Infrastructure name	**Autosub3**
Code	
Owner/Institution	NOC
Manager	Stephen McPhail
Equipment type	1600m depth rated
System description	
WEB LINK	http://www.noc.soton.ac.uk/nmf/sea_sys_index.php?page=as
WEB LINK TECH SPECS	http://www.noc.soton.ac.uk/nmf/usl_index.php?page=vd
Vessels normally used	RSS Discovery
Ship requirements	
Launching method	Gantry system
Technical requirements	
Weight	2.3T
Buoyancy (water)	
Dimensions	7 m x 0.9 Diameter
Battery	
Technology	alkaline "d " cells
Charging time	
Battery autonomy (e.g. X hrs @ X knots)	1000km
Battery capacity	1000km max
Dives	
Misson depth	1600
Duration	
Speed	
Max. range	1000km
Details of Autonomy/settings in emergency mode (if available)	
Power	
Frequency	n/a
Voltage	90v dc
KVA	
Max Amps	
Other power requirements	
Hydraulic - for LARS (?)	
Pressure	max 210
Flow rate	min 70 litres/min max 140 litres/min.
Compressed air requirements	n/a
Cooling water	n/a
Subsea positioning requirements	
Compatible USBL systems	
Vessel GPS Feed or other requirements	NMEA required is:- Position: GGA (standard output) Heading: HDG,HDT, or VHW from ships compass, not VTG or HDM from the GPS
Communication requirements	

Acoustic	Homing transmitter, hand deployed or via moon pool
Satellite	
WIFI	High Gain WiFi antenna (2). With a clear view as far around as possible, but must cover launch area. Maybe install access point close to the antenna (to keep RF cable runs as short as possible). Gonio (as high as possible) deck unit placed on bridge
Deck Cable	
Vessel Networking requirements	Output for bridge from our main navigation computer in lab, showing Autosub waypoints and position requires all four twisted pairs of a cat 5 cable, NMEA
No. of System configurations possible	
Configuration 1	Gantry deployment with Gantry situated 0.5m form ships edge . Prefer T shape arranmgement with 2 20' containers at the inboard end of gantry
Configuration 2	Variations on the above to suit available deck space are possible i.e. No containers/ 1 container
Configuration 3	
Configuration 4	
Deck Layout Drawing	
Configuration 1	see attachment Auto Sub 3 Deck layout
Configuration 2	
Configuration 3	
Configuration 4	
System weight/COG in each configuration	
Configuration 1	gantry: Weight 5.75 tons,Optional power pack for gantry Weight 2 tons. 2 x 5t containers
Configuration 2	garage containers are optional
Configuration 3	
Configuration 4	
Number of containers/Items, Footprint Area required	
Configuration 1	2 x 20' containers, gantry 2x3 metres, power pack Size 3x2x1 metres.
Configuration 2	
Configuration 3	
Configuration 4	
Deck securing arrangements	
Configuration 1	twist lock containers, Gantry is required to bolt down on a metre matrix bolt pattern or interface plate M24.,
Configuration 2	
Configuration 3	
Configuration 4	
Deck strength/Deck loading	
Configuration 1	
Configuration 2	
Configuration 3	
Configuration 4	
Transportation requirements (total weight and number of loads)	
Configuration 1	2 x 20' containers + optional power pack (20 tonnes total)
Configuration 2	
Configuration 3	
Configuration 4	
V.A.T. + Customs clearance practice	

Mobilisation Details	
Typical Mobilisation duration	3 days
Typical Mobilisation cost	10k euro
Typical Demobilisation duration	2.5 days
Typical Demobilisation cost	10 k euro
Insurance arrangements	
Own use	self insured
Barter	
Charter	
Co-operation	
Transporation insurance	
Technicians	
Number and type of technicians required to operate system in various scenarios	5 technicians required
System payloads	
Total maximum payload (kg)	150 kgs
Existing specific payloads	CTD, multibeam(EM2000) , 2 x adcp 150, 300 KHZ, camera, INS , sonar, water sampler
Additional payloads	significant space for additional payloads