

Technical Data

ADCON SERIES 6 RTU



ADCON new ultra low power RTU A760, A765 and A764

- **Device type**
Compact data logger with integrated cell modem
- **Product highlights**
ultra-low-power design; large integrated memory; IP-67/IP-65; WMO-compliant weather recording; Bluetooth; Firmware update over the air feature (FOTA)
- **Data transmission**
2G/3G or 4G/LTE
- **Sensor interfaces**
A764: 12x analog in (0 ... 2,5 VDC); 4x pulse counter □ 4x digital in/out (0 ... 3 V TTL); 40x SDI-12 values; Analog resolution: 16-Bit @ 0 ... 2,5 V

The ADCON SERIES 6 RTU is the new generation of remote-controlled, ultra low-power dataloggers for agricultural, meteorological and hydrological applications at a competitive price.

The series differentiates from its predecessors by a self-monitoring battery, a larger memory for up to 2 million values and wireless communication via Bluetooth.

Further advantages are the data encryption option to ensure data safety, the convenient firmware update over the air as well as the future-proof design for integration in IoT networks and existing state-of-the-art communication technologies.

The ADCON SERIES 6 RTU is available as 2G/3G or 4G/LTE version and is equipped with a fast 32-bit-CPU.

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| Dimensions | 160 x 60 x 80 mm |
| Weight | approx. 1 200 g |
| IP class | IP 65 & IP 67 |
| Breathing vent | Type: A760 : yes Type: A764: yes Type: A765: yes |
| Temperature Range | -30 to +65 °C |
| Case | powder-coated aluminum |
| Screw connections | flange sockets of nickel-plated brass, stainless steel cover |
| Connectors (all connectors IP67 if properly mated or capped) | Type: A760 : 3 x Binder M9 7-pin to sensors (A, B, D) Type: A764: 4 x Binder M9 7-pin to sensors (A, B, C, D) Type: A765: 2 x Binder M9 7-pin to sensors (A, D) 1 x Binder M9 5-pin to solar cell / power supply 1 x TNC Antenna connector |
| Power supply | - 6.0 V NiMH battery 3 300 mAh - solar cell or mains adapter |

| Type A760 | |
|---------------------------------------|--|
| I/O Ports | 9 x analog in (0 to 2.5 VDC) 3 x pulse counter 3 x digital in/out (0 to 5 V TTL) 40 x SDI-12 values |
| Resolution | Analog: 12-Bit @ 0 to 2.5 V |
| Counter inputs | 3x Configurable per I/O: Slow: 30 Hz Fast: 500 Hz |
| Min/Max operations for analog sensors | yes |
| Wind Gust Measurement capability | no |
| Rain Gauge Event capability | yes |
| Digital events | yes |
| I/O Current consumption measurement | no |

| Type A764 | |
|---------------------------------------|--|
| I/O Ports | 12x analog in (0 to 2.5 VDC) 4 x pulse counter 4 x digital in/out (0 to 5 V TTL) 40 x SDI-12 values |
| Resolution | Analog: 16-Bit @ 0 to 2.5 V |
| Counter inputs | 4x Configurable per I/O: Slow: 30 Hz Fast: 500 Hz |
| Min/Max operations for analog sensors | yes |

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|-------------------------------------|--------------|
| Wind Gust Measurement capability | yes (C only) |
| Rain Gauge Event capability | yes |
| Digital events | yes |
| I/O Current consumption measurement | yes |

| Type A765 | |
|---------------------------------------|--|
| I/O Ports | 2 x pulse counter 2 x digital in/out (0 to 5 V TTL) 40 x SDI-12 values |
| Resolution | Analog: None |
| Counter inputs | 2x Configurable per I/O: Slow: 30 Hz Fast: 500 Hz |
| Min/Max operations for analog sensors | yes |
| Wind Gust Measurement capability | no |
| Rain Gauge Event capability | yes |
| Digital events | yes |
| I/O Current consumption measurement | yes |

| All | |
|---|--|
| Sensor excitation | unregulated batt. 5.6 to 7.2 V |
| Sampling interval | user specific (from 10 s to 12 h) |
| Measuring method | parallel & sequential |
| Internal memory | 16 MB (typ. 2,000,000 values) |
| Internal sensors | Temperature |
| Operating time (without charging of internal battery) | in standard mode up to 14 days, in power-save mode up to 6 months, depends on slot time, transmission rate and sensors |

| UMTS Version | |
|---------------------|------------------------------------|
| UMTS bands | 800, 850, 900, 1900, 2100 MHz |
| GSM bands | Quad-Band |
| UMTS Rx Sensitivity | -109 to -111 dBm (depends on band) |

| LTE Version | |
|-----------------------|---|
| LTE information | LTE Cat M1/NB1 LTE bands: 2, 3, 4, 5, 8, 12, 13, 20, 28 |
| LTE Rx Sensitivity | - Cat M1: -105 to -107.5 dBm (depends on band) - Cat NB1: -112 to -114 dbm (depends on band) |
| Tx Output Power | 21 to 33 dBm depending on network |
| Transmission distance | Network dependent |
| SIM form factor | Mini SIM (2FF) |

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|----------------------|---|
| Antenna | omni-directional, 2G/3G/4G, 2 dBi |
| Bluetooth module | Type: A760 : no Type: A764: yes (Bluetooth Low Energy 5) Type: A765: yes (Bluetooth Low Energy 5) |
| FOTA | yes |
| Expansion (optional) | Type: A760 : no Type: A764: yes - Modbus interface via RS-485/RS-232, external digi-I/O Box A553 Type: A765: yes - Modbus interface via RS-485/RS-232, external digi-I/O Box A553 |
| Type Approvals | RED, FCC, IC, PTCRB |