u8 | TERMINAL

KYMETA™
MAKING MOBILE GLOBAL

KYMETA u7 vs. u8: KEY DIFFERENCES

The u8 outperforms the u7 even at its peak performance.

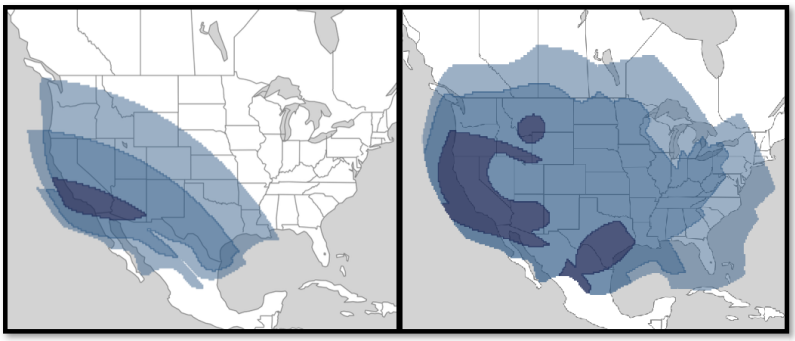
The Kymeta™ u8 terminal is the next-generation Ku-band satellite terminal for communication on the move (COTM). The Kymeta u8 antenna is designed for integrators to create mobile satellite terminals with enhanced communications.

Leveraging Kymeta's revolutionary metamaterials-based technology from the u7 antenna, the u8 antenna has been re-engineered for increased antenna performance and adaptability for greater flexibility to address customers' needs.

Building on the field-proven, best-in-class electronic beam steering technology the Kymeta u8 antenna is even better and easier to use.

Performance enhancement is best shown via coverage maps. The diagrams show modelled throughputs for the same satellite beam (SES-15).

EXPECTED THROUGHPUT ON u7x TERMINAL **EXPECTED THROUGHPUT ON u8 TERMINAL**



- Kymeta technical advances permit higher density of metamaterial pixels resulting in increased tunable bandwidth from 10.7 GHz to 12.75 GHz.
- Only holographic beamforming, metamaterial design permits this higher element density—this is not possible with phased array antennas.
- Redesign of the feed structure permits a larger 82 cm active aperture for the u8 vs. a 68 cm active aperture for the u7, with less than an 8 cm increase in overall dimension. The larger active antenna results in higher gain in the u8.
- The u8 antenna has ~69,000 individually tunable elements for unparalleled agility, while the u7 antenna has only ~30,000, and a similar-sized phased array has 100s of times fewer.

FLEXIBLE INTEGRATION
Integrators can choose to use different modems, different BUCs, and different services

DESIGNED FOR MOBILITY
Low profile and aerodynamic
Low power
Best-in-class pointing and tracking

DESIGNED FOR GLOBAL OPERATIONS
Supports the full Ku-band
Ready for all environments

LEO READY
The u8 antenna is ready for Ku-band LEO constellations

Kymeta u7 vs. u8: highlighted differences*

PERFORMANCE

PARAMETER	KYMETA u7 (V1.2 CONFIGURATION)	KYMETA u8 (COMMERCIAL CONFIGURATION)
Antenna Aperture	RX and TX combined 68 cm active diameter	RX and TX combined 82 cm active diameter
Integrated Tracking System	DVB-S2	DVB-S2, DVB-S2X
Carrier Roll-off Factor	≥20%	≥5%
RX Frequency Range	u7m: 11.4 GHz to 12.3 GHz u7h: 11.85 GHz to 12.75 GHz u7x: 11.2 GHz to 12.1 GHz	10.7 GHz to 12.75 GHz
RX Performance (G/T, broadside)	9.5 dB/K maximum	9 dB/K to 11.5 dB/K
TX Frequency Range	14.0 GHz to 14.5 GHz	13.75 GHz to 14.5 GHz
TX Performance (EIRP, broadside 14.0 GHz to 14.5 GHz)	44.5 dBW max with 16 W BUC	45.5 dBW to 46.5 dBW with 16 W Plin BUC

SIZE, WEIGHT, AND POWER

PARAMETER	KYMETA u7 (V1.2 CONFIGURATION)	KYMETA u8 (COMMERCIAL CONFIGURATION)
Size (W × D × H)	82.3 cm × 82.3 cm x 16.6 cm 32.4 in. × 32.4 in. × 6.5 in.	89.5 cm × 89.5 cm × 14 cm 35.2 in. × 35.2 in. × 5.5 in.
Weight	26.2 kg / 57.5 lb. does not include modem	34 kg / 75 lb. includes modem, hybrid card
Input Power	110 VAC to 240 VAC 50/60 Hz	12 VDC to 36 VDC max
Power Consumption	200 W (typical) 550 W (peak)	150 W (typical) 510 W (peak)**

**For full specifications refer to the u7 and u8 product sheets.*

***Software restriction on peak draw available. May affect antenna performance at low temperature.*

ENVIRONMENTALS

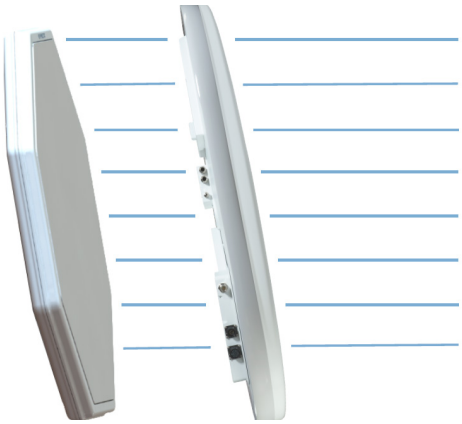
PARAMETER	KYMETA u7 (V1.2 CONFIGURATION)	KYMETA u8 (COMMERCIAL CONFIGURATION)
Operational Temperature	-25 °C to +65 °C (antenna) -25 °C to +55 °C (terminal)	-40 °C to +55 °C (ambient) -40 °C to +70 °C (with solar load)

AVAILABLE CONFIGURATIONS

OPTION	KYMETA u7	KYMETA u8
Antenna only	Yes (u7m, u7h, u7x)	Yes
ODU	Yes	Yes
Terminal with External Modem	Yes	No
Terminal with Embedded Modem Card(s)	No	3 versions available: 1. iDirect iQ 200 satellite modem card and LTE Advanced Pro modem card *(Global)* 2. iDirect iQ 200 satellite modem card and LTE Advanced Pro modem card *(FirstNet)* 3. iDirect 950mp satellite modem and LTE Advanced Pro modem card *(Global)****
Kymeta GO	KyWay GO (prototype)	u8 GO***
Mounts	Mounting handle, vehicle mount (prototype)	Vehicle, MRZR, universal mount
LEO Upgradeable	No	Yes

****Available in Q1 2021.*

KYMETA™ u7 AND u8 ANTENNAS AND TERMINALS OFFER THE SAME KEY BENEFITS



- LOW PROFILE
- LIGHTWEIGHT
- LOW POWER CONSUMING
- INDUSTRY-LEADING POINTING AND TRACKING ABILITY
- FULL DUPLEX (RX/TX FROM A SINGLE APERTURE)
- OVER-THE-AIR (OTA) SOFTWARE UPDATES
- LOW MAINTENANCE
- AFFORDABLE

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