MPU5
UNMANNED SYSTEMS

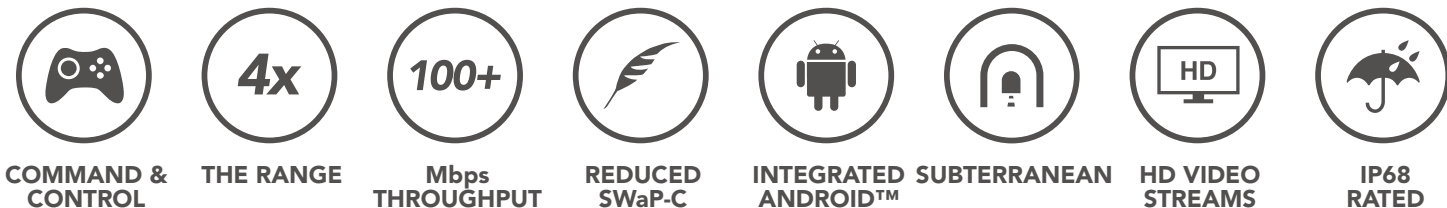**Persistent Systems, LLC**

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THE WORLD'S FIRST SMART RADIO

Easily integrate the MPU5 into your unmanned systems. The MPU5's fully featured smart radio platform provides HD video encoding, Ethernet, RS-232 over IP, extended range, and extremely high throughput.

Replace many systems on your unmanned platform with one MPU5 and save on size, weight, power, and cost. Your Android™ control application installs directly on the MPU5, enabling a single smart radio to fly or drive all of your unmanned systems. Your entire fleet of unmanned systems can now operate and communicate on a common network.

| COMMAND & CONTROL	THE RANGE	Mbps THROUGHPUT	REDUCED SWaP-C	INTEGRATED ANDROID™	SUBTERRANEAN	HD VIDEO STREAMS	IP68 RATED
	4x	100+				HD	

GO WHERE OTHER RADIOS CAN'T

The MPU5's radio system is built on 3x3 Multiple Input Multiple Output (MIMO) technology. MIMO technology allows for extended range and increased throughput in complex urban, subterranean, and maritime environments - both line-of-sight (LOS) and non-line-of-sight (NLOS). Ideal for Unmanned Systems, the MPU5 can extend your network to maintain communication with your unmanned systems wherever they need to go.

STREAM HD VIDEO

The MPU5 enables you to encode and stream live audio and video without the need for external hardware encoders by directly connecting HD and SD camera systems via 3G-SDI, HDMI, and Composite video inputs. The MPU5 encodes and streams H.264 feeds at resolutions ranging from 320x240 to Full HD 1080p and 720p60. The onboard hardware accelerated video encoder supports RTP as well as both unicast and multicast UDP streaming in an MPEG-TS transport stream. The MPU5 also provides hardware accelerated H.264 video decoding, enabling you to watch up to four video streams simultaneously.
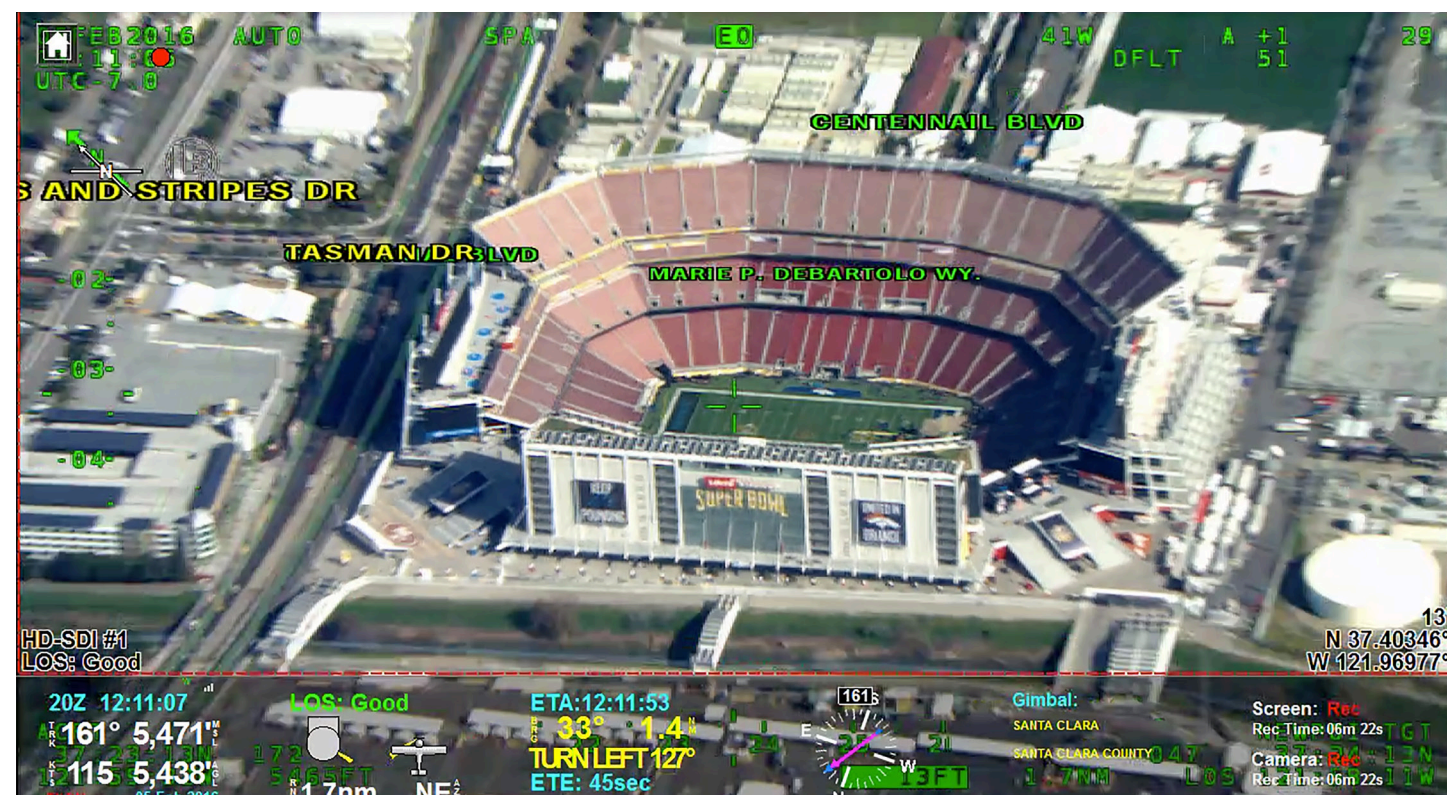
PERSISTENT SYSTEMS

COMMAND – CONTROL – NETWORK – SWARM

YOUR RADIO IS NOW THE COMPUTER

The MPU5's onboard Android™ operating system allows you to install and run 3rd party applications directly on the device. As a smart radio, the MPU5 is a network and mobile computing platform that works simply and easily. Install a command and control app on the MPU5 to control all your unmanned systems directly from the device while monitoring their movement via situational awareness apps and/or the Wave Relay® Video Decoding app.

WAVE RELAY® MANET

The Wave Relay® MANET was designed for mobility and is the core of the MPU5. The MPU5, powered by the Wave Relay® MANET, allows a distributed a decentralized group of fully mobile users to communicate continuously and efficiently without the need for fixed infrastructure. Ever MPU5 on a Wave Relay® network communicate with each other, forming a true peer-to-peer network with no master node or base station. Add and subtract MPU5s from the network without losing connectivity or reconfiguring your devices. The Wave Relay® MANET routes data from radio to radio, enabling the network to grow, adapt, and extend as more MPU5s are added. Massively scalable and incredibly intelligent – the MPU5 keeps you connected and ready for anything.

INTELLIGENT RoIP TETHERING

Eliminate the divide between organizations with incompatible communications equipment. The MPU5's Intelligent Radio over IP (RoIP) Tether feature requires just one cable to connect to your existing Land Mobile Radio (LMR) system and makes it available as a talk group to MPU5s on the network. Everyone carrying an MPU5 can now speak on all of the existing LMR channels.

SUPERIOR VOICE CAPABILITY

The MPU5 delivers crystal-clear Push-to-Talk (PTT) voice over 16 switchable and independently configurable talk groups. The Wave Relay® MANET enables you to maintain continuous voice connectivity as your unmanned system travels through tunnels, mountains, and other dynamic landscapes. Utilizing the G.711 audio CODEC, the MPU5 seamlessly integrates with 3rd party radio interoperability systems commonly used in operations centers.

THE WAVE RELAY® ADVANTAGE

"The MPU5 brings together a number of critical capabilities for our unmanned platforms. Not only on the vehicle side with the embeddable unit. Through the MANET and MIMO, the ranges we are achieving in complex environments is truly impressive. This is a win from both the manufacturer and user standpoint."

-- Unmanned System Engineer/Trainer