MISSION
COMMUNICATIONS

Accessory Catalog

All Mission Communications remote terminal units (RTUs) come equipped with the necessary materials for a standard application. The accessories described in this catalog are intended for specialty applications and/or to replace expired or damaged parts.

Many of the accessories in this catalog are compatible with both the Legacy and MyDro series of RTU, but some may only work with one system or the other. Please consult the notes column for additional details about each product.

The products listed in this catalog may be subject to change. Please contact orders@123mc.com with questions about current offerings or to make modifications to accessories that contain multiple components.

The Sales Department can be reached at sales@123mc.com or (877) 993-1911 option 4. Contact Technical Support at techsupport@123mc.com or by selecting option 2.

Legacy Series
M110
M800

MyDro Series
M150
M850

Contents

Antennas and Antenna Accessories

Mission RTUs include the standard antenna and mounting system that are appropriate for most applications. The majority of Mission systems do not need additional antenna hardware. The antennas and accessories described in this section are for special applications, such as locations where the signal strength is weak or the antenna must be located further away from the RTU than normal. Consider the following factors when choosing antennas:

- Frequency: The cellular transceiver integrated into the Mission RTU supports different frequency bands—between 700 MHz and 2100 MHz. The radio will automatically select the best tower signal based on the site and the cellular carrier.

- Signal strength: Signal strength is measured in decibels (dB). It can be improved or gained by clearing obstacles or installing a special antenna. Signal strength can be lost in excessively long cable runs or corroded, wet connections.
- Antenna location: For best performance, the antenna should be installed outdoors and as high as possible. If mounted on a structure, the antenna whip should be above the highest point.
- Low-profile options: Low profile antennas are inconspicuous and deter vandalism. This type works best when used in areas with great signal strength.
- Directional antennas: These yield higher gain but may prevent the RTU from receiving signals from other towers in the area.

N Connectors 0.785 inch outer diameter	SMA Connectors 0.36 inch outer diameter	TNC Connectors 0.57 inch outer diameter
Female (F) Male (M)	Female (F) Male (M)	Female (F) Male (M)

Mission Part No.	Item Description and Specifications	Notes	Image
RF445	**Antenna Adapter—Base** 7.5-in TNC-F to molded antenna base adapter		
RF3004	**Antenna—Directional Yagi** 11 dB gain, multi-band antenna, 700–2700 MHz; Includes 9-in TNC-F connector	Drain hole should be oriented toward the ground	
RF409	**Antenna—Low Profile with Cable and Adapter** 3 dB gain, dual-band, tamper-resistant antenna, 11' SMA cable, and SMA-F to TNC-F		
RF412	**Antenna—Low Profile with Cable** 3 dB gain, dual-band, tamper-resistant antenna and 11' SMA cable		
RF417	**Antenna Cable—10-ft, RG58** N-M to SMA-M		

Mission Part No.	Item Description and Specifications	Notes	Image
RF418	**Antenna Cable—11-ft, RG58** SMA-M to molded antenna base	Included in PN RF8005 and PN RF433	
RF413C	**Antenna Cable—15-ft** Includes: low signal loss RG8U cable with TNC-M connectors on both ends, 8-in TNC-F to SMA-M adapter, and 7.5-in TNC-F to molded antenna base adapter	For custom cable length, order direct from vendor; Call Mission for details	
RF414C	**Antenna Cable—20-ft** Includes: low signal loss 9913 cable with TNC-M connectors on both ends, 8-in TNC-F to SMA-M adapter, and 7.5-in TNC-F to molded antenna base adapter	For custom cable length, order direct from vendor; Call Mission for details	
RF415C	**Antenna Cable—25-ft** Includes: low signal loss 9913 cable with TNC-M connectors on both ends, 8-in TNC-F to SMA-M adapter, and 7.5-in TNC-F to molded antenna base adapter	For custom cable length, order direct from vendor; Call Mission for details	
RF416C	**Antenna Cable—50-ft** Includes: low signal loss 9913 cable with TNC-M connectors on both ends, 8-in TNC-F to SMA-M adapter, and 7.5-in TNC-F to molded antenna base adapter	For custom cable length, order direct from vendor; Call Mission for details	

Mission Part No.	Item Description and Specifications	Notes	Image
RF8005	**Antenna Kit—Pole Mount** Includes: universal antenna mount bracket, 11-ft RG58 SMA-M to molded end antenna cable, strain relief, antenna whip, and 2 mounting clamps	Included with all RTUs	
RF435	**Antenna Kit—Pole Mount without Antenna Bracket** Includes: 11-ft RG58 SMA-M to molded end antenna cable, strain relief, antenna whip, and 2 mounting clamps	Bracket not included	
RF430	**Antenna Mini-Whip** Replacement, LTE	Fits universal antenna mount bracket and molded antenna base	
R3002	**Antenna Cable** 100mm UFL-SMA Bulkhead	For use with MyDro RTUs	
RF434	**Bracket—Universal Antenna Mount** Replacement, universal, aluminum	Included in PN RF8005	

Expansion Modules and Option Boards

MyDro Expansion Modules

Expansion modules are compatible with MyDro series RTUs (M150 and M850). MyDro units simultaneously support one of each type of expansion module and up to two pulse expansion modules. If ordering a second Pulse Input Expansion Module for the same application, indicate OP464-31 on the order because the modules must run on different channels. Available expansion modules include analog input, analog output, digital input, and pulse input.

The expansion modules provide the following additions to mainboard I/O:
- Analog Input: 4 analog input channels
- Analog Output: 2 analog output channels
- Digital Input: 8 digital input channels
- Pulse Input: 4 total pulse input channels

Legacy Option Boards

Option boards are compatible with legacy series RTUs (M110 and M800). Legacy units only support one option board per RTU. Available option boards include analog input and pulse input, analog output and pulse input, digital input, and pulse input. When placing orders for option boards, indicate the year the RTU was purchased. Older RTUs will require a backplate adapter to accommodate option boards.

The option boards provide the following additions to mainboard I/O:
- Analog Input and Pulse Input: 4 analog input channels and 2 pulse input channels
- Analog Output and Pulse Input: 2 analog output and 2 pulse input channels
- Digital Input: 8 digital input channels
- Pulse Input: 2 pulse input channels

Mission Part No.	Item Description and Specifications	Notes	Image
OP465	**Expansion Module—Analog Input** Provides 4 analog input channels via RS485	For use with MyDro 850 RTU; Requires service package (PN SPOP-12)	
OP461	**Expansion Module—Analog Output** Provides 2 analog output channels via RS485	For use with MyDro 850 RTU; Requires service package (PN SPOP-12)	
OP653	**Expansion Module—Digital Input** Provides 8 isolated digital inputs via RS485	For use with MyDro 850 RTU; Requires service package (PN SPOP-12)	
OP464	**Expansion Module—Pulse Input** Provides 2 pulse input channels via RS485	For use with MyDro 150 and MyDro 850 RTUs; Requires service package (PN SPOP-12); Indicate OP464-31 on order if second pulse module on same application	
OP466	**Option Board—Analog Input and Pulse Input** Provides 4 analog inputs and 2 pulse input channels	For use with M800 RTUs; One option board per RTU; Requires service package (PN SPOP-12); Indicate RTU purchase year on order for proper backplate	

Expansion Modules and Option Boards

Mission Part No.	Item Description and Specifications	Notes	Image
OP460	**Option Board—Analog Output and Pulse Input** Provides 2 analog output and 2 pulse input channels	For use with M800 RTUs; One option board per RTU; Requires service package (PN SPOP-12); Indicate RTU purchase year on order for proper backplate	
OP650	**Option Board—Digital Input** Provides 8 isolated digital inputs for alarm purposes	For use with M800 RTUs; One option board per RTU; Requires service package (PN SPOP-12); Indicate RTU purchase year on order for proper backplate	
OP463	**Option Board—Pulse Input** Provides 2 pulse channel inputs	For use with M110 and M800 RTUs; One option board per RTU; Requires service package (PN SPOP-12); Indicate RTU purchase year on order for proper backplate	
OP400	**Switch—AC Current Switch** Strap-on, nylon enclosure, 5-ft twisted pair wire, red LED shows as a closed digital input when greater than 5 A flows through load conductor	For use with Wet Well Module (PN OP651) or directly wire to MyDro digital inputs	
OP651	**Wet Well Module—Revision 2** Includes: Wet Well Module printed circuit board, 2 AC strap-on current switches (PN OP400) and mounting hardware		

Notes

Mission recommends that customers with Manhole Monitors keep a spare antenna and float on hand in case unforeseen issues arise. For instance, road resurfacing may grind up the existing antenna or a vacuum pump may compromise a float.

The Manhole Monitor comes equipped with most parts necessary for a standard installation, but customers may require the 3/8 inch x 24 inch drill bit for in-road installations.

Manhole Monitor above-ground antenna

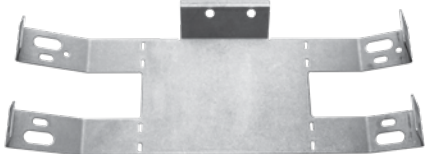| Mission Part No.	Item Description and Specifications	Notes	Image
RF8006	**Antenna—Above-ground** Dual-band antenna with 12-ft SMA-M to SMA-F coaxial antenna cable housed in a 6 ft x 3.5 in vandal-resistant PVC post	For use in remote locations	
RF8003	**Antenna—In-ground** Replacement, dynamic load, omnidirectional		
PW8202	**Battery Replacement Kit** Replacement lithium manganese dioxide, 6.6 V, 6.1 Ah battery pack with 5+ year nominal lifetime, O-ring, dielectric grease, 4 pan-head Phillips stainless steel screws, nitrile gloves		
CP8807	**Carabiner** Snap hook, 3-1/8 in, 316-rated stainless steel		
CP8000	**Drill Bit** 3/8 in x 24 in masonry bit	For use during in-road antenna installation	

Mission Part No.	Item Description and Specifications	Notes	Image
IT8503	**Float—10-ft** N/C, mercury-free, mechanically activated, MilliAmpMaster, ROHS-compliant float with weight attached; Heat, chemical, and abrasion-resistant, non-wicking cable with molded water-tight termination with integral O-ring and locking bayonet		
IT8502	**Float—20-ft** N/C, mercury-free, mechanically activated, MilliAmpMaster, ROHS-compliant float with weight attached; Heat, chemical, and abrasion-resistant, non-wicking cable with molded water-tight termination with integral O-ring and locking bayonet		
IT8504	**Float—30-ft** N/C, mercury-free, mechanically activated, MilliAmpMaster, ROHS-compliant float with weight attached; Heat, chemical, and abrasion-resistant, non-wicking cable with molded water-tight termination with integral O-ring and locking bayonet		
E8110	**Mounting Bracket—Sidewall** Replacement, 304-rated stainless steel, multi-position, wire management tabs		
E8113	**Mounting Bracket—Under the Lid** Designed for mounting directly onto RF transparent manhole covers; 304-rated stainless steel		

Notes

Power Accessories and Replacement Components

Mission offers replacement power components to keep RTUs running properly. There are three primary transformer configurations for AC power for customer RTUs:
- Flying lead
- No lead
- Plug-in

The MyDro series auxiliary voltage output is selectable as 12 or 24 VDC. For legacy series units, Mission also offers a power booster for use with external devices that require 24 VDC power and a plug-in 120 VAC to 24 VDC supply. The power booster works with the RTU auxiliary output.

Interposing relays are for use between RTU onboard relays and pumps.

Mission Part No.	Item Description and Specifications	Notes	Image
PW441	**Battery—5 Ah** Sealed, lead-acid, 12 VDC	Included with standard RTU	
PW442	**Battery—7 Ah** Sealed, lead-acid, 12 VDC		
PW7002	**Power Booster** 24 VDC regulated output, 12–24 VDC input, 0.75 A max output	For use with M110 and M800 RTUs to boost the 12 VDC auxiliary output of RTUs to 24 VDC	
PW426	**Power Supply—Plug-In** 24 VDC, 1 A, UL-listed, black	Used to supply 24 VDC to devices that require more current than can be provided by the RTU auxiliary output	
PW479	**Relay** Single-pole, double-throw, 12 or 24 VDC, 35 mA coil; Contacts rated 120 VAC, 10 A; Includes: MOVs and diodes	Mechanical relay used between onboard relays and customer pumps; Switches the higher current required by pumps and blower motors	

Mission Part No.	Item Description and Specifications	Notes	Image
PW480	**Relay—Solid State** Single-pole, single-throw, N/O only, 5–24 VDC control, 120 VAC, 20 A load	Electronic relay used in applications where low noise switching is required; minimum current of 3 A	
PW453	**Transformer** UL-recognized, 12.6 VAC, 20 VA, class 2	No wire leads	
PW429	**Transformer—Flying Lead** Replacement, UL-listed, class 2, 120 VAC step-down to 12.6 VAC, 20 VA	Included with standard RTU	
PW430A	**Transformer—Plug-In** 12.6 VAC output, 20 VA, MOV protected	Plugs into standard 120 VAC outlet	

Notes

Replacement and Component Parts

Mission products are designed to be resilient, but harsh environments may still affect the life of equipment. Replacement parts are available to keep devices at peak performance.

It is a good idea to have a few spare components in case of an emergency or for troubleshooting purposes—particularly a spare printed circuit board and radio.

Contact orders@123mc.com for questions about current radios.

Mission Part No.	Item Description and Specifications	Notes	Image
CP422	**Annunciator/Buzzer** Replacement	Provides audible feedback of key access and RTU connection after reboot; For use with M110 and M800 RTUs	
CP500	**Cable—RS485** MyDro communication data cable	For use with MyDro 150 and MyDro 850 RTUs	
CP571	**Conformal Coating** Protects printed circuit boards from corrosive environments; Can be applied to: main PCB, radio assembly, Wet Well Module, and option board (if used)	Recommended for harsh environment applications; For use with Legacy and MyDro RTUs	NO IMAGE AVAILABLE
CP305	**Connector Kit—MyDro** Includes: 1 power connector—6 position, 1 analog connector—4 position, 2 digital connectors—8 position, and 3 relay connectors—3 position	For use with MyDro 150 and MyDro 850 RTUs	
E4102	**Enclosure—FlatPak Legacy** Replacement; Includes: electronic key reader, annunciator/buzzer and main printed circuit board; Dimensions: 10.5 in x 7.75 in x 1.5 in	For use with applications inside other control panels; For use with M110 and M800 RTUs	

Replacement and Component Parts

Mission Part No.	Item Description and Specifications	Notes	Image
E4102M	**Enclosure—FlatPak MyDro** Replacement; Includes: electronic key reader, and annunciator/buzzer; Dimensions: 10.5 in x 7.75 in x 1.5 in	For use with applications inside other control panels; Does not include printed circuit board; For use with MyDro 150 and MyDro 850 RTUs	
E4103	**Enclosure—NEMA 1 Legacy** Replacement; Includes: electronic key reader, annunciator/ buzzer and main printed circuit board; Dimensions: 11.375 in x 11.25 in x 3.5 in	For use with M110 and M800 RTUs	
E4103M	**Enclosure—NEMA 1 MyDro** Replacement; Includes: electronic key reader, and annunciator/buzzer; Dimensions: 11.375 in x 11.25 in x 3.5 in	Does not include printed circuit board; For use with MyDro 150 and MyDro 850 RTUs	
E428	**Enclosure—NEMA 4X Legacy** Replacement; Includes: hardware, electronic key reader, annunciator/buzzer and main printed circuit board; Dimensions: 13.25 in x 13.75 in x 6.25 in	For use with M110 and M800 RTUs	
E428M	**Enclosure—NEMA 4X MyDro** Replacement; Includes: hardware, electronic key reader, and annunciator/buzzer; Dimensions: 13.25 in x 13.75 in x 6.25 in	Does not include printed circuit board; For use with MyDro 150 and MyDro 850 RTUs	

Mission Part No.	Item Description and Specifications	Notes	Image
CP450	**Keys—Electronic** Package of 5	Place RTUs into service mode when doing maintenance and acknowledge alarms; For use with MyDro and Legacy RTUs	
CP421	**Key Reader—Legacy** Replacement; Electronic	For use with M110 and M800 RTUs	
CP421-MyDro	**Key Reader—MyDro** Replacement; Electronic	LED is active when used with MyDro RTUs; For use with MyDro 150 and MyDro 850 RTUs	
CP627	**LCD—MyDro** Replacement; For use with CP626	Connector plugs into mainboard; Display is held in place by 4 screws; For use with MyDro 150 and MyDro 850 RTUs	
CP625	**Printed Circuit Board—Main/Legacy** Replacement	Specify device serial #, radio type, chip firmware version, and RTU series; For use with M110 and M800 RTUs	

Mission Part No.	Item Description and Specifications	Notes	Image
CP626	**Printed Circuit Board—Main/MyDro**	Specify device serial #, radio type, chip firmware version, and RTU series; For use with M150 and M850 RTUs; Does not include LCD	
CP652	**Printed Circuit Board—Wet Well Module, Revision 2** Replacement	For use with M110 and M800 RTUs	
CP628	**Printed Circuit Board Assembly—Main/MyDro** Main printed circuit board, LCD screen, connector kit, and adapter	For use with MyDro 150 and MyDro 850 RTUs	
RL	**Radio Replacement—Legacy** For M110 and M800	For use with M110 and M800 RTUs; Contact Mission for details regarding current radios	NO IMAGE AVAILABLE
RM	**Radio Replacement—MyDro** For MyDro 150, MyDro 850, and Manhole Monitor	For use with MyDro 150 and MyDro 850 RTUs; Contact Mission for details regarding current radios	NO IMAGE AVAILABLE

Notes

The Universal Stand is convenient and customizable for mounting a wide variety of items including a remote terminal unit, rain tipping bucket, solar panel, and antenna. It's available as a kit or as individual components. The unique design of the main plate allows rainfall and solar systems to be adjusted for level, angle (Southerly) and attitude (winter vs. summer).

The base can be mounted directly to a slab or with the included stabilizing struts. The inherent design and struts make for a stable, low center of gravity system. Extremely windy environments or roof mount applications where penetrations are undesirable can be further stabilized with cinder blocks, sand bags, longer struts or pressure treated 2x4s, all items available at big-box home stores. Likewise the included 60" height vertical strut can be replaced with a longer one to improve solar or antenna performance.
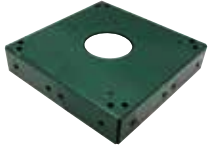
Mission rainfall kits come with all necessary accessory parts to set up a weather reporting station. RTUs can connect to industry-standard pulse based rainfall tipping buckets such as the high quality one we offer on Page 39. Local rainfall information facilitates comparisons to pump runtimes or flow meters for inflow and infiltration (I&I) studies or long term trending. Users can associate a single rain tipping to multiple RTUs in the area.

Solar kits are available for site locations with no access to AC power. They are suitable for use with M850 RTUs and include a larger battery and enclosure than the standard NEMA 4X MyDro. For more solar options, see the next section of this catalog.

For more details on the various ways the universal stand can be used please consult the installation manual available via 123SCADA.com or by contacting Mission.

Universal stand with rain tipping bucket and solar panel

Mission Part No.	Item Description and Specifications	Notes	Image
CP350	**Universal Stand (Full Stand Assembly)** Includes: universal stand (unistrut) and hardware Dimensions: 40 in x 42 in Height without rain tipping bucket: 62 in Height with rain tipping bucket: 74 in Weight: 35 lbs	For use with rain tipping bucket, antenna, solar panel, and/or NEMA 4X; does not include solar bracket Ships in two packages	SEE PAGE 26
CP352	**Universal Stand Base Only** Includes: universal stand base and hardware Dimensions: 18.125 in x 11.125 in x 7.75 in Weight: 7 lbs	Typically used with Universal Stand assembly; can be used with unistrut or telescoping round tube	
CP351	**Mainplate Only** Includes: mainplate and hardware Dimensions: 7.65 in x 7.65 in x 1.58 in Weight: 2.1 lbs	Typically used with rain tipping bucket as part of Universal Stand assembly	
CP355	**Solar Bracket Only (set of two brackets and joining plate)** Includes: two solar brackets, joining plate, and hardware Dimensions: 19.3 in x 4.25 in x 8.5 in Weight: 3.5 lbs	Typically used with solar panel as part of Universal Stand assembly	
RF436	**Antenna Bracket** Includes: antenna bracket and hardware Dimensions: 7 in x 6.25 in x 6.6 in Weight: 0.5 lbs	Typically used with Universal Stand assembly	

Mission Part No.	Item Description and Specifications	Notes	Image
CP353	**Upper Leveling Bracket** Includes: upper leveling bracket and hardware Dimensions: 6.8 in (diameter) x 5.1 in; lower strut - 1.85 in x 1.725 in Weight: 1 lb	Typically used with Universal Stand assembly	
KT278	**Rainfall Kit MyDro—AC** Includes: rainfall tipping bucket, universal stand, and pulse input expansion module	For use with AC powered M150 and M850 series RTUs (not included) Items not to scale Not pictured: Universal Stand	
KT280	**Rainfall Kit MyDro—20 W Solar** Includes: rainfall tipping bucket, universal stand, pulse input expansion module, large NEMA 4X enclosure, 20 W solar panel, solar panel mounting rack, solar charge regulator and 35 Ah battery	Typically used with M850 series RTUs (not included) Items not to scale Not pictured: Universal Stand	
KT862	**Solar Kit MyDro—20 W** Includes: 20 W solar panel, solar panel mounting brackets, large NEMA 4X enclosure, 35 Ah battery, and solar charge regulator	Typically used with M850 RTUs (not included) Items not to scale	

Notes
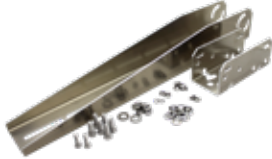
For applications where local utility AC power is not available, Mission offers solar battery operation. Power requirements should be calculated using the worst case scenario. The battery should be able to power the RTU for the longest period of time the site is estimated to be without sun.

Mission utilizes polycrystalline solar panels, which offer the best solar coverage for their value. They work best when they are pointed to the south and not shadowed. It is recommended that users adjust the positioning of solar panels seasonally.
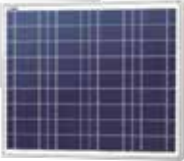
Contact orders@123mc.com for modifications to accessories that include multiple components.

Solar application using 20 W solar panel

Mission Part No.	Item Description and Specifications	Notes	Image
PW862	**Battery—35 Ah** Dimensions: 5 in x 7.5 in x 7 in; Weight: 25 lbs	Only fits in Large NEMA 4X Enclosure; Included with solar powered RTUs and 20 W solar kit	
PW865	**Charge Regulator—SunSaver 12 V**	Included with solar-powered RTUs and 20 W solar kit	
E865	**Enclosure—Large NEMA 4X Legacy** Assembled; Includes: hardware, electronic key reader, and annunciator/buzzer; Dimensions: 7.25 in x 13 in 15.84 in	Included with solar-powered RTUs and 20 W solar kit; Does not include printed circuit board	
E865M	**Enclosure—Large NEMA 4X MyDro** Assembled; Includes: hardware, electronic key reader, and annunciator/buzzer; Dimensions: 7.25 in x 13 in 15.84 in	Included with solar-powered RTUs and 20 W solar kit; Does not include printed circuit board	
CP864	**Mounting Rack** For 20 W solar panel	Included with solar-powered RTUs and 20 W solar kit	

Mission Part No.	Item Description and Specifications	Notes	Image
CP868	**Solar Panel—20 W** Dimensions: 22.68 in x 14.06 in x 1.97 in	Included with solar-powered RTUs and 20 W solar kit	

Notes

Specialty Software and Upgrades Options

Mission offers specialty software and upgrade options for customers with advanced applications. The two most prominent offerings are the Tank and Well Control Package and the OPC-UA link to an existing SCADA HMI.

Tank and Well Control Package
The RTU at the water tank transmits level information to Mission servers. When the tank level is outside the user configurable level boundaries, a command is automatically sent to output relays on the same RTU or remote RTUs to energize pumps or valves and refill the tank. The Tank and Well software supports up to five pumps. RTUs may be connected to additional equipment such as chlorine monitors or other alarm inputs and can be solar-powered.

OPC-UA
OPC-UA is an industrial communication protocol developed for process control and is the successor to the OPC Classic protocol. It offers enhanced security, stability, and software support with added features like multi-platform support. OPC-UA simplifies connections because it no longer depends on legacy Microsoft COM/DCOM technologies. The new protocol also makes firewall client-side configurations much easier.

RTU data is continuously stored on the Mission data servers so the Mission web portal is always available for viewing, configuration, and other functions. Some OPC customers use Mission for telemetry and their SCADA-HMI for alarming and reporting. Others take a hybrid approach where alarm call-outs and acknowledgments are performed by Mission and their traditional system tracks history. Other managers use Mission as a backup system and only enable Mission alarm call-out functions when they are needed.

Mission Part No.	Item Description and Specifications	Notes	Image
SW550	**New Account/Website Setup**	One-time fee per account; Non-ship item	NO IMAGE AVAILABLE
SW586	**SCADA Integration—OPC-UA Link Over Internet**	One-time fee per account; Non-ship item	NO IMAGE AVAILABLE
SW590	**SCADA Integration—VPN Setup for OPC**	Optional addition to PN SW586; One-time fee per account; Non-ship item	NO IMAGE AVAILABLE
SW587	**Tank and Well Control Package** Supports up to 5 well pumps	One-time fee per source tank; For use with M800 or M850 series RTUs only; Non-ship item	NO IMAGE AVAILABLE
SP-1Up-grade	**Service Package—M110/M150 Upgrade** Proration from M110 to M800 series or M150 to M850 series; 1 month	Included with SW800 to add to remaining service; Non-ship item; Supply device name or serial number to accounting@123mc.com for quote	NO IMAGE AVAILABLE

Specialty Software and Upgrade Options

Mission Part No.	Item Description and Specifications	Notes	Image
SW800	**Upgrade—M110 to M800 or M150 to M850** Over-the-air conversion; Service package will be converted from M110 to M800 or M150 to M850	Service package upgrade will be prorated; Non-ship item; Supply device name or serial number to accounting@123mc.com for quote	NO IMAGE AVAILABLE
SW588	**PBARC - Pulse Based Automated Remote Control**	Requires pulse input expansion (PN OP464) or option board (PN OP463); Non-ship item	NO IMAGE AVAILABLE
AF[1]	**Digital Interconnect**	For use with MyDro RTU; Non-ship item	NO IMAGE AVAILABLE
AF[2]	**Analog Interconnect**	For use with MyDro RTU; Requires Analog Output Expansion Board (PN OP461) and service; Non-ship item	NO IMAGE AVAILABLE
AF[1]	**Temperature Interconnect**	Non-ship item	NO IMAGE AVAILABLE

1. No additional feature charge. 2. No additional feature charge, but see product note.

Notes

Transducers and Instrumentation

Transducers allow Mission RTUs to present continuously variable signals like level or pressure on the customer web portal.

Current transducers can be used to monitor motor current for pumps and blowers.

Other instrumentation like a rainfall tipping bucket can be used with a Mission pulse expansion module to measure local rainfall at the Mission RTU.

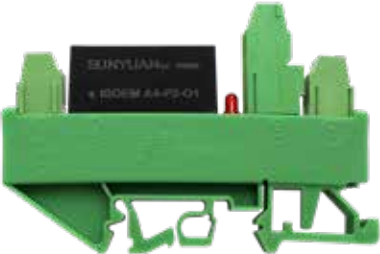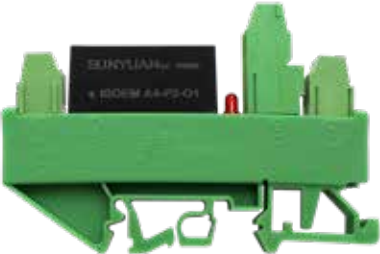| Mission Part No.	Item Description and Specifications	Notes	Image
IT475	**Loop Isolator—Signal Conditioner** Universal signal conditioning module; Active, requires external power supply, configurable for multiple input and output formats		
IT476	**Loop Isolator—Passive** 4–20 mA, loop-powered, non-adjustable range/span		
IT476P12	**Loop Isolator—Powered** 4–20 mA, 12 VDC supply required		
IT476P24	**Loop Isolator—Powered** 4–20 mA, 24 VDC supply required		
IT251	**Rainfall Tipping Bucket** NOAA-compliant, corrosion-resistant metal, measurements in 1/100th in of rain	Requires pulse input option board (PN OP463) or pulse expansion module (PN OP464)	

Mission Part No.	Item Description and Specifications	Notes	Image
IT482	**Surge Protector—Analog** For use with 4–20 mA loop circuits	Included with pressure transducers (PN IT465S, IT472S, IT473S, IT474S, IT477S)	
IT484	**Transducer—Current** Switchable 0–30, 0–60, 0–120 A; 4–20 mA output	Used to measure current draw of a pump, blower, or other type of motor	
IT470-1	**Transducer—Level, 0–15 ft, 40-ft Cable** Submersible, loop-powered, 2-wire transducer; 4–20 mA DC output over 0–6.5 PSI span (0–15 ft); 40-ft signal cable; Includes: sealed breather system and integral surge protector	For custom cable length, order direct from vendor; Call Mission for details	
IT470-2	**Transducer—Level, 0–23 ft, 40-ft Cable** Submersible, loop-powered, 2-wire transducer; 4–20 mA DC output over 0–10 PSI span (0–23.1 ft); 40-ft signal cable; Includes: sealed breather system and integral surge protector	For custom cable length, order direct from vendor; Call Mission for details	
IT470-3	**Transducer—Level, 0–23 ft, 65-ft Cable** Submersible, loop-powered, 2-wire transducer; 4–20 mA DC output over 0–10 PSI span (0-23.1 ft); 65-ft signal cable; Includes: sealed breather system and integral surge protector	For custom cable length, order direct from vendor; Call Mission for details	

Mission Part No.	Item Description and Specifications	Notes	Image
IT470-4	**Transducer—Level, 0–23 ft, 55-ft Cable** Submersible, loop-powered, 2-wire transducer; 4–20 mA DC output over 0–6.5 PSI span (0-15 ft); 65-ft signal cable; Includes: sealed breather system and integral surge protector	For custom cable length, order direct from vendor; Call Mission for details	
IT470-5	**Transducer—Level, 0–15 ft, 65-ft Cable** Submersible, loop-powered, 2-wire transducer; 4–20 mA DC output over 0–6.5 PSI span (0-15 ft); 65-ft signal cable; Includes: sealed breather system and integral surge protector	For custom cable length, order direct from vendor; Call Mission for details	
IT465S	**Transducer—Pressure, 0–30 PSI** Non-submersible, 4–20 mA, 36-in non-submersible cable, ceramic sensor; 1/4-in NPT 316L SS process connection, 1% FS accuracy; 9–30 VDC supply voltage; 1000 Ω max load resistance (at 30 VDC); 60 PSI max pressure, 300 PSI over pressure; Comes with surge protector		
IT472S	**Transducer—Pressure, 0–75 PSI** Non-submersible, 4–20 mA, 36-in non-submersible cable, ceramic oil-filled sensor; 1/4-in NPT 316L SS process connection, 1% FS accuracy; 9–30 VDC supply voltage; 1000 Ω max load resistance (at 30 VDC); 100 PSI max pressure, 300 PSI over pressure; Comes with surge protector		
IT473S	**Transducer—Pressure, 0–150 PSI** Non-submersible, 4–20 mA, 36-in non-submersible cable, ceramic sensor; 1/4-in NPT 316L SS process connection, 1% FS accuracy; 9–30 VDC supply voltage, 1000 Ω max load resistance (at 30 VDC); 300 PSI max pressure, 750 PSI over pressure; Comes with surge protector		

Mission Part No.	Item Description and Specifications	Notes	Image
IT477S	**Transducer—Pressure, 0–15 PSI** Non-submersible, 4–20 mA, 36-in non-submersible cable, ceramic oil-filled sensor; 1/4-in NPT 316L SS process connection, 1% FS accuracy; 9–30 VDC supply voltage; 1000 Ω max load resistance (at 30 VDC); 30 PSI max pressure, 150 PSI over pressure; Comes with surge protector		
IT474S	**Transducer—Pressure, 0–75 PSI** Non-submersible, 0–5 VDC, 36-in non-submersible cable, ceramic oil-filled sensor; 1/4-in NPT 316L SS process connection, 1% FS accuracy; 9–30 VDC supply voltage; 1000 Ω max load resistance (at 30 VDC), 100 PSI max pressure; 300 PSI over pressure; Comes with surge protector	Recommended for solar applications	

Notes

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