

mMESH™

Private wireless mesh connectivity...
... for challenging environments.



Powered by mMESH™
COFDM Technology



Private Closed Wireless
Network, Independent of
Public Telecom Infrastructure



Rapid Deploy



Enhanced Security Features



Up to 64 Nodes in a Network



Versatile and Expandable



Built for IP Data, Voice &
Video Transmission



Design and built for mobility



DC Powered



Hub-less, no primary/secondary device



MIMO Option



Real-Time Video Transmission
and Viewing

HIGH POWER ROBUST mMESH™

The High Power Robust mMESH™ radio is designed for long range transmission, frequently installed as infrastructure radio nodes on buildings or telecom towers. It can also be installed in sea, air, land vehicles for operational field deployments. The higher power provides longer range transmission compared to the Robust mMESH™.



RF Specifications

Waveform	COFDM
Frequency Range	1000-1500Mhz
Carrier Bandwidth	
- Narrowband	0.25/0.5/1Mhz
- Wideband	1.25/2.5/5/10/20/40Mhz
Max Throughput	
- Narrowband	0.94Mbps
- Wideband	180Mbps
RF Output	10W/40dBm
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz

Power

Power Input	28-36Vdc
Power Consumption	
- Standby	28W
- Max	120W

Physical Dimension

Dimensions (L*W*H)	314*384.5*153.5mm
Weight	12kg

Environment

Operating Temperature	-40 to 50 °C
IP Rating	IP68

I/O Interface

2 x RS232, 2 x Ethernet, 1 x Audio,	1 x TTL
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Security

DES / AES128 / AES256

ROBUST mMESH™

A versatile and multi-purpose radio for any situations.

Mount the Robust mMESH™ unit in any vehicle, building rooftops or towers, unmanned platforms, ships or RHIBs, where it can be quickly deployed for ad-hoc operations, or as a permanent installation.



RF Specifications

Waveform	COFDM
Frequency Range	320-450, 450-650, 1100-1500, 2000-2500, 4800-5000Mhz
Carrier Bandwidth	
- Narrowband	0.25/0.5/1Mhz
- Wideband	1.25/2.5/5/10/20Mhz
Max Throughput	
- Narrowband	0.94Mbps
- Wideband	100Mbps
RF Output	2W
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz

Power

Power Input	28-36Vdc
Power Consumption	
- Standby	13W
- Max	28W

Physical Dimension

Dimensions (L*W*H)	177*170*72mm
Weight	1.8kg

Environment

Operating Temperature	-40 to 50 °C
IP Rating	IP67

I/O Interface

RS232, Ethernet, Audio

Security

DES / AES128 / AES256

ROBUST LITE mMESH™

Following the same Robust series design philosophy, the Robust Lite mMESH™ is also designed to be a versatile and multi-purpose radio. Whether its unmanned platforms, robotics, K9 units, human body-mounted, the Robust Lite can perform in any challenging environments. The side brackets on this radio unit is MOLLE compatible and allows it to be mounted on PALS webbing.



RF Specifications	
Waveform	COFDM
Frequency Range	1300-1500, 2000-2500Mhz
Carrier Bandwidth	
- Narrowband	0.25/0.5/1Mhz
- Wideband	1.25/2.5/5/10Mhz
Max Throughput	
- Narrowband	0.94Mbps
- Wideband	63Mbps (MIMO@10Mhz)
RF Output	0.5W (S band)/1W (L band)
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz
Power	
Power Input	12Vdc (PD)
Power Consumption	
- Standby	6W
- Max	22W
Physical Dimension	
Dimensions (L*W*H)	122*58*35mm
Weight	0.3kg
Environment	
Operating Temperature	-20 to 50 °C
IP Rating	IP68 (unit only)
I/O Interface	
RS232, Ethernet	
Security	
DES / AES128 / AES256	

ROBUST BODYWORN mMESH™

The Robust Bodyworn mMESH™ radio is a personnel mesh unit. Designed with IP68 rating, the unit is suitable for anti-terror units, law enforcement agencies, border and marine security agencies, and other team-based operations that require a robust manet radio.



RF Specifications	
Waveform	COFDM
Frequency Range	1300-1500, 2000-2500Mhz
Carrier Bandwidth	
- Narrowband	0.25/0.5/1Mhz
- Wideband	1.25/2.5/5/10/20Mhz
Max Throughput	
- Narrowband	0.94Mbps
- Wideband	100Mbps
RF Output	1W/30dBm
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz
Power	
Power Input	12.6Vdc(MBITR Battery)
Power Consumption	
- Standby	8W
- Max	18 (L band) / 21W (S band)
Physical Dimension	
Dimensions (L*W*H)	185*75*38.5mm (no batt)
Weight	0.46Kg (no batt)
Environment	
Operating Temperature	-20 to 50 °C
IP Rating	IP68 (unit only)
I/O Interface	
RS232, Ethernet, USB	
Security	
DES / AES128 / AES256	

PUSH-TO-TALK mMESH™

Get the complete picture with speed and simplicity. The PTT (Push-to-talk) mMESH™ radio is the one of its kind in the market that offers voice, video and data transmission in a PTT form factor. The most advance product of its class, this product can function as both a broadband radio for voice, video and data, or as a narrowband voice-only push-to-talk radio. Its quick and simple to deploy in any ad-hoc or emergency situations.



RF Specifications	
Waveform	COFDM
Frequency Range	520-650, 1200-1500, 2000-2500, 4800-5000Mhz
Carrier Bandwidth	
- Narrowband	0.25/0.5/1Mhz
- Wideband	1.25/2.5/5/10Mhz
Max Throughput	
- Narrowband	0.94Mbps
- Wideband	28Mbps
RF Output	0.5W (27dBm)
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz
Power	
Power Input	7.6Vdc (battery)
Power Consumption	
- Max	9.1W
Physical Dimension	
Dimensions (L*W*H)	150*67*40mm
Weight	0.45kg
Environment	
Operating Temperature	-20 to 50 °C
IP Rating	IP54
I/O Interface	
Ethernet, USB, Audio	
Security	
DES / AES128 / AES256	

COVERT mMESH™

Covert mMESH™ is our smallest mMESH™ radio unit. Its designed to be hidden in clothing pockets, and when paired with covert cameras and headsets, this product can be used in various covert operations. The Covert mMESH™ unit can be powered by any standard 12Vdc power bank.

Being small and light, it can also be installed as payloads on unmanned aerial drones, allowing live video to be streamed from the drone to any connected viewing devices within the network.



RF Specifications	
Waveform	COFDM
Frequency Range	1200-1500Mhz
Carrier Bandwidth	
- Narrowband	0.25/0.5/1Mhz
- Wideband	1.25/2.5/5/10Mhz
Max Throughput	
- Narrowband	0.94Mbps
- Wideband	63Mbps (MIMO@10Mhz)
RF Output	0.5W / 27dBm
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz
Power	
Power Input	7-14.5Vdc (Barrel Jack) 12Vdc (USB-C PD)
Power Consumption	
- Standby	6W
- Max	15W
Physical Dimension	
Dimensions (L*W*H)	122*58*35mm
Weight	0.3kg
Environment	
Operating Temperature	-20 to 50 °C
I/O Interface	
Ethernet, Audio, USB	
Security	
DES / AES128 / AES256	

COMMANDER mMESH™

Take charge of any situation from this laptop-equipped Commander node that features a 2W mMESH™ kit powered by ACE6 AEGIS command and control software. With AEGIS, team commanders can view multiple video feeds, record video content, remotely control cameras, and configure mMESH™ device settings. Fortified by a travelling hard-case, this battery-powered unit also comes with Wi-Fi and dual Ethernet ports for connection to other IP devices.



RF Specifications	
Waveform	COFDM
Frequency Range	450-650, 1000-1500, 2000-2500Mhz
Carrier Bandwidth	0.25/0.5/1Mhz
- Narrowband	1.25/2.5/5/10/20Mhz
- Wideband	
Max Throughput	0.94Mbps
- Narrowband	100Mbps
- Wideband	
RF Output	2W
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz
Power	
Power Input	100-240Vac 28-36Vdc
Power Consumption	
- Max	30W
Physical Dimension	
Dimensions (L*W*H)	502*415*246mm
Weight	~11g (depending on config)
Environment	
Operating Temperature	-40 to 50 °C
I/O Interface	
2 x Ethernet, Audio	
Security	
DES / AES128 / AES256	

PTZ & FIX CAM mMESH™

The pan-tilt-zoom capabilities of the PTZ Cam mMESH™ is a portable battery-powered unit allowing uninterrupted transmission of the complete surveillance area. Integrated with a 2W mMESH™ core, the viewing angle can be adjusted remotely.

The Fix Cam mMESH™ is a light, compact camera that can be wall-mounted using Velcro. Battery-powered, with a manually-adjustable view angle, the camera's integrated 500mW mMESH™ radio unit delivers an additional surveillance video of critical zones.



RF Specifications	
Waveform	COFDM
Frequency Range	1200-1500Mhz (Fix Cam) 1100-1500Mhz (PTZ Cam)
Carrier Bandwidth	1.25/2.5/5/10/20Mhz
Max Throughput	100Mbps
RF Output	0.5W (Fix Cam) / 2W (PTZ Cam)
FEC rate	1/3, 2/3
Receive Sensitivity	-100dBm@5Mhz
Power	
Power Input	7-14Vdc (Fix Cam) 28-36Vdc (PTZ Cam)
Power Consumption (Max)	18W (Fix Cam) / 48W (PTZ Cam)
Physical Dimension	
Dimensions (D*H)	160*152mm (Fix Cam) / 220*262mm (PTZ Cam)
Weight	1.93kg (Fix Cam) / 5.25kg (PTZ Cam)
Camera (Fix Cam)	Camera (PTZ Cam)
Image Quality: 2MP	Image Quality: 2MP
Image Resolution: 1080P@30fps	Image Resolution: 1080P@60fps
Video Compression :H264/ H265	Video Compression: H264/ H265
IR Distance: up to 35m	IR Distance: up to 160m
Lens: 2.8 – 8.4mm	Lens: 5—117mm
Zoom: 3x optical zoom	Zoom: 23x optical zoom
	Pan Range: 360° endless
	Tilt Range: -5° to 90° (auto flip)

Search & Rescue teams can be equipped with PTT mMESH™.



UAV and helicopters employed in the search and rescue efforts can also be installed with mMESH™ radios. This can increase network coverage of the search zone.

UAV installed with ACE6 mMESH™ radio.

Command Centre with ACE6 mMESH™ High Power Robust radio.



Vehicles are installed with Robust MESH™ radio.

Tactical units are equipped with body-worn mMESH™ radio.

Boarding teams are equipped with PTT MESH™ and body cameras.

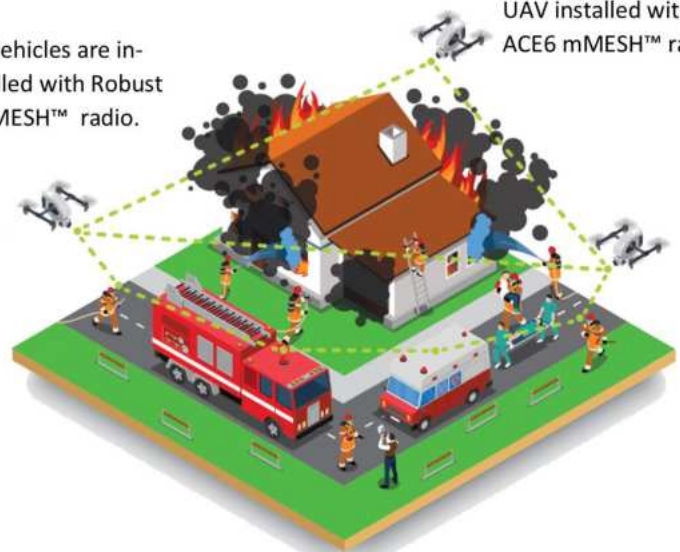
All Coast Guard vessels are installed with Robust MESH™ radio.



In a ship-boarding operation, live video from boarding teams are transmitted live to Commanding Officer at the Patrol Vessel.

Vehicles are installed with Robust MESH™ radio.

UAV installed with ACE6 mMESH™ radio.



A MESH™ network can provide the Fire Commander with up-to-date information on the fire fighting operation and location of all fire fighting assets.



ACE6 TECHNOLOGY
Pushing the Boundaries

ACE6 Technology Pte Ltd

Tel: (+65) 6258 4692 Fax: (+65) 6258 4694 enquiry@ace6tech.com www.ace6tech.com



fb.com/ace6tech



linkedin.com/company/ace6tech

