

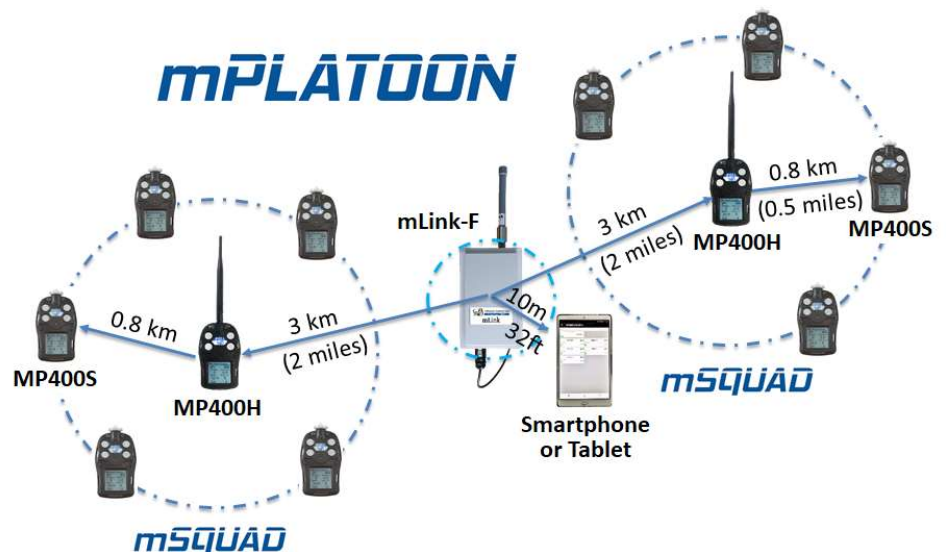
Mobile Wireless Multi-Gas Team Warning System



The mPlatoon System is a quickly-deployable set of mobile multi-gas meters that communicate wirelessly to a central command station (mLink-F) up to 3 km (2 miles) distant. The system is ideal for Hazmat Response, temporary venue protection, large industrial site activities, etc. The mLink-F connects with up to 8 squads of 8 monitors each, for a total of 64 personnel with gas meters. An mSquad consists of one Head monitor (MP400H) and 3 or 7 Soldier monitors (MP400S) operating within a 0.8-km (1/2-mile) radius. Each 4- or 5-gas monitor has options for a full range of sensors for toxic gases, oxygen (O₂), combustibles (LEL) and carbon dioxide (CO₂). In addition to high gas concentration alarms, the Squad Head and central mLink-F modem receive any Man-Down alarms to notify them of a worker in distress. The overall operation is overseen from a Android smartphone or tablet that communicates by wireless BLE to the mLink-F within 10 m (33 ft.). The mLink-F normally runs on 100-240 VAC power and is not intrinsically safe, while all the Squad monitors run on batteries and are Class I Div I certified to operate in hazardous zones. However, the entire Platoon can be mobilized by operating the mLink-F out of a vehicle or utilizing its back-up battery, which runs for up to 18 hours. For smaller operations the mLink-F can be replaced by the lower-cost mLink-P. The MP400S and MP400H have rugged construction and easy-to-learn 2-button operation.

Features, Functions and Benefits

- Remote, wireless real-time readings and alarms including Man-down
- Up to 64 remote 4- or 5-gas monitors in 8 Squads of 8 persons each
- Up to 3 km (2 miles) distance to Squad Head and 800 m within Squad
- Mobile system operation
- 12-hour continuous operation on single Li-ion battery charge.
- USB Micro cable for local charge & communication
- Wide selection of sensor types







mPLATOON Specifications

mLink & Platform Specifications

mLink	mLink-F	mLink-P	MP400H
Size w/o Antenna	11 x 6.6 x 3.9 in. 28 x 17 x 10 cm	5.0 x 3.6 x 1.9 in. 13 x 9.1 x 4.7 cm	5.7 x 3.3 x 1.7 in. 14 x 8.4 x 4.2 cm
Weight	31 oz (880 g)	16 oz (450 g)	15.5 oz (435 g)
IP	IP67	IP54	IP67
Temp.	-4° to 131°F -20° to 55°C	-4° to 122°F -20° to 50°C	-4° to 122°F -20° to 50°C
Power Source	100-240V AC w/ Back-up battery	Li-Ion Battery	Li-Ion Battery
Battery	18 hr	24 hr	12 hr
Range	3 km (2 miles)	3 km (2 miles)	0.8 km (1/2 mile)
Monitors	64	32	4 or 8 /mSquad
Certs.	N/A	N/A	C1D1 ABCD T4
Freq.	ISM band (902-928 MHz) FCC Part 15 approved		

MP400S and MP400H Specifications

Size	5.7 x 3.3 x 1.7 in (140 x 84 x 42 mm) w/o Antenna
Weight	15.5 oz (435 g)
Sampling	MP400S - Internal pump; MP400H - Diffusion
Battery	12 hr (depends on sensors and pump installed)
Direct Readout	<ul style="list-style-type: none"> Real-time gas concentrations; Battery status STEL, TWA, peak and minimum values, and more
Display	128 x 128 graphical LCD, 1.77 x 1.73 in (45 x 44 mm), with LED backlight for enhanced readability.
Calibration	Zero and span calibration. Single or multiple sensor simultaneous calibration settings
Wireless Comm	Poll gas concentration readings from Software on Android phone or tablet via MP400H and mLink-F
Alarms	Push Notification via MP400H and mLink-F, plus local audible (95 dB @ 30 cm), visual (flashing LEDs), vibration and Man-down alarms
Direct Comm and Charging	USB cable for charging, data download, instrument setup and firmware upgrades on PC or 100-240V AC charger, or CaliCase.
Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% Relative humidity (non-condensing)
IP Rating	IP-65 MP400S (pump); IP-67 MP400H (diffusion)
Safety Certifications	 Class I, Div 1, Group ABCD T4, -20°C ≤ T _{amb} ≤ +50°C  Ex ia IIC T4 Ga  II 1G Ex ia IIC T4 Ga (pending)  European Conformity (pending)
EMC/RFI	EMC directive: 2014/30/EU

Sensor Options

Sensor Types	Interchangeable: EC for Toxic and O ₂ , Pellistor for LEL, and NDIR for LEL, Vol% and CO ₂
Response time (t90)	<ul style="list-style-type: none"> 20 s (LEL/CO/H₂S/O₂) Others vary up to 120 s

Sensor	Range	Resolution
PID	0-2000 ppm	0.1 ppm
Oxygen (O₂)	0-30%Vol	0.1%Vol
Combustibles (LEL%)	0-100%LEL	1%LEL
Hydrocarbons (Vol%)	0-100%Vol	0.1%Vol
CO₂ (Carbon Dioxide)	0-50000 ppm	100 ppm
CO (Carbon Monoxide)	0-1000 ppm	1 ppm
H₂S (Hydrogen Sulfide)	0-100 ppm	0.1 ppm
	0-1000 ppm	1 ppm
CO + H₂S	CO 0-500 ppm	1 ppm
	H₂S 0-200 ppm	0.1 ppm
SO₂ + H₂S	SO₂ 0-20 ppm	0.1 ppm
	H₂S 0-100 ppm	0.1 ppm
NH₃ (Ammonia)	0-100 ppm	1 ppm
Cl₂ (Chlorine)	0-50 ppm	0.1 ppm
H₂ (Hydrogen)	0-1000 ppm	10 ppm
HCl (Hydrogen Chloride)	0-15 ppm	0.1 ppm
HCN (Hydrogen Cyanide)	0-100 ppm	1 ppm
NO (Nitric Oxide)	0-250 ppm	1 ppm
NO₂ (Nitrogen Dioxide)	0-20 ppm	0.1 ppm
PH₃ (Phosphine)	0-20 ppm	0.01 ppm
SO₂ (Sulfur Dioxide)	0-20 ppm	0.1 ppm
ETO (Ethylene Oxide)	0-100 ppm	0.1 ppm
CH₃SH (Methyl Mercaptan)	0-10 ppm	0.1 ppm

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* Due to ongoing research and product improvement, specifications are subject to change without notice *