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SPECIFICATIONS

DOCUMENT #W53-03

YSI Aquaculture Expansion Modules for Monitoring & Control

IOEM-4 Expansion Module

IOEM-8 Expansion Module

REM-4 Expansion Module



Ensure healthy livestock and maximum profits with tighter control of water quality and system parameters. The YSI IOEM and REM expansion modules increase the flexibility and capability of the YSI aquaculture M&C platform when networked with 5200A, 5400 and/or 5500D instruments.

With YSI's IOEMs (Input, Output Expansion Module) you'll benefit from the ability to configure up to 8 inputs/outputs. Inputs allow for additional sensors while outputs can be configured to control pumps, UV systems, analog valves, and SCADA or PLC systems.

REMs (Relay Expansion Module) add relays where needed to control feeders, lighting, heaters, alarming, and more.

Applications:

- Recirculating systems
- Raceways
- Ponds
- Sea cages
- Live haul
- Aquariums
- Research
- Tanks

IOEM

- 4 (IOEM-4) or 8 (IOEM-8) user-configurable channels as inputs or outputs
- Optically isolated to eliminate electrical interferences and ground loops
- When configured as outputs (4-20 mA) either set point or PID control can be used
- 4-20 mA outputs can interface to a SCADA or PLC system
- Inputs can be used for temperature, analog (0 to 1.0 VDC, 0 to 5.0 VDC or 4-20 mA) or digital*

*user-configurable inputs can be used for additional sensors like DO, pH, Total Gas Pressure, ORP, photo period, etc. Some sensors require an additional transmitter.

REM

- 4 user-configurable output relays

IOEM and REM

- Plug-and-play: easy to install, setup and maintain (no need to hire programmers or engineers)
- Meets NEMA 4X, FCC, CE and CUL (ETL) requirements
- Waterproof, IP-65 rating
- AC and DC power (battery back-up if used with AC power)
- 2-year warranty

Building a system is easy. Choose the expansion module appropriate for your needs (control, communications, etc.) and network with a 5200A, 5400 and/ or 5500D.

YSI.com/ExpansionModules



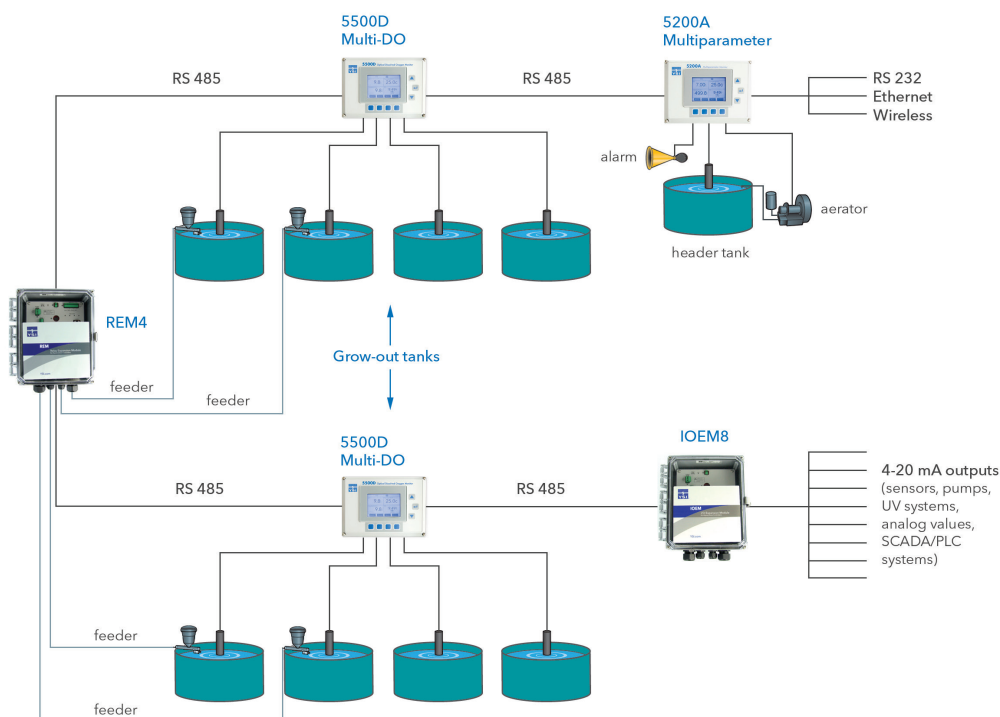
YSI Aquaculture Expansion Modules Specifications

Communication Ports	RS485 communication (digitally isolated), RS232 communication configured for firmware updates only
Warranty	2-years
Inputs (IOEM 4, 8)	4 or 8 user-configurable, optically isolated, inputs for temperature, analog (0 to 1.0 VDC, 0 to 5.0 VDC or 4-20 mA) or digital *
Outputs (IOEM 4, 8)	4 or 8 user-configurable, optically isolated, 4-20 mA outputs
Output Relays (REM)	(4) 10 amp 115 VAC (5 amp 230 VAC) relays for control and/or alarm off of measurement
Ratings	NEMA 4X, CE, CUL, ETL, IP-65, Made in USA
Instrument Operating Temperature	-15 to 70°C (5 to 158°F)
Operating Environment	Direct exposure to outside conditions NEMA 4X Enclosure with compressions fitting
Power Requirements	12 VDC; mobile live haul or anytime when AC power is not available 100-240 VAC; automatically switches to 12 VDC back-up with alarm if primary voltage drops
Operating System	AquaManager® Software: Windows® 2000/XP/Vista/Windows 7 operating systems
Field Upgradable Software	Yes; flash based
Dimensions	
Box	Height: 11.75 in (29.85 cm); Width: 10.01 in (25.43 cm); Depth: 5.47 in (13.89 cm)

YSI Aquaculture Expansion Modules Ordering Information (order items separately)

Model	Item #	Description
IOEM-4-AC/DC	606430	Networkable module that has 4 each 4-20 mA Inputs / Outputs
IOEM-8-AC/DC	606432	Networkable module that has 8 each 4-20 mA Inputs / Outputs
REM-4-AC/DC	606434	Networkable module that has 4 each relay outputs
6513	606435	Weather shield
6514	606518	Rail mount kit
5209A	655363	AquaManager desktop software

*user-configurable inputs can be used for additional sensors like DO, pH, Total Gas Pressure, ORP, photo period, etc. Some sensors require an additional transmitter.



Example of three monitors individually monitoring and controlling nine tanks with two expansion modules to control feeders, lighting, and send data to a SCADA/PLC system.

YSI

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Printed in the USA. W53-03 May, 2015



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