

# AU-500

- High gain, low noise dual-band antenna (L1/L5)
- Supports GPS, GLONASS, Galileo, BeiDou, NavIC, QZSS, SBAS
- Ideal for time synchronization applications
- Superior out of band filtering
- Built-in lightning protection – compliant to IEC 61000-4-5
- IP67, CE, FCC & RoHS 2 compliant

The AU-500 is a dual-band, multi-constellation GNSS antenna ideal for time synchronization applications. It is designed to enable GNSS receivers to perform to their full potential even in harsh weather, hostile RF environments and challenging installation conditions, providing safety and security for critical infrastructure applications such as 5G mobile base stations, timing systems and communications systems where service outages are not permitted.

The underside of the main unit doubles as a ground plane, which improves reception sensitivity whilst at the same time reducing interference and multipath effects. Its high-quality polymer radome is waterproof and dustproof in accordance with IP67 and has been quality tested for operation in harsh environments, verifying the antenna's long-term protection against rain, snow, sea water, ultraviolet rays, chemicals and gases.

A built-in noise filter also effectively removes radio waves (LTE, broadcasting, satellite communications, etc.) that can adversely affect GNSS reception.

Built-in lightning protection in accordance with IEC 61000-4-5 protects the antenna against lightning surges.

AU-500 provides the best performance when combined with Furuno GNSS receiver GT-100. This receiver features multipath mitigation (DSS\*) anti-jamming and anti-spoofing functions to deliver the time accuracy and robustness required by critical infrastructure. Their performance is further enhanced when combined with Furuno's high-performance antennas.

\*DSS (Dynamic Satellite Selection™): an algorithm-based multipath mitigation technology devised by NTT.



		AU-500
<b>Application</b>		
Time Synchronization		●
<b>GNSS Constellations</b>		
GPS / SBAS		●
GLONASS		●
Galileo		●
BeiDou		●
QZSS		●
NavIC		●
<b>Frequency Band</b>		
L1		●
L5		●
<b>Additional Features</b>		
Noise Filter		●
Water & Dustproof (IP67)		●
Lightning protection (IEC61000-4-5)		●
<b>Power Supply</b>		
Operating Voltage		2.5 - 12VDC

Model	AU-500
	
Constellations Supported	GPS L1C/A, GLONASS L1OF, Galileo E1B/E1C, BeiDou B1I/B1C, QZSS L1C/A, SBAS L1C/A GPS L5, Galileo E5a, BeiDou B2a, QZSS L5, NavIC L5
Frequency Band	1558 to 1606MHz(L1); 1164 to 1189MHz(L5)
Polarization	Right-Handed Circular Polarization (RHCP)
Antenna Gain	$\geq 4\text{dBi}$ (Peak gain) $\geq 2\text{dBi}$ (In-band)
Impedance	50 $\Omega$
LNA Gain	40dB $\pm$ 2dB
Noise figure	$\leq 2.5\text{dB}$
Out of Band Rejection	fo = 1176.5MHz, 1582MHz fo $\pm$ 50 MHz: $\leq -50\text{dB}$ , fo $\pm$ 100MHz: $\leq -70\text{dB}$
VSWR	$\leq 2.0$ (@LNA output)
Operating Voltage	DC 2.5 – 12V
Current Consumption	$\leq 40\text{mA}$
Operating Temperature	-40°C to +85°C
Humidity	20 to 90% RH
IP Rating	IP67
ESD resistance	$\pm 15\text{kV}$ (air discharge), IEC 61000-4-2
Shock resistance (lightning)	$\pm 4\text{kV}$ , IEC 61000-4-5
Dimensions	Diameter 110mm x Height 104mm (4.3"x4.09")
Weight	300 $\pm$ 15g
Connector	TNC (J)

### GNSS receiver module for time synchronization

#### Model GT-100



#### Features

- World's highest level of time accuracy <math><4.5\text{ns}</math> ( $1\sigma$ ) in open sky.
- Equipped with DSS to minimise accuracy degradation in harsh urban environments.
- Dual-band system (L1 and L5) for superior performance and robustness.

### Lightning surge protection

#### Model TVA-03C



#### Features

- Protects GNSS receivers from lightning surges.
- Covers GPS, GLONASS and Galileo.
- Compatible not only with GPS receivers but also with multi-GNSS receivers.

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Specifications subject to change without notice