

Remote I/O

Maximize System Transparency. Minimize Operational Waste.

Drive automation efficiency with our expertly integrated IO-Link ecosystem



Weidmüller 

Maximize Availability. Simplify Automation.

Harness the power of IO-Link for an intelligent, flexible, functional system

In traditional machinery and plant engineering, the primary challenge has always been reducing the time spent on assembly, commissioning and maintenance. These phases typically involve manual electrical connections, painstaking adjustments and complex parameterization.

IO-Link makes this traditional workflow redundant. By connecting intelligent sensors and actuators to the controller via this standardized communication system, you can significantly accelerate deployment.

Examples:

Plug-and-Play Assembly: Pre-assembled cables ensure fast, error-free physical connections.

Automated Commissioning: Parameter sets are downloaded automatically, eliminating manual entry errors.

IO-Link provides total transparency down to the device level. This visibility enables precise error diagnostics and simplified device replacement, drastically reducing downtime and maintenance costs. As the world's first standardized IO technology (IEC 61131-9), IO-Link serves as a cornerstone for Industry 4.0 and IIoT implementations.



Key Advantages

- **Comprehensive, Integrated IO-Link Solutions:** Seamlessly unify your entire ecosystem.
- **Effortless Power Management:** Easily integrate power-supply and power-management components directly into your automation system.
- **Smart Remote Capabilities:** Enable advanced control features, including real-time voltage tracking and automated load cut-offs.

Advanced Control and Seamless Integration

The IP 20 u-remote IO-Link Module

The IP 20 u-remote IO-Link module provides a high-density, versatile interface for modern industrial environments, featuring four individually configurable Type A ports. Each port supports one IO-Link device and includes an additional digital input to process status signals directly from connected devices or independent sensors. While natively designed for Port Class A, the module can easily support Port Class B through external potential distribution modules, ensuring broad hardware compatibility.

Beyond standard process data, the module handles acyclic data exchange, including diagnostics and parameter settings via an integrated data storage server. This allows for "hot-swap" simplicity; if a module or device (v1.1 or higher) needs replacement, parameters are automatically restored without manual reconfiguration.



IO-LINK-V2

Why choose IO-Link?

Fast-Track Setup: Use pre-assembled cables for error-free installation and leverage automatic parameter downloads for instant commissioning.

Complete Transparency: Gain deep insights with status analysis and precise diagnostics right down to the sensor/actuator level.

Minimal Downtime: Replace devices quickly and accurately, slashing maintenance costs and keeping your system running longer.

Future-Proof: As a globally standardized technology (IEC 61131-9), IO-Link is your gateway to Industry 4.0 and Industrial IoT.

Technical data

Type	Description	I/O Link specification	Port classification	IP rating	Number of IO-Link interfaces	Max current per channel	Qty	Order no.
UR20-4COM-IO-LINK-V2	Remote I/O module, 4-channel, diagnostic via device parameter events	Full V1.1.4 compliance	4 x type A	IP20	4 digital inputs	0.5A per channel	1	2819690000

Key Advantages

Unlock Higher Performance with IO-Link

The expanded feature set of the new u-remote IO-Link Master V2 streamlines commissioning, provides deep process transparency, and drives measurable operational efficiency—improvements that deliver a clear return on investment.

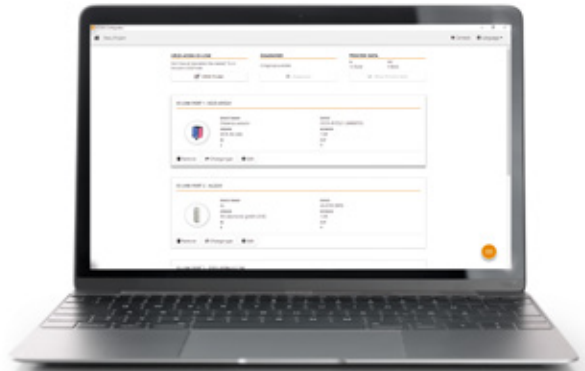
u-mation Configurator

Universal integration and simplified engineering

The u-mation Configurator provides a powerful, fieldbus-independent solution for integrating, configuring and parameterizing IO-Link devices within any automation environment. Featuring an intuitive, web-based interface with a direct link to the IODD database, it eliminates the complexity of device integration by allowing you to create, export and manage device configurations with ease.

Optimized Configuration for Next-Generation Hardware

u-mation Configurator 2.0.x delivers a robust feature set, including real-time diagnostics and comprehensive project management, optimized specifically for high-performance IO-Link-V2 master module (IO-Link V1.1.4). It is fully compatible with u-remote System Baseline 50 (SBL50) and newer, (Fieldbus Coupler / FBC firmware released after March 2026).



Real-Time Insights with Online Mode

Stay in control with live diagnostics. The Online Mode allows you to automatically identify devices connected to the IO-Link Master, monitor live process status and view diagnostic or error messages. You can even modify parameters on the fly while devices are running to minimize downtime.

Streamlined Project Management

Managing your IO-Link architecture has never been easier. With a convenient context menu, you can save, open and edit projects at any time. Configuration files can be exported and seamlessly re-imported via the u-remote station's web application. For maximum flexibility in the field, both versions are available as Setup or Portable executables.

Flexible Offline Configuration

Engineered for modern production schedules, the configurator supports offline setups. This is ideal for series production or when system configuration and physical setup occur at different times or locations. Prep your devices whenever it's convenient, no direct connection required.



u-mation
configurator

Key Advantages

- Fieldbus-Independent Configuration and Parameterisation of IO-Link Devices
- Web-Based, Intuitive User Interface with an Integrated Interface to IODDfinder
- Direct Upload of Configuration File to the IO-Link Master and IO-Link Devices
- Options for the Local Storage, Opening and Editing of Configuration Files

The IO-Link Ready Power Supply for Seamless Condition Monitoring

PROtop: the future-proof high-end power supply



Communication-enabled components are the backbone of networked production. By capturing real-time status data, operational metrics and energy parameters, these components allow data to be aggregated in the cloud. This data then serves as the basis for advanced services, from process optimization and remote diagnostics to comprehensive energy management. To stay competitive, devices must be networked and cloud-connected as efficiently as possible.



Future-Proofing with Retrofit Solutions

The PROtop power supply is designed for the requirements of tomorrow. By adding a plug-and-play communication module, you can retrofit existing systems to transmit critical process data to a higher-level controller. This integrates the power supply into the broader system network, enabling remote control and seamless integration into condition monitoring platforms.

Optimizing Performance via Condition Monitoring

Condition monitoring enables a shift from reactive to proactive management. By analyzing real-time data, operators can reduce power consumption and systematically plan maintenance. This significantly increases functional reliability and efficiency—even in demanding environments like hygienic food and packaging plants or remote, offshore wind installations.

Technical data

Type	Watt	Rated output voltage	Peak load reserve [DCL]	Connection system	Operating temperature range	Qty	Order no.
PRO TOP1 120W 24V 5A	120 W	24V	30A / 15ms	PUSH IN	-25 ... +70 °C	1	2466870000
PRO TOP3 120W 24V 5A	120 W		30A / 15ms		-25 ... +70 °C	1	2467060000
PRO TOP1 960W 24V 40A	960W		160A / 15ms		-25 ... +70 °C	1	2466900000
PRO TOP1 480W 24V 20A	480W		100A / 15ms		-25 ... +70 °C	1	2466890000
PRO TOP1 240W 24V 10A	240W		60A / 15ms		-25 ... +70 °C	1	2466880000

Key Advantages

- **Enhanced Condition Monitoring:** Seamlessly integrate process data into higher-level controllers for real-time system health insights.
- **Smart Power Control:** Enable advanced solutions like voltage tracking and remote load shedding through integrated control capabilities.
- **Plug-and-Play Commissioning:** Dramatically reduce setup time and maintenance with automatic parameterization via your existing machine control.

Intelligent Securing of DC Loads

Advanced load monitoring with integrated IO-Link communication

Integrated Power Management: PROtop meets topGUARD

Modern industrial plants demand more than just power; they require intelligent load monitoring with full communication capabilities. The topGUARD system provides remote control, total data transparency and fail-safe protection for your 24V DC circuits.

Smart Synergy via IO-Link

topGUARD is the ideal companion to our IO-Link-compatible PROtop power supplies. Together, they create an innovative power-management ecosystem:

- **Space-Efficient:** Integrated potential distribution reduces wiring and saves valuable DIN rail space.
- **Plug-and-Play Integration:** Simply connect the IO-Link module and import the IODD file for instant parameterization and control.
- **Unified Data:** Access all operating metrics—from power supply health to individual branch circuit status—through a single communication interface.



Technical data

Type	Description	Qty	Order no.
TGD FIM-C	Power-feed module	1	2625000000
TGD ELM-6	Load monitoring	1	2624980000
PRO COM IO-LINK	Communication module	1	2587360000

Additional topGUARD modules can be found in the eShop.

Key Advantages

- **Full Data Transparency & Remote Control:** Leverage IO-Link to monitor real-time current, adjust parameters remotely, and identify faults before they cause downtime.
- **Maximum System Flexibility:** A modular design that adapts to your specific machine requirements, allowing for easy expansion or reconfiguration.
- **NEC Class 2 Compliance:** Voltage-adaptive load monitoring ensures reliable protection while meeting strict UL/NEC Class 2 safety standards.
- **Reduced Installation Time & Costs:** Our integrated potential distribution eliminates messy wiring and saves up to 50% of DIN rail space.
- **Seamless Migration:** Easily upgrade your existing maxGUARD installations to the communication-enabled topGUARD system with minimal design changes.

Flexible Application Automation

Meet the u-control family

Experience the Future of Automation: u-control WL2000, R-Series & M-Series

Combining the compact footprint of the WL2000 with the advanced processing power of M-Series PACs creates a unified automation ecosystem built to maximize your IO-Link potential. As a core component of the u-control family, the WL2000 delivers a space-saving control base that connects seamlessly with u-remote I/O modules. When paired with M3000 or M4000 PACs, the system leverages a powerful multi-core architecture to cleanly separate real-time PLC tasks from complex IIoT data processing.

This high-performance hardware combination empowers your IO-Link network through u-OS and CODESYS integration. Together, they streamline end-to-end device management, from automated parameterization via the Data Storage server to real-time, deep-level sensor diagnostics. By anchoring your IO-Link master modules to this robust control backbone, you establish a true plug-and-play environment where smart sensors are not merely connected but fully optimized for high-speed operation.

Step into a new era of flexibility, individualization, and industrial connectivity. Powered by the u-control WL2000, R2500, R3500, M3000, M4000 and u-OS, your infrastructure is engineered to adapt to evolving manufacturing demands. You aren't just automating your processes, you're innovating for the future.



Technical data

Type	Processor	Memory (flash)	Real-time clock	Max no. of I/O modules	Interface	Qty	Order no.
UC20-WL2000-AC	Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM	32 GB via microSD	Battery buffered	64 ST	2 x 100 Mbps, 1 x micro USB	1	1334950000
UC20-WL2000-AC-CAN	Dual Core ARM Cortex A9, 624MHz, 512 Mbyte RAM			64 ST	2 x 100 Mbps, 1 x micro USB	1	2928020000
UC20-R2500-AC-CAN/RS485	Dual Core ARM Cortex A53, 1.2GHz, 1 GB RAM 128 kB NVRAM			32 ST	1 x 1 Gbps, 2 x 100 Mbps, 1 USB-C	1	2927440000
UC20-R3500-AC-CAN/RS485	Quad Core ARM Cortex A53, 1.2GHz, 2 GB RAM 128 kB NVRAM			32 ST	1 x 1 Gbps, 2 x 100 Mbps, 1 USB-C	1	2927450000
UC20-M3000	Dual Core ARM Cortex A53, 1.2GHz, 2 GB RAM 128 kB NVRAM			64 ST	2 x 1 Gbps, 2x Host (USB-A), 1 USB-C	1	2839150000
UC20-M4000	Quad Core ARM Cortex A53, 1.2GHz, 4 GB RAM 128 kB NVRAM			64 ST	4 x 1 Gbps, 2x Host (USB-A), 1 USB-C	1	2839160000

Key Advantages

- Flexible Software Architecture & Open OS (u-OS / Web-based)
- Seamless Integration with the u-remote I/O Ecosystem
- Native IIoT & Cloud Connectivity Out-of-the-Box

Weidmuller — Your Partner in Smart Industrial Connectivity

As experienced experts, we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Smart Industrial Connectivity.

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