon can convert Kuiper into an AWS delivery backbone while leveraging its position as the "alt-Starlink."

In the meantime, it's tempting to stack
Kuiper up against SpaceX's massive scale.
But that comparison misses the point.
Kuiper isn't trying to out-proliferate Starlink.
It's trying to fold a space-based layer into
Amazon's empire by turning satellites into
yet another on-ramp to Prime and AWS.



MEGACONSTELLATION MONTHLY

STARLINK: A GLOBAL GLIMPSE

STARLINK

STARLINK'S REGULATORY RUNDOWN: EPFD

SpaceX is conducting real-world tests (first in Romania and more recently in Colombia) to demonstrate to regulators that NGSO satellites can operate without interfering with GEO operations — the crux of its <u>push to raise</u> equivalent power flux density (EPFD) limits.

The Romanian campaign, conducted with ANCOM, directly fed into the ITU study pipeline. SpaceX shared those <u>results</u> with the ITU in April.

The Colombia trials were run with ANE and then previewed to the FCC in an <u>Aug. 20</u> ex parte, just ahead of the <u>EPFD</u> proceeding's <u>reply-comment deadline</u> (July 28 comments, Aug. 27 replies).

SpaceX (and others, including Kuiper and Telesat) argue that the EPFD rules are ripe for revisiting. For its part, SpaceX is trying to demonstrate that you can keep GEO links whole while lighting eight co-frequency beams and holding only a 4° keep-out wedge from the GEO arc - i.e., more simultaneous reuse (a proposed Nco = 8 versus today's Nco = 1 in most places) and tighter steering (4°) without pushing GEO below performance thresholds. Nco is the number of co-frequency beams visible to a GEO Earth station; raise it and you raise capacity as long as there is no interference. The 4° is the angular buffer from the GEO belt; shrink it and you reclaim sky or previously off-limit angles you weren't using. SpaceX says that with its advanced beamforming, scheduling, and link-aware power control, you can push Nco up and avoidance down while still protecting actual GEO links — measured by throughput/availability on reference links vs. a worst-case mask everywhere on Earth.

The timing of the Columbia study is deliberate. SpaceX, being SpaceX, slid the teaser into the record right before the SB <u>Docket 25-157</u> replies were closing — classic end-game pressure in the FCC's decisionshaping window. That said, the result of this NPRM is likely already decided. The Commission's own not-so-subtle messaging practically telegraphed the outcome: "FCC Begins Review of Decades-Old Spectrum Sharing Rules to Unleash the Power of Space Innovation." If (when) the Commission embraces SpaceX's performance-based logic, Starlink and other NGSOs stand to gain more bits per cell from the same spectrum. If not, they keep yielding to GEO birds with wider no-go wedges and fewer beams, even where no GEO Earth station exists. Internationally, the next step is to keep fueling the studies that will help shape the final ruling at WRC-27, where lobbyists are already lining up.



AUGUST'S AVIATION UPDATE

Starlink's Summer aviation surge came with a reality check. <u>Two outages</u> – including a July 24 global outage tripped by a software upgrade gone sideways — didn't just knock out Starshield and consumer comms, they also left Starlink-equipped aircraft dark for hours. It was a stark reminder that while Starlink's 8,000+ satellites can deliver 500 Mbps at cruising altitude, it's still a single network that can't replace safety-critical comms. Airlines and regulators will continue to demand backup GEO or terrestrial links for ATC and cockpit data. But airline passengers are measuring their loyalty in megabytes instead of miles these days. So here we are. And August underscored just how fast Starlink Aviation is climbing:

- as On Aug. 20, Alaska Airlines signed on to bring Starlink across its entire fleet regionals, narrowbodies, and widebodies - with installs starting this winter and deployment by 2027. Free access will be bundled into its new Atmos Rewards program through T-Mobile, making Alaska the first U.S. airline to tie loyalty perks directly to LEO IFC. The rollout displaces legacy Ku-band Intelsat systems, positioning Alaska to claim more Starlink-equipped departures from Seattle than any other carrier. Performance promises include <99ms latency and up to 500 Mbps — roughly 7x faster than GEO rivals.
- os On Aug. 21, Bloomberg reported SpaceX would soon be closing IFC deals with Emirates, Saudia (covering 140+ aircraft), and Flydubai. If inked, the collabs would unseat incumbents like Viasat and SES-Intelsat in one of IFC's most lucrative hubs.
- On <u>Aug. 24</u>, Avionics Networks rolled out a portable "Pilot Kit" using the Starlink Mini, delivering 5–157 Mbps for small aircraft and rotorcraft without the hefty <u>\$300K</u> terminal price tag *Bloomberg* flagged just days before.

Note: For our Starlink model, we're still holding a \$150k per terminal cost estimate for Starlink Aviation, on the assumption that the higher figures cited by Bloomberg reflect STC certification and installer integration charges, which are revenues captured by MROs and avionics shops, rather than by SpaceX itself.



MEGACONSTELLATION MONTHLY



STARLINK DTC UPDATE

STARLINK

BEAD HAUL (SO FAR)



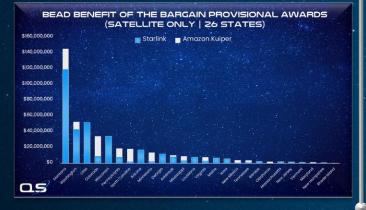
T-Mobile and SpaceX are expanding their DTC partnership beyond text messaging into satellite data. Early access begins Aug. 28 for the Google Pixel 10, but only for Google Maps, Messages, WhatsApp, and Find Hub. Broader third-party app support (X, AccuWeather, navigation, etc.) will be available starting Oct. 1, but only ~70 devices are currently compatible. Fourteen popular models — including Pixel 9a, Moto Razr 2024s, and Samsung Galaxy S21 variants — won't work, likely due to modem and firmware gaps. Since studies peg early Starlink DTC throughput at ~4 Mbps, scaling from texts to apps will be the next test of the system's limits.

Google blurred the lines a bit this month by announcing that Pixel 10 phones will support satellite voice and video calls on WhatsApp, leveraging T-Mobile's Starlink. At the same time, Google's Pixel Watch 4 introduced satellite SOS and location sharing over the Skylo network (likely using Viasat) – highlighting how handset makers are hedging with multiple satellite partners.

Starlink's U.S. rollout still looks cautious compared to Japan's. On the same day, KDDI launched "au Starlink Direct" with a starter pack of 19 supported apps, including X, SmartNews, Weathernews, NERV Disaster Prevention, and YAMAP. The service runs on Pixel 10s and Samsung Z Fold7 | Flip7 with a ¥1,650/month plan and a three-month free trial for rival carrier customers. KDDI pitched it as closing Japan's coverage gap by promising connectivity "anywhere you can see the sky."

And in Latin America, Entel announced on Aug. 13 that Starlink DTC service would soon go live in Peru, extending coverage to remote provinces and islands. The launch follows a broader May 2025 agreement that saw Entel's Peru and Chile units team up with Starlink on DTC connectivity — giving Starlink an early commercial foothold in LATAM.

STAY TUNED FOR FULL RESULTS IN NEXT MONTH'S MEGA:



Final BEAD allocations are due on Sept. 4, but the outlines of Howard Lutnick's reset are already coming into view. By scrapping the "fiber first" rule and forcing states to re-bid, satellite providers have muscled into the subsidy pool. This is the first real test of the new "tech-neutral" mandate. In dollars, the biggest LEO hauls are Montana (\$145M) and Washington (\$53M) so far. LEO dominates in number of locations for states like Ohio (Starlink) and Colorado (Kuiper). In other states like New Jersey, the satellite share feels symbolic. Of the 26 states reporting (as of Aug. 29), the total BEAD satellite spend is ~\$466M split between Starlink (\$347M) and Kuiper (\$119M). A few noteworthy results so far:

- between Starlink (\$119.3M) and Kuiper (\$25.95M). Statewide, satellites cover a majority of addresses; fiber and fixed wireless split the rest. About 16% of funds and 65% of locations went to LEO.
- us Washington: \$52.64M total (Starlink \$43.37M, Kuiper \$9.27M). The state still spends far more on terrestrial (especially fixed wireless), but LEO's check is sizable.
- os Ohio: Starlink secured 41% (31k) of all BEAD locations (more than any ISP) for ~\$52M.
- Wisconsin: Starlink landed \$34.4M to serve 22,948 locations (13%).
- as Colorado: The <u>first state</u> to lean heavily on satellite. Of 66,977 locations, <u>47,652</u> went to LEO providers mostly <u>Kuiper</u>, with 42,252 awarded for \$25.3M. Starlink picked up just 5,400 locations for \$9.1M. Together, satellite claimed the majority of addresses, though just <u>9%</u> of the state's overall spend.
- West Virginia: A near shutout. Starlink won \$6.4M to cover 4,241 addresses about 6% of the total and only 1% of the funds. Fiber walked away with 94% of addresses and 99% of dollars.
- us Virginia: awarded Starlink \$3.3M to serve 5,579 locations less than 1% of funds. <u>Elon displeased</u>.
- Louisiana: doled out just a sliver to satellite. SpaceX is Ragin about the Cajuns.
- as Arkansas: Satellites were pushed to the margins. Starlink picked up about 11k addresses for \$8.5M, and Kuiper just 1,650 for \$1.7M. Fiber providers took ~77% of the state's awards.
- As Maine: Starlink scored 3,464 addresses for \$6.8M, while fiber giant Consolidated Communications dominated with 17,000+ addresses and three-quarters of all funds.
- as Oklahoma: Kuiper was tapped for 4,237 addresses, while Starlink got just one.

 Overall, fiber will cover 65% of awards, fixed wireless 20%, and satellites 15%.
- Georgia: Starlink landed \$11.65M for ~13.5k addresses. Kuiper was ghosted.



MEGACONSTELLATION MONTHLY

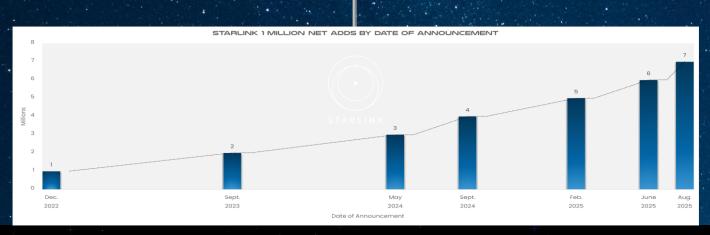


Aerospacelab eyes leading IRIS² manufacturing role after raising \$110 million spacenews.com/aerospacelab-e...

TELESAT.

Telesat reported more than <u>CAD \$1B</u> in contracted Lightspeed backlog in Q2, with growth centered on mobility and government customers. On Aug. 19, Telesat Government Solutions signed an MoU with ALL.SPACE to certify its Hydra family of multi-orbit ground terminals for Lightspeed. The Hydra-2 MAX supports dual Ka-band links across GEO, MEO, and LEO, while the Hydra-4 MAX combines Ka, Ku, and L-band in a single ruggedized unit – systems already fielded with the U.S. Army and Navy. Integrating these already proven platforms ensures Lightspeed will be accessible from day one within multiorbit government architectures, giving it an edge in advancing interoperable





MEGACONSTELLATION TRACKER

