

## HYPERION ATLAS PROGRAMMABLE DIGITAL SERVOS - DS16, DS20, DS20x SERIES SPECIFICATIONS

Hyperion Part Number >>>	HP-DS16FCD	HP-DS16FMD		HP-DS20xTMD	HP-DS20xSMD		HP-DS20UMD	HP-DS20FMD	HP-DS20GMD	HP-DS20HMD
Weight	25.5g	28.5g		52.5g			53g		49g	
Dimensions mm	32 x 16 x 31.5			40.0 x 19.5 x 36.5			40.0 x 19.5 x 37.8			
Speed sec/60 deg 4.8v/6.0v	0.18/0.15			0.16/0.13	0.13/0.11		0.23/0.18	0.17/0.13	0.07/0.05	0.15/0.11
Dynamic torque Kg/cm 4.8v/6.0v	4.5/5.5			8.0/9.5	7.0/8.0		11.6/13.8	7.0/8.2	1.6/2.0	3.6/4.7
Holding torque Kg/cm 4.8v/6.0v	9.0/11.0			16.0/19.0	14.0/16.0		20.9/23.5	14.0/16.4	3.2/4.0	7.2/9.4
Gear Train Primary Material	CarbonPoly	Metal		Metal			Metal			
Bearing	double ball			double ball			double ball			
Required Pulse	2.5 – 5 Volt Peak to Peak Square Wave									
Operating Temp	-20 to +60 Degree C									
Current Drain (4.8V)	7.0mA/idle, 150mA noload operating			7.0mA/idle, 230mA noload operating			7.0mA/idle, 230mA noload operating		7.0mA/idle, 170mA noload operating	
Current Drain (6.0V)	7.0mA/idle, 170mA noload operating			7.0mA/idle, 300mA noload operating			7.0mA/idle, 300mA noload operating		7.0mA/idle, 200mA noload operating	
Stall Current (4.8V)	680mA			1500A			1500mA		830mA	
Stall Current (6.0V)	800mA			2000mA			2000mA		1100mA	
Minimum Input Voltage	3.5V under load									
Maximum Input Voltage	Unloaded input voltage should never exceed 7.8V, loaded input voltage max 6.6V									
Drive	Direct DIGITAL			Direct DIGITAL with <b>CORELESS</b> Motor			Direct DIGITAL			
Connector Wire Gauge	25AWG			22AWG			22AWG			
Connector Wire Strand Count	30EA			60EA			60EA			

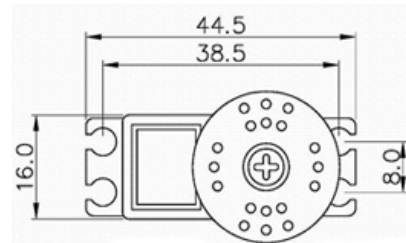
### PROGRAMMABLE PARAMETERS via PC with HP-AT-PRGUSB 3pin Adapter, or EMETER v2 (est Oct 2008)

Rotation in Degrees	Adjustable 30 to 140 degrees total (i.e. 15 to 70 degrees each way), 90 degree default (45 each way)									
Reverse	Clockwise/CounterClockwise, Clockwise default									
Speed	1% to 100% of Rated Speed (100% default)									
Servo Center	+/- 127uS (0 default, center at 1500uS)									
DeadBand Width	0 uS to 16 uS (2 uS default)									
Compatibility	Programmer allows selection of common Transmitter brands, to insure compatibility and default centering									

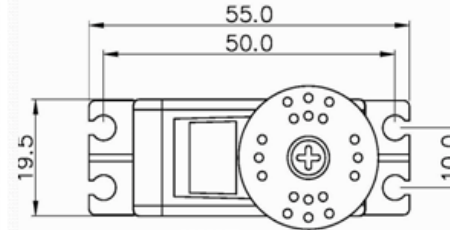
Coreless Motor - eXtreme Torque **xT**  
compared to std type at similar speed

Coreless Motor - eXtreme Speed **xS**  
compared to std type at similar torque

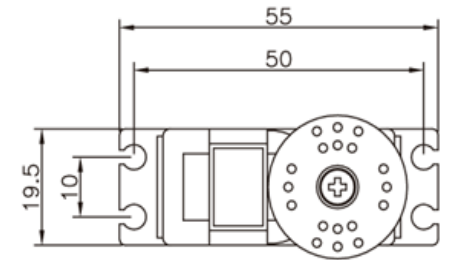
Normal Torque and Speed **A**  
HighTorque/Speed Blend, Mod Current **F**  
UltraHigh Speed for Heli Gyro **G**  
Very High Speed/Low Currrent **H**  
High Speed/Med Torque/Low Current **S**  
High Torque/Less Speed **T**  
UltraHigh Torque/Low Speed **U**  
CarbonPoly Gears (primarily) **C**  
Metal Gears (primarily) **M**  
Plain Bearings **P**  
Top Ball Bearing **B**  
Twin Ball Bearing **D**



**DS16 SERIES**



**DS20x SERIES CORELESS**



**DS-20 SERIES**

