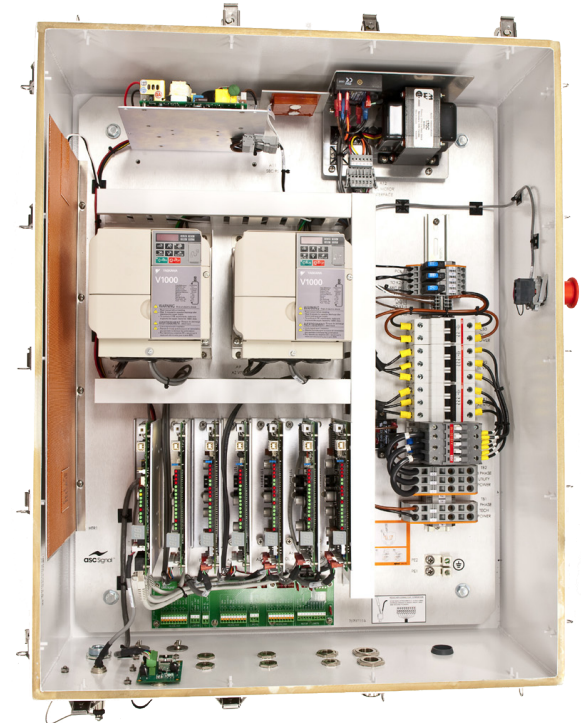


# NGC OUTDOOR UNIT (ODU)

## FEATURES

- The Kratos ODU is housed in a NEMA 4X aluminum enclosure and is designed to be mounted directly onto the antenna structure, minimizing the cable length to motors, limit switches and position encoders.
- Variable Speed motor control for two- and three- axis motor systems complying with the standard Kratos interface, using VFDs for driving the Azimuth and Elevation axes.
- Support for stepper motor type Polarization rotators (optional) utilizing Kratos proprietary NGC Bus, eliminating the need for the internal transformer and polarization control electronics.
- Support for Sub Reflector Tracking utilizing Kratos proprietary NGC Bus. The NGC ODU can simultaneously control 3 SRT Axes (X, Y, Z) as well as 3 main reflector axes (Az, El, Pol) motorization.
- Support for outdoor equipment redundancy control, removing the need for additional controllers and cables.
- Interfaces to the NGC-IDU (Indoor Unit) via fiber optic Inter-Facility Link, providing lightning protection to the NGC-IDU.
- Emergency Stop switches located on both the ODU and advanced handheld terminal. Optional remote ESTOP stations are available.
- Advanced handheld terminal provides local jog control and position designate capability. Handheld terminal reports detailed status of the ODU such as antenna pointing angles and limit switch status. The outdoor unit can be fully configured from the handheld terminal.
- Embedded firmware is updated via USB ports located inside the ODU
- Onboard LEDs and seven segment displays provide low-level detailed status of the ODU circuits and peripherals.



- Configuration of the AC mains terminal block provides a means for powering the low voltage electronics separately from the VFDs using a nominal 220VAC  $\pm$  10% power supply, ideal for connecting a UPS to maintain communications between the NGC-IDU and NGC-ODU during power outages.
- Support for an optional Antenna Warning Light system, providing visible and audible warning signals indicating antenna pre-motion and in-motion status. The Antenna Warning Light system also provides an auxiliary LED element for customer defined use, such as Transmitter On, controlled by external SPST (Single Pol Single Throw) switch. (CFE or designed into system)

# NGC OUTDOOR UNIT (ODU)

## NGC-ODU

Main Unit	
NGC-ODU-208-3	NGC Outdoor Controller for Fixed Antenna 208VAC-3HP
NGC-ODU-380-3	NGC Outdoor Controller for Fixed Antenna Systems 380VAC-3HP
NGC-ODU-208-5	NGC Outdoor Controller for Fixed Antenna 208VAC-5HP
NGC-ODU-380-5	NGC Outdoor Controller for Fixed Antenna Systems 380VAC-5HP
NGC-ODU-208-5-HA	NGC Outdoor Controller for Fixed Antenna Systems High Accuracy 208VAC-5HP
NGC-ODU-380-5-HA	NGC Outdoor Controller for Fixed Antenna Systems High Accuracy 380VAC-5HP
NGC-ODU-208-81DD	NGC Outdoor Controller for ES81MPEXKA-1 Fixed Antenna Systems 208VAC
NGC-ODU-380-81DD	NGC Outdoor Controller for ES81MPEXKA-1 Fixed Antenna Systems 380VAC
NGC-ODU-208-94DD	NGC Outdoor Controller for ES94MPEXKA-1 Fixed Antenna Systems 208VAC
NGC-ODU-380-94DD	NGC Outdoor Controller for ES94MPEXKA-1 Fixed Antenna Systems 380VAC
NGC-ODU-208-LPP *	NGC Outdoor Controller for Trifold Low Profile Positioner 208VAC 3 Phase or 240VAC 1 Phase
NGC-ODU-SRT *	NGC Outdoor Interface for SRT

\* These units are packaged differently but have similar functionalities.

## NGC-ODU Options

Options	
NGC-201 (-DD)	NGC ODU Low Temperature Kit (-40 C)
NGC-202 (-LPP) (-DD)	NGC ODU High Temperature Kit (+60 C)
NGC-205 (-LPP)	NGC ODU AC Polarization Drive Interface
NGC-206	NGC Exterior Emergency Stop Button
NGC-207	Pre Movement Alert Warning Light And Announcator
NGC-211	Dual Path NGC Redundancy
NGC-AESC	Environmental System Controller
NGC-SEN-TRI-HA	NGC Acquisition Assist Sensor Package for Trifold Antennas

## Specifications

Options	
Enclosure Dimensions	32" x 26.5" x 10.4"
Weight	110 lbs. (50kg) approx.
Horsepower	3HP or 5HP (Antenna Size Dependent)
Power Requirement	208 or 380 VAC ±10%, 50/60, 3 Phase 5 Wire Wye, 60 Amps Max
Operational Temperature	-10°C to +50°C. Optional Low Temp Kit extends operating temperature down to -40°C. Optional High Temp Kit extends operating temperature up to +60°C.
Storage Temperature	-40°C to +60°C
Humidity	100% Condensing
Position Encoding	Absolute, Single Speed Resolver to Digital Conversion for Azimuth, Elevation, and Polarization axes. Optical Encoders (17 or 26 bits) are provided for Ka band or special application. Note: Stepper motor polarization drives utilize an industrial potentiometer or 12 bit encoder for position feedback.
R/D Converter Resolution	16 Bit (.0055°)



**KRATOS**<sup>®</sup>  
READY FOR WHAT'S NEXT™



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