

# Remote Modules

## WiFi Analog I/O Remote Modules

### A-12x Series/A-3290



#### OVERVIEW

- ※ Analog Input 16-bit Resolution ,Burn-out Detection
- ※ Analog Output 12-bit Resolution
- ※ Support Analog Input/Output 0/4 ~20mA or 0-10V
- ※ Support PT-100 Or PT-1000 (2/3/4-wired)
- ※ Support J, K, T, E, R, S, B Thermocouple
- ※ Support 10K/6.8K/4.7K/3.3K/3K/2.7K/2.252K/2.1K/2K/1.5K/1K Thermistor
- ※ WIFI Interface + RS-485 Interface + USB Interface
- ※ Hi-Speed RS-485 Interface (Max 921600bps)
- ※ Standard 2.4GHz IEEE 802.11 b/g (Wi-Fi)
- ※ Built-in Step Motor Driver, Connect Directly
- ※ Output Over Current Protection (OCP)
- ※ Output Over Thermal Protection (OTP)
- ※ Output Under Voltage Lockout (UVLO)
- ※ Support MODBUS TCP/IP, UDP/IP ,RTU , ASCII
- ※ Able To Connect Wi-Fi AP, Internet Of Things (IOT), Industry 4.0
- ※ A-3290 Can Be Directly Connected To The Control Output, Without Any Controller
- ※ Free Monitor PC Software "YottaUtility"



For more information, please refer to [www.yottacontrol.com](http://www.yottacontrol.com)

| Type                              | A-1251<br>DI  | A-1212<br>A-1213<br>ADIO                                   | A-1219<br>A-1220<br>ADIO  | A-1255/<br>A-1255S<br>ADIO                                 | A-1260<br>ADIO   | A-1269<br>ADIO           | A-3290<br>Wi-Fi Two-Way<br>communicate<br>Transmitter |
|-----------------------------------|---|--|---|--|--|--------------------------|---|
| Operation Voltage                 | 10~30VDC/24VAC  | 10~30VDC/24VAC   | 10~30VDC/24VAC  | 10~30VDC/24VAC   | 10~30VDC/24VAC   | 10~30VDC/24VAC           | AA Battery *2   |
| Inputs                            | 16*Isolation DI<br>status low:<1VDC<br>status high:>5~30VDC   | 2*Isolation DI<br>status low:<1VDC<br>status high:>5~30VDC | 4*Isolation DI<br>status low:<1VDC<br>status high:>5~30VDC          | 8*Isolation DI<br>status low:<1VDC<br>status high:>5~30VDC | 7*Isolation DI<br>status low:<1VDC<br>status high:>5~30VDC | ---                      | 7*Isolation DI  |
| Outputs                           | ---   | 2*(Transistor)   | ---   | 4*(Motor Driver)<br>4*(Source Driver)                      | 4*(Power Relay)  | 8*(Power Relay)          | ---   |
| Continuous Current                | ---   | 10-35VDC(1A)   | ---   | 8-60VDC(1.75A)<br>/10-40VDC(1A)                            | 250VAC(7A)<br>/30VDC(7A)                                   | 250VAC(5A)<br>/30VDC(5A) | ---   |
| Communication Baud Rate           | 2400~921600bps  |  |   |  |  |                          | WIFI b/g  |
| Isolation                         | YES(5000VDC)  |  |   |  |  |                          | ---   |
| Input Operating Frequency         | 10HZ  |  |   |  |  |                          | 5HZ   |
| Output Operating Frequency        | Transistor:10HZ   |  |   |  |  |                          | ---   |
| Operation Temperature             | -20 to +75 °C   |  |   |  |  |                          | -20 to +75 °C   |
| Degree Of Protection              | IP20  |  |   |  |  |                          | IP66  |
| Installation                      | 35 mm DIN rail or Flush mounting  |  |   |  |  |                          | ---   |
| Dimension (W x H x D mm)          | 76.4*118.2*38.5 mm  |  |   |  |  |                          | 120*55*30 mm  |
| Analog Inputs                     | ---   | 4 (16-bit)   | 8 (16-bit)  | ---  | 4 (12-bit)   | ---                      | ---   |
| Analog Input Type                 | ---   | 2*0/4~20mA<br>2*0/2~10V<br>2*PT-100/1000<br>(-200~+600°C)  | 0/4~20mA, J,K,T,E,R<br>.S,B,Thermistor<br>(-270~+1800°C)<br>0/2~10V | ---  | 4* 0~10V   | ---                      | ---   |
| Analog Outputs                    | ---   | 2 (12-bit)   | ---   | ---  | ---  | ---                      | ---   |
| Analog Output Type                | ---   | 0/4 ~20mA  | ---   | ---  | ---  | ---                      | ---   |
| Input Impedance                   | ---   | Current: 100 Ω<br>RTD : 10 MΩ                              | Current: 100 Ω<br>Voltage : 10 MΩ                                   | ---  | Voltage:10 MΩ  | ---                      | ---   |
| Analog Input / Outpu Accuracy     | ---   | ±0.1% / ±1%  | ±0.1% / ---   | ---  | ±1% / ---  | ---                      | ---   |
| Interface                         | WIFI + RS-485 + USB   |  |   |  |  |                          | WIFI + USB  |
| Channel Independent Configuration | YES   |  |   |  |  |                          | ---   |
| Sampling Rate                     | AI/AO: 10sample/second(total) ; DI/DO:100sample/second(total)   |  |   |  |  |                          | ---   |
| CMR @ 50/60 Hz                    | 120 dB  |  |   |  |  |                          | ---   |
| Span Drift                        | ±50 ppm/°C  |  |   |  |  |                          | ---   |
| Zero Drift                        | ±18 μV/°C   |  |   |  |  |                          | ---   |
| Temperature Ranges                | (PT-100~-200~600°C) (PT-1000~-200~600°C) (J~-210~760°C) (K~-270~1370°C) (T~-270~400°C) (E~-270~1000°C) (R~-1750°C) (S~0~1750°C) (B~0~1800°C) (Thermistor-10K-T2:0~100°C) (Thermistor-10K-T3:0~100°C) (Thermistor-6.8K:-10~100°C) (Thermistor-4.7K:-10~100°C) (Thermistor-3.3K-20~100°C) (Thermistor-3K:-20~100°C) (Thermistor-2.7K:-20~100°C) (Thermistor-2.252K:-20~100°C) (Thermistor-2.1K:-30~100°C) (Thermistor-2K:-30~100°C) (Thermistor-1.5K:-40~100°C) (Thermistor-1K:-40~100°C) |  |   |  |  |                          |   |

Sky blue background with white letters is the difference for the models in the same field.

# Ordering Information

## Yottacontrol Remote Modules

| WIFI Remote Modules                    |   |               |
|--|---|---------------|
| 1212                                   | WIFI ADIO Remote Modules,4AI(0~20/4~20mA + PT-100/1000),2AO(0~20/4~20mA),2DI,2DO(Source Output),WIFI*1,RS-485*1,USB*1                     | A-1212        |
| 1213                                   | WIFI ADIO Remote Modules,4AI(0/2~10V + PT-100/1000),2AO(0/2~10V),2DI,2DO(Source Output),WIFI*1,RS-485*1,USB                               | A-1213        |
| 1219                                   | WIFI ADIO Remote Modules,8AI(0~20/4~20mA,J,K,T,E,R,S,B,Thermistor),4DI,WIFI*1,RS-485*1,USB*1  | A-1219        |
| 1251                                   | WIFI DI Remote Modules,16DI,WIFI*1,RS-485*1,USB*1   | A-1251        |
| 1255                                   | WIFI ADIO Remote Modules,8DI/4DO/4AI(0~10V),Motor Driver Output,WIFI*1,RS-485*1,USB*1   | A-1255        |
| 1260                                   | WIFI ADIO Remote Modules,7DI/4DO/4AI(0~10V),Power Relay Output,WIFI*1,RS-485*1,USB*1  | A-1260        |
| 1269                                   | WIFI ADIO Remote Modules,8DO/4AI(0~10V),Power Relay Output, WIFI*1,RS-485*1,USB*1   | A-1269        |
| 1255S                                  | WIFI ADIO Remote Modules,8DI/4DO/4AI(0~10V),Source Output,WIFI*1,RS-485*1,USB*1   | A-1255S       |
| ETHERNET Remote Modules                |   |               |
| 1812                                   | ETHERNET ADIO Remote Modules,4AI(0~20/4~20mA + PT-100/1000),2AO(0~20/4~20mA),2DI,ETHERNET*1,USB*1   | A-1812        |
| 1819                                   | ETHERNET ADIO Remote Modules,8AI(0~20/4~20mA,J,K,T,E,R,S,B,Thermistor),ETHERNET*1,USB*1   | A-1819        |
| 1851                                   | ETHERNET DI Remote Modules,16DI,ETHERNET*1,USB*1  | A-1851        |
| 1855                                   | ETHERNET DIO Remote Modules,8DI/4DO,Motor Driver Output,ETHERNET*1,USB*1  | A-1855        |
| 1860                                   | ETHERNET DIO Remote Modules,8DI/4DO,Power Relay Output,ETHERNET*1,USB*1   | A-1860        |
| 1869                                   | ETHERNET DIO Remote Modules,8DO,Power Relay Output,ETHERNET*1,USB*1   | A-1869        |
| 1855S                                  | ETHERNET DIO Remote Modules,8DI/4DO,Source Driver Output,ETHERNET*1,USB*1   | A-1855S       |
| RS-485 Remote Modules                  |   |               |
| 1057                                   | DO Remote Modules , LED indicator , DC Power Supply , 12DO , Source Output , RS-485*1   | A-1057        |
| 1058                                   | DO Remote Modules , LED indicator , DC Power Supply , 12DO , Sink Output , RS-485*1   | A-1058        |
| 1068                                   | DO Remote Modules , LED indicator , DC Power Supply , 8DO , Signal Relay Output , RS-485*1  | A-1068        |
| 1069                                   | DO Remote Modules , LED indicator , DC Power Supply , 8DO , Power Relay Output , RS-485*1   | A-1069        |
| 1051+                                  | DI Remote Modules , LED indicator , DC Power Supply , 16DI , RS-485*1(isolated)   | A-1051+       |
| 1051                                   | DI Remote Modules , LED indicator , DC Power Supply , 16DI , RS-485*1   | A-1051        |
| 1055                                   | DIO Remote Modules , LED indicator , DC Power Supply , 8DI/8DO , Sink Output , RS-485*1   | A-1055        |
| 1055S                                  | DIO Remote Modules , LED indicator , DC Power Supply , 8DI/8DO , Source Output , RS-485*1   | A-1055S       |
| 1060                                   | DIO Remote Modules , LED indicator , DC Power Supply , 8DI/4DO , Power Relay Output , RS-485*1  | A-1060        |
| 1010+                                  | ADIO Remote Modules , LED indicator , DC Power Supply , 8AI(0~10V) , 2AO(0~10V) , 4DO(Sink Output) , RS-485*1(isolated)                   | A-1010+       |
| 1010                                   | ADIO Remote Modules , LED indicator , DC Power Supply , 8AI(0~10V) , 2AO(0~10V) , 4DO(Sink Output) , RS-485*1                             | A-1010        |
| 1012+                                  | ADIO Remote Modules , LED indicator , DC Power Supply , 4AI(0/4~20mA+PT100/1000) , 2AO(0/4~20mA) , 2DI , 2DO(source) , RS-485*1(isolated) | A-1012+       |
| 1012                                   | ADIO Remote Modules , LED indicator , DC Power Supply , 4AI(0/4~20mA+PT100/1000) , 2AO(0/4~20mA) , 2DI , 2DO(source) , RS-485*1,USB*1     | A-1012        |
| 1013                                   | ADIO Remote Modules , LED indicator , DC Power Supply , 4AI(0/2~10V+PT100/1000) , 2AO(0/2~10V) , 2DI , 2DO(source) , RS-485*1,USB*1       | A-1013        |
| 1019+                                  | ADIO Remote Modules , LED indicator , DC Power Supply , 8AI(0~20/4~20mA,J,K,T,E,R,S,B,Thermistor) , 4DI , RS-485*1(isolated)              | A-1019+       |
| 1019                                   | ADIO Remote Modules , LED indicator , DC Power Supply , 8AI(0~20/4~20mA,J,K,T,E,R,S,B,Thermistor) , 4DI , RS-485*1,USB*1                  | A-1019        |
| 1020                                   | ADIO Remote Modules , LED indicator , DC Power Supply , 8AI(0~10V)-16bits , 4DI , RS-485*1 , USB*1  | A-1020        |
| 1036+                                  | AO Remote Modules , LED indicator , DC Power Supply , 6AO(0/4~20mA) , RS-485*1(isolated)  | A-1036+       |
| 1038+                                  | AO Remote Modules , LED indicator , DC Power Supply , 8AO(0/2~10V) , RS-485*1(isolated)   | A-1038+       |
| 1080                                   | DO Remote Modules , LED indicator , DC/AC Power Supply , 8DO , HID Relay Output , Input Switch*8 , RS-485*1                               | A-1080        |
| Wi-Fi Two-Way Communicate Transmitters |   |               |
| A-3290                                 | WIFI DI Remote Modules,7DI,WIFI*1,USB*1   | A-3290        |
| Accessories                            |   |               |
| ASPS                                   | Power Supply , 24V/2A   | ASPS          |
| CAB-MINIUSB60                          | Communication lines   | CAB-MINIUSB60 |
| CAB89                                  | A-3290 Communication lines  | CAB89         |
| Software                               |   |               |
| YottaUtility                           | Monitoring and Database Software  | YottaUtility  |
| A-1x USB Driver                        | A-1x USB PC Driver  | DR-A1XUSB     |
| CAB89 USB Driver                       | A-3290 Communication lines PC Driver  | DR-CAB89USB   |

# Pin Assignments Remote Modules

## Remote Modules

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### Pin Table

|  |  |   |
|--|--|---|
| <p><b>A-1251</b></p> <p>D9-11COM1<br/>D19<br/>D10<br/>D11<br/>D12-15COM<br/>D12<br/>D13<br/>D14-5COM<br/>D14<br/>D15<br/>D12-3COM<br/>D12<br/>D11<br/>D10<br/>14 D10-1COM<br/>(BIGND 13)</p> | <p><b>A-1255</b></p> <p>D17COM1<br/>D17<br/>NC<br/>D00-3COM<br/>D00<br/>D01<br/>D02<br/>D03<br/>D00-3GND<br/>D16-6COM<br/>D10-3GND<br/>(Y)DATA+<br/>(G)DATA-<br/>(R)-VS<br/>(BIGND 13)</p> | <p><b>A-1255S</b></p> <p>D17COM1<br/>D17<br/>D00-3COM<br/>D00<br/>D01<br/>D02<br/>D03<br/>D00-3GND<br/>NC<br/>D16-6COM<br/>D10-3GND<br/>(Y)DATA+<br/>(G)DATA-<br/>(R)-VS<br/>(BIGND 13)</p> |
| <p><b>A-1260</b></p> <p>RL0NO 1<br/>RL0COM<br/>RL1NO<br/>RL1COM<br/>RL2NO<br/>RL2COM<br/>RL3NO<br/>RL3COM<br/>NC<br/>(Y)DATA+<br/>(G)DATA-<br/>(R)-VS<br/>(BIGND 13)</p>                     | <p><b>A-1269</b></p> <p>RL4NO 1<br/>RL4COM<br/>RL5NO<br/>RL5COM<br/>RL6NO<br/>RL6COM<br/>RL7NO<br/>RL7COM<br/>NC<br/>(Y)DATA+<br/>(G)DATA-<br/>(R)-VS<br/>(BIGND 13)</p>                   |   |
| <p><b>A-1212</b></p> <p>OUT0+ 1<br/>OUT0-<br/>OUT1+<br/>OUT1-<br/>NC<br/>D00-1COM<br/>D00<br/>D01<br/>D00-1GND<br/>+RTD2<br/>(Y)DATA+<br/>(G)DATA-<br/>(R)-VS<br/>(BIGND 13)</p>             | <p><b>A-1219</b></p> <p>+A14 1<br/>-A14<br/>+A15<br/>-A15<br/>+A16<br/>-A16<br/>+A17<br/>-A17<br/>NC<br/>(Y)DATA+<br/>(G)DATA-<br/>(R)-VS<br/>(BIGND 13)</p>                               | <p><b>A-1213<br/>A-1220<br/>(neutral only)</b></p> <p>26<br/>25<br/>24<br/>23<br/>22<br/>21<br/>20<br/>19<br/>18<br/>17<br/>16<br/>15<br/>14</p>  |
| <p><b>A-1851</b></p> <p>85N<br/>D16-15COM1<br/>D16<br/>D17<br/>D18<br/>D19<br/>D110<br/>D111<br/>D112<br/>D113<br/>D14<br/>D15<br/>(R)-VS<br/>(BIGND 13)</p>                                 | <p><b>A-1855</b></p> <p>85N<br/>D16-7COM1<br/>D16<br/>D17<br/>D00-3COM<br/>D00<br/>D01<br/>D00-3GND<br/>D00-3COM<br/>D02<br/>D03<br/>D00-3GND<br/>(R)-VS<br/>(BIGND 13)</p>                | <p><b>A-1855S</b></p> <p>85N<br/>D16-7COM1<br/>D16<br/>D17<br/>D00-3COM<br/>D00<br/>D01<br/>D00-3GND<br/>D00-3COM<br/>D02<br/>D03<br/>D00-3GND<br/>(R)-VS<br/>(BIGND 13)</p>                |
| <p><b>A-1860</b></p> <p>85N<br/>D16-7COM1<br/>D16<br/>D17<br/>RL0NO<br/>RL0COM<br/>RL1NO<br/>RL1COM<br/>RL2NO<br/>RL2COM<br/>RL3NO<br/>RL3COM<br/>(R)-VS<br/>(BIGND 13)</p>                  | <p><b>A-1869</b></p> <p>85N<br/>RL3NO 1<br/>RL3COM<br/>NC<br/>RL4NO<br/>RL4COM<br/>RL5NO<br/>RL5COM<br/>RL6NO<br/>RL6COM<br/>RL7NO<br/>RL7COM<br/>(R)-VS<br/>(BIGND 13)</p>                |   |
| <p><b>A-1812</b></p> <p>85N<br/>+A10 1<br/>-A10<br/>+A11<br/>-A11<br/>+RTD2<br/>-RTD2<br/>+RTD3<br/>-RTD3<br/>COM3<br/>NC<br/>(R)-VS<br/>(BIGND 13)</p>                                      | <p><b>A-1819</b></p> <p>85N<br/>+A13 1<br/>-A13<br/>+A14<br/>-A14<br/>+A15<br/>-A15<br/>+A16<br/>-A16<br/>+A17<br/>-A17<br/>NC<br/>(R)-VS<br/>(BIGND 13)</p>                               |   |

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