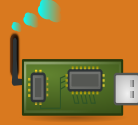


KABLOSUZ

Endüstriyel
Otomasyon



Radyo Modem
RF OEM Modül

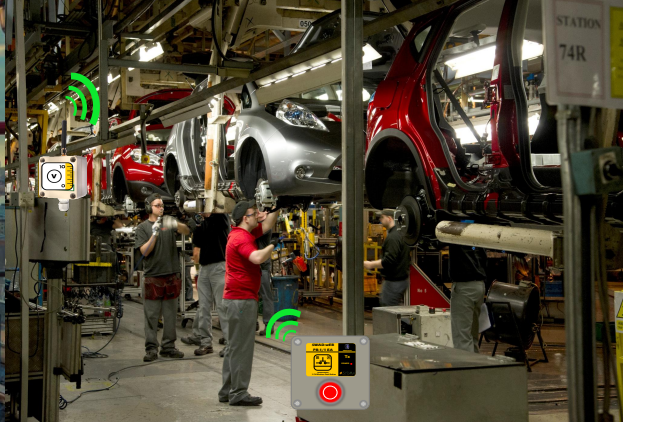


ENDÜSTRİ 4.0
Internet of Things



Uçtan Uca
Kablosuz Çözümler





SYDMA

Endüstriyel Kablosuz Otomasyon

Sydma Kontrol'ün temel faaliyet alanı kablosuz otomasyon teknolojileridir.

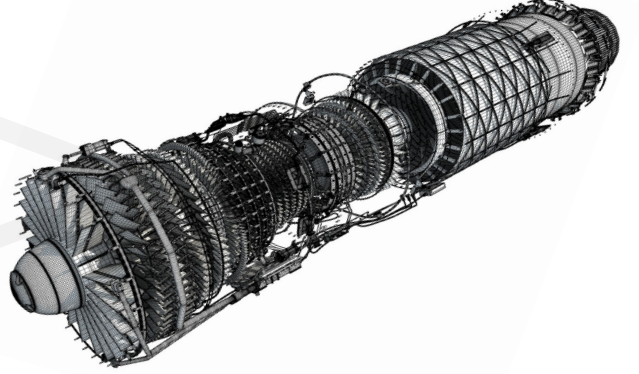
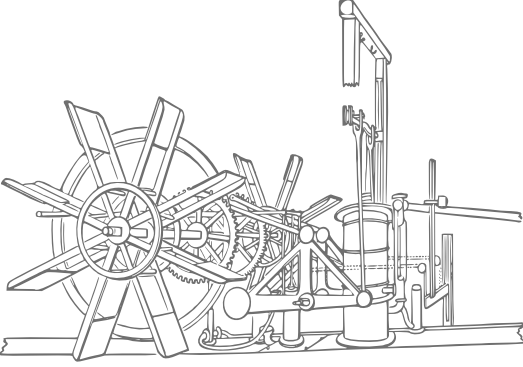
SYDMA Kontrol, endüstriyel otomasyon konusunda öngörülerde bulunarak, geleceğin teknolojilerini sunmak konusunda yüksek motivasyona sahiptir. Bunun bir örneği olarak, yıllar önce öngörülen, otomasyon cihazlarının akıllı nesnelere (smart objects) evrileceği fikri hayat buluyor. SYDMA Kontrol, endüstriyel IoT (iloT) teknolojileri ile ilgili ürün ve çözümlerini, otomasyon ve endüstri profesyonellerinin kullanımına sunuyor.

Bu kapsamda, iletişim halindeki akıllı nesneler (Smart – Objects) ya da nesnelerin interneti (Internet of Things - IoT) olarak ifade edebileceğimiz teknolojilerin öngördüğü; kablosuz iletişim (yerel ya da geniş alan: LAN / WAN) kurabilen, akıllı yazılımlar ile donatılmış IoT cihazlarının, hazır ya da gömülü olacak şekilde üretimi ve/ya da tedariği yapılmaktadır. Saha uygulamaları, bağlı süreçlerin internetten, mobil telefondan, tablet bilgisayardan ve kişisel bilgisayar (PC) üzerinden izlenmesi, kontrolü, ilgili birimlerin ve kararvericilerin, e-posta, SMS v.b yollar ile haberdar edilmesi işlemleri, SYDMA Kontrol uzmanlığı ile, sağlanmaktadır.

SYDMA Kontrol'ün ürün ve çözüm portföyünde, kablolu ya da kablosuz iletişim cihazları, gömülü ya da eklenebilen akıllı kontrol cihazları, mikroişlemciler, radyo modül ve radyo modemler, web tabanlı kontrol cihazları, endüstriyel Wi-Fi cihazları, kablosuz seri ve ethernet haberleşme cihazları, sinyal şartlandırıcılar, indikatörler, güç transduserleri, remote I/O cihazları, gatewayler, web dataloggerlar, sıcaklık kontrolörleri, PID kontrolörleri ve PC recorder'lar bulunmaktadır. Bütün bu ürünlerle ilgili satış, projelendirme, kurulum ve devreye alma işlemleri yapılmaktadır.

endüstriyel
**akıllı nesneler &
nesnelerin interneti**
Industrial IoT & Smart Objects

Endüstri 4.0



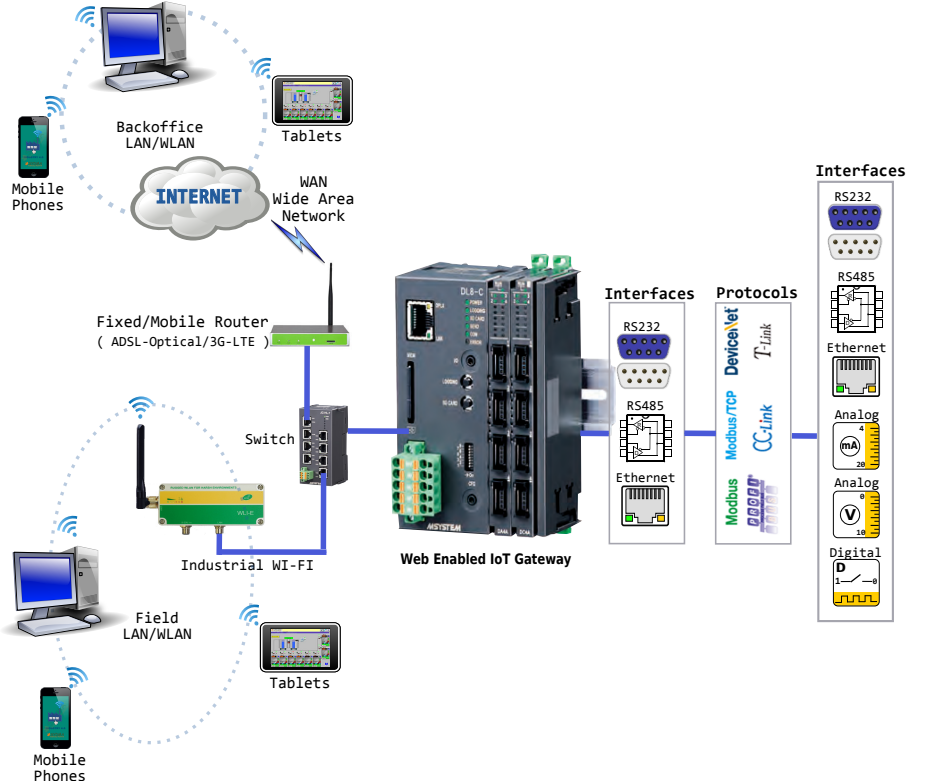
endüstriyel
**akıllı nesneler &
 nesnelerin interneti**
 Industrial IoT & Smart Objects

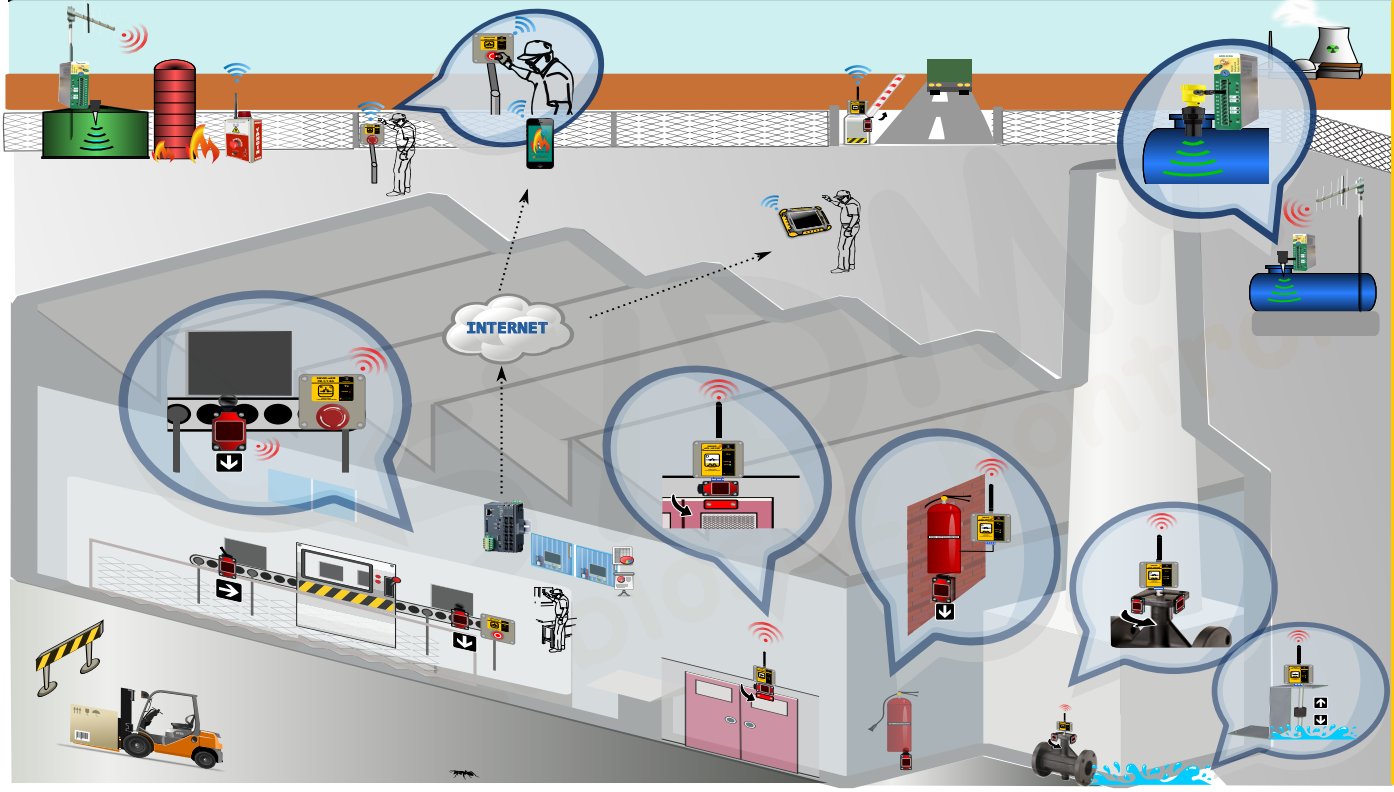
SYDMA

Uçtan - Uca Kablosuz

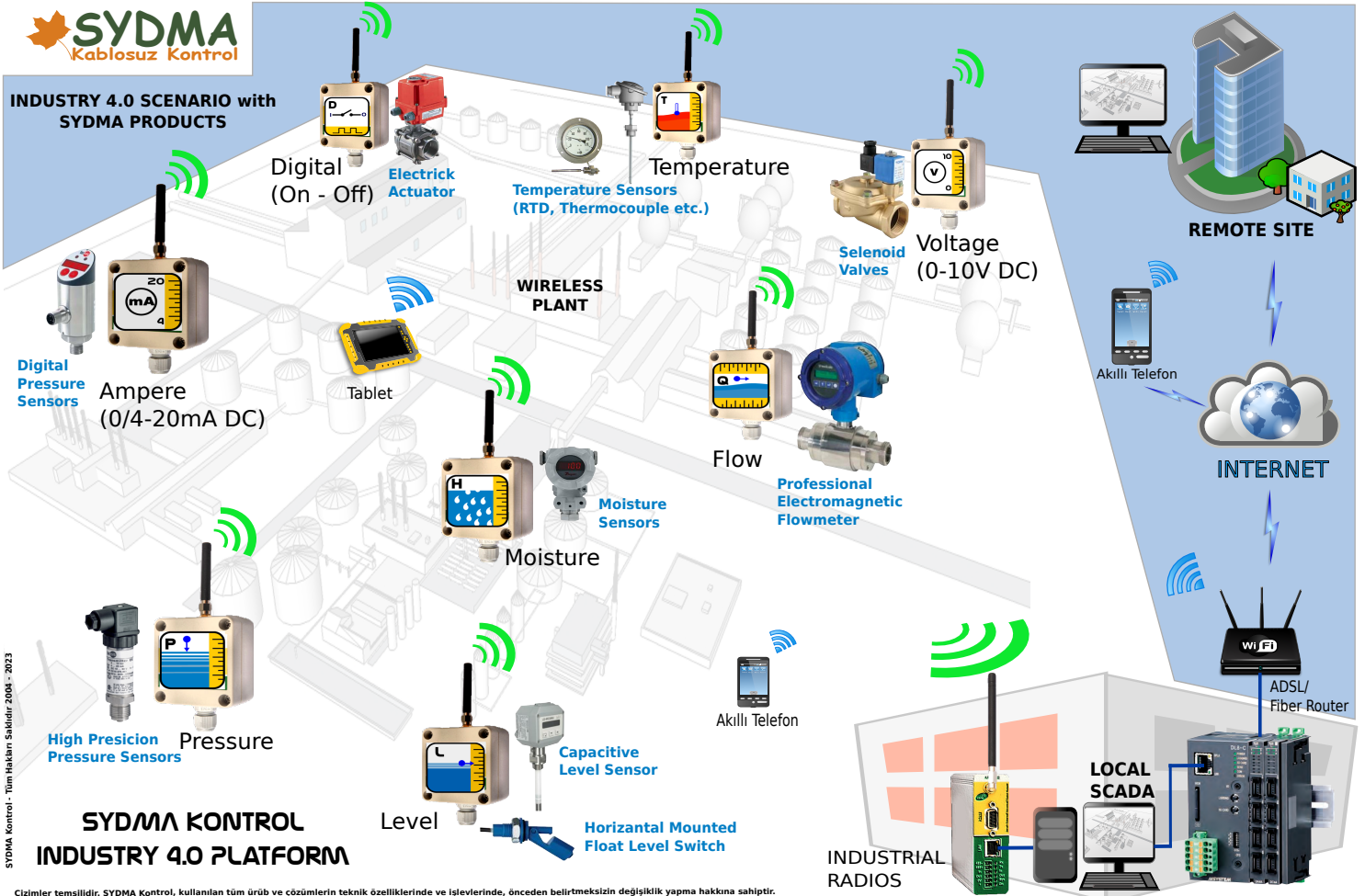
Kablosuz teknolojilerin, endüstriyel otomasyonda kullanılmasına öncülük etme iddasını desteklemek için geliştirilen uçtan uca kablosuz kavramı; bir endüstri tesisinde ya da işletmede, otomasyonu gerektiren her işin kablosuz cihazlarla yapılmasını öngörür. Teknolojik gelişmelere paralel olarak geliştirilen ürünler sayesinde bu konseptin gereklerini büyük oranda yerine getirebiliyoruz.

Yandaki ve arka sayfadaki benzetimden de görüleceği gibi, SYDMA Kontrol'ün, kablosuz IIoT platformu ile, sahadaki tüm cihazların arabirimleri ile iletişim kurulabilir. Bu sayede, endüstriyel bir tesiste, giriş-çıkış kapılarının açık-kapalı durumlarından, uzak siloların seviyelerine, üretim bantlarındaki malzeme ihtiyaç bildirimleri için kullanılan butonlardan, somun sıkma tabancalarının tork-basınç değerlerinin takibine, arıza bildirimlerinden, acil durum uyarılarına, vana açık-kapalı ya da oransal pozisyonlarından, ekipmanların var-yok bilgilerine kadar tüm ihtiyaçlar kablosuz olarak karşılanabilmektedir. Duruma göre, kendinden beslemeli (batarya -akü) ve mikroişlemcili kablosuz düğümler ile, otonom bir yapıda, sahadaki tüm cihazlar kablosuz olarak izlenip kontrol edilebilir. Tüm bu iletişim, izleme ve kontrol bilgileri, işletmenin yerel ya da geniş alan ağları üzerinden ilgili birimler





INDUSTRY 4.0 SCENARIO with
SYDMA PRODUCTS



SYDMA KONTROL
INDUSTRY 4.0 PLATFORM

Çizimler temsilidir. SYDMA Kontrol, kullanılan tüm ürün ve çözümlerin teknik özelliklerinde ve işlevlerinde, önceden belirtmeksizin değişiklik yapma hakkına sahiptir.



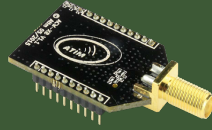
ENDÜSTRİYEL RADYO MODEMLER

ARM
(Advanced Radio Modem)
Seri endüstriyel radyo
modemler:
Seri(RS232/485),
Ethernet arabirimler,sayısal,
analog Giriş/Çıkış, 868MHz,
500mW Lisanssız, 5000m
iletişim mesafesi.



BULUT OTOMASYON RADYO MODEMLER

ATIM Bulut - kablosuz serisi ürünler,tüm bulut-otomasyon ihtiyaçlarınızı karşılamak için çok yönlü ve esnek olarak yapılandırılabilir.
ACW (Atim Cloud Wireless) sensörleri, benzersiz basitliği ile gerçek zamanlı veri görselleştirme sağlayan,tam bir IoT ve M2M çözümüdür. Yerel iletişimdeMODBUS master/slave, uzak iletişimde LoRaWan ağları üzerinden internete, kolay ve hızlıca entegre olabilir.



RF OEM MODÜLLER ENDÜSTRİYEL IOT

ARM OEM radyo modülleri, yeni ürün geliştiricilerine, mevcut ürünlerine kablosuz bağlantı özelliği kazandırmak isteyen üreticilere, araştırmacılara, evrenkent(üniversite) ya da teknik okul laboratuvarlarında çalışanlara uygun maliyeti ve gelişkin teknik özellikleri ile yeni fırsatlar sunmaktadır.



AKSESUARLAR

RF iletişimin başarısına doğrudan etki eden, yüksek kaliteli, düşük kayıplı; anten, anten kablosu, RF konnektör, aşırı gerilim koryucu gibi aksesuarlar.

MSYSTEM

Web Data
Loggers

Tower Light

Gateway,
Remote I/O

Signal
Conditioners

PROSES OTOMASYON

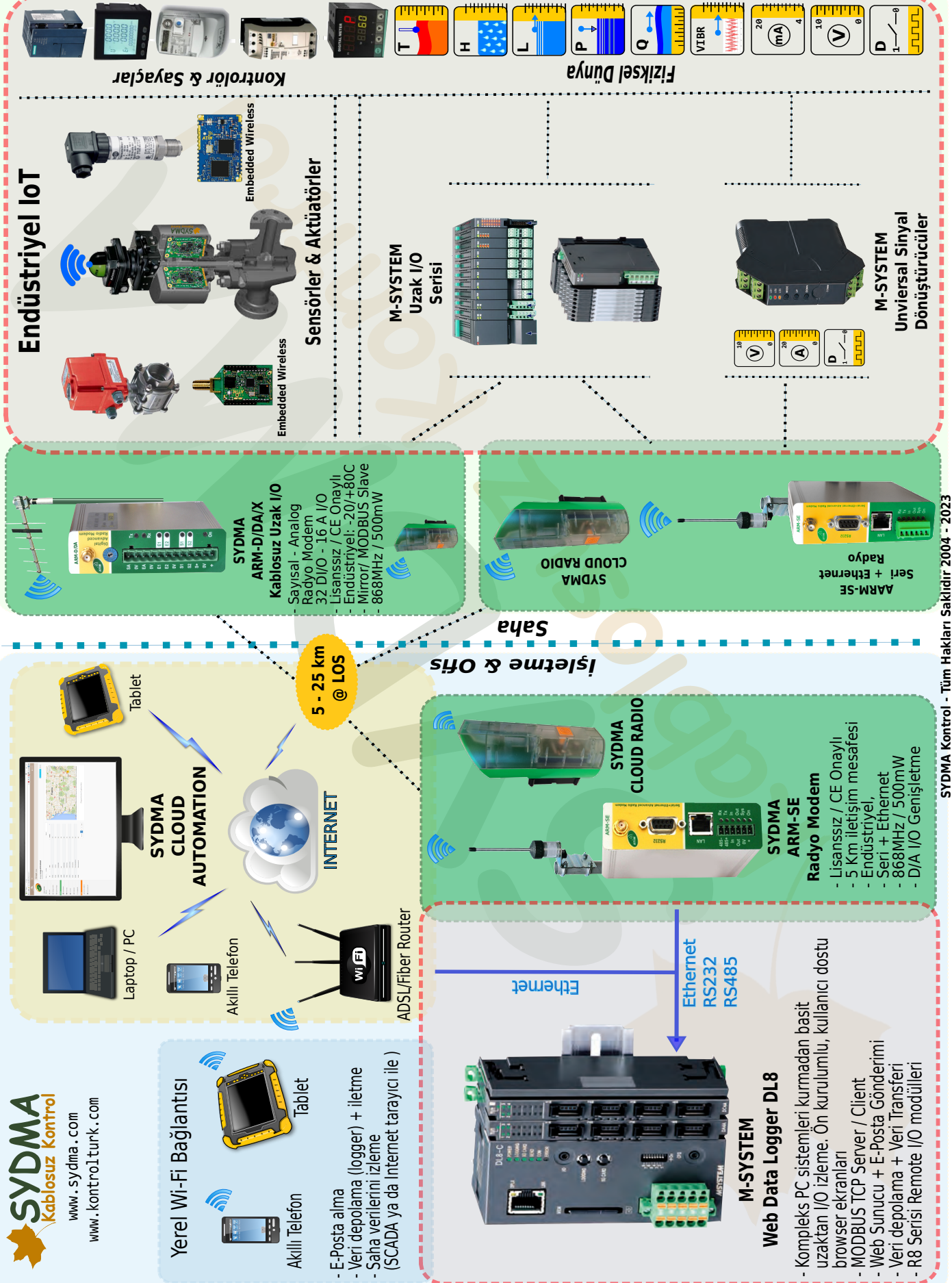
M-System, proses, fabrika ve bina otomasyonunda kullanılan, sahadan kontrol odasına geniş bir yelpazede, enstrümantasyon ve otomasyon ekipmanları sunar. Bizi, aynı zamanda, analog/sayısal sinyallerin, iletişim ağlarının ve zeki sistemleri arabirim uygulamaları için güvenilir tedarikçiniz olarak görebilirsiniz.

endüstriyel
**kablosuz otomasyon,
akıllı nesneler & nesnelerin interneti
endüstri 4.0**

Industrial IoT & Smart Objects



Industrial Strength



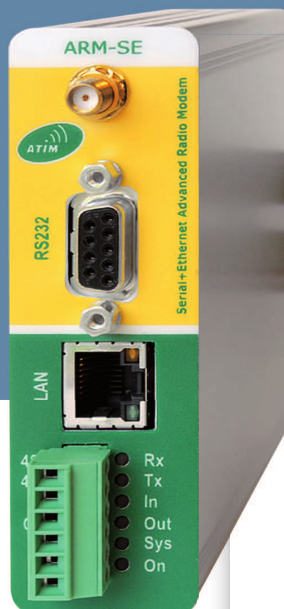
ARM-SE

Advanced Radio Modem

Licence free M2M*

>5 km at 868 MHz
500 mW

Serial + Ethernet



Radio modem
868 MHz (1 to 500 mW)
& **433 MHz** (10 mW)

European standard,
licence-free

Hight sensibility,
long range stability (TCXO)

RS232/485 or
Ethernet Full TCP/IP +
Modbus TCP/RTU gateway

« NLOS » functioning
(non line of sight), Wi-Fi alternative
in obstructed areas

Web page configuration
(in local and in a distance),
Firmware update

Advanced functions :
multiple repeater, watchdog, ...

Metal box for **Rail DIN** mounting

Excellent **quality / price** ratio

The ARM-SE radio modem

is compatible with all the ARM (Advanced Radio Modem®) range. It enables the communication between all serial or Ethernet devices, and devices (I/Os, serial, wireless, Ethernet) connected to other remote radio modules.

It can be used as a bridge between 2 or several Ethernet devices (PLCs for instance). Its strong points are the range it can cover with small antenna (more than 5km at sight and even more than 10km with a high point) and its excellent sensitivity which allows to cover very obstructed and disturbed areas such as industrial halls, quarries, urban environment, mobile machines, etc...

The ARM-SE offers an alternative to Wi-Fi for industrial applications not requiring important data throughput but rather a guarantee of good operation in worst situations.

The ARM-SE is equipped with an Ethernet port and also a serial port which can be used either in RS232 or RS485, for connecting serial devices (PLCs, terminals, ...), 1 digital input and 1 digital output (default watchdog output). Its modularity allows to add in "extended" version, either standard I/O modules or specific modules on request. It can operate under several modes: transparent, secured or Modbus protocol.

Its integration is perfect into a wireless communication architecture with other radio modems from the ARM range.

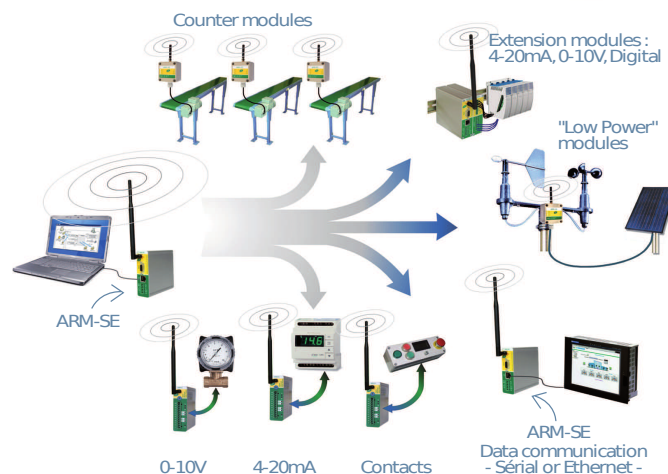
APPLICATIONS TYPE

LONG DISTANCES IN OBSTRUCTED AND DISRUPTED AREAS :

Timing, lapping time report
Digital display, road signs
Water and energy management
Camera control, telemetry
Quarries, mines, cement works
Building trade, industries ...



>M2M Infrastructure example



www.atim.com

ARM-SE

Advanced Radio Modem

Aluminum IP40 box for DIN mounting

Low thickness in an electric cabinet

Weight: 250g



Daughter board for ARM-SE

ARM-X8800 : extension card 8 inputs + 8 outputs (optocouplers / Vmos)

ARM-X4440 : extension card 4 inputs + 4 outputs digital + 4 inputs analogical 4-20mA or 0-10V

ARM-X4440 : extension card 4 inputs + 4 outputs digital + 4 outputs 4-20mA or 0-10V

Compatibility with ARM range

ARM-IOx : radio modems low cost -IOS/-IOD/-IOA

ARM-IOx-LP : low power version with input/output digital and analogical

ARM-D : digital version, 2 inputs + 2 outputs (+1 input and 1 output 4/20mA)

ARM-DA : digital-analogical version, 2 inputs + 2 outputs (+1 input and 1 output 4/20mA)

ARM-C8 et -U8 : transceiver OEM version

Articles references

ARM-SE8/500 868/870MHz band, 500mW

ARM-SE4/10 433/434MHz band, 10mW

Options :

-HD : 38400bps radio version

CONNECTIONS

1 Ethernet port 10BaseT (RJ 45)

1 RS232 port (SUBD 9 pins with Rts, Cts, Dtr, Dsr)

1 RS485 port 2 wires (de-pinable terminal)

1 input "IN" digital (terminal)

1 output "OUT" digital Vmos 30V/0,5A (terminal)

Technical specifications

FUNCTIONALITIES

FUNCTIONING MODES : Transparent mode, buffer 2ko

Mirror mode with modules I/O ARM-X

Secured mode with acquittal enquiry

Gateway: modbus TCP to Modbus RTU

Modes: point to point, access point, client, repeater

ADVANCED FUNCTIONS : Routing option (relaying path)

Data encryption, error corrector code

"LBT" function (listen before talk)

MAC addresses filtering for flow optimization

Configuration and diagnostic in a distance (by@P)

Watchdog functions (with e-mail alert)

GENERAL INFORMATIONS

CONFIGURATION AND UPDATES:

by embedded webpage, or Hayes commands (parameters saving in EEPROM).

Firmware update via Ethernet. Configuration and test mode in local and in a distance. 3 DIP-switches at the back for RS485 configuration +1 for transition in test mode.

ANTENNA: SMA female antenna connector on the front

Recommended antennas: 1/2 wave angled or 1/4 wave deployed for case or metallic cabinet, or 1/2 wave deployed (without ground plan).

ENVIRONMENT : Temperature functioning/stocking: -30 to +60°C / -40 to +70°C

Humidity: 0 to 95% without condensation

NORMALIZATION : directive RTTE1995/5/CE - ETS300-220-3 v1.1.1

CEM EN 301 489-3 v1.4.1 - Sécurité NF EN60950 Ed.2000 - Conformity RoHS

LIGHTS AND MISCELLANEOUS : 6 LEDs: Rx, Tx, In, Out, Sys, On

Encoder wheel 16 channels

RADIO INTERFACE "RF"

Band: 433MHz, 868MHz, 1 to 500mW (0-27dBm)

Modulation: GFSK

Radio flux: 19200bps NRZI, 38Kbps in option

16 configurable channels with encoder wheel or soft

Sensibility in reception: -110dBm at 9600bps / -107dbm at 19k2

POWER SUPPLY

Consumption at 12V: 400mA in emission, 115mA in reception

Sleep mode (just in serial mode): ~40mA



www.atim.com

DISTRIBUTED BY :

SYDMA
Kablosuz Kontrol

Chemin des guillets • F-38250 Villard de Lans
Tél. +33(0)4 76 95 50 65 • Fax +33(0)4 76 95 50 64 • Email : arm@atim.com

Sarl - capital : 30 000 - Siret 410 460 422 00026

Document non contractuel, spécifications modifiables sans préavis - Haz2009

ARM-X

Advanced Radio Modem - eXtended

Licence free M2M*



Contacts carrying & analogical values

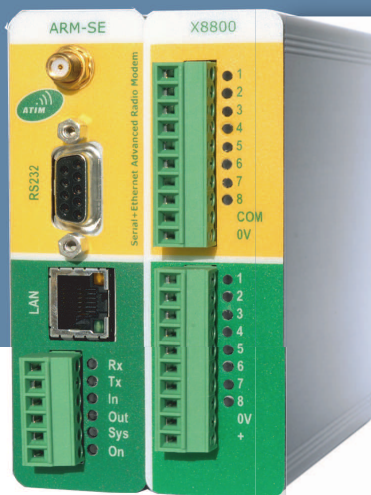
Digital / Analogical

The ARM-X extension module

is designed for applications such as remote control, monitoring, telemetry, data transfer, ... where cabling is sensitive and expensive (dam, weather station, mechanic installations, ...), as well as for mobile applications (vehicles, cranes, robotics, ...). It offers a complete ready-to-use solution avoiding in some case the use of PLCs or I/O terminals.

The input-output modules are available in digital and in analog (0-10V / 4-20mA). Thermocouple and PT100 versions will complete this range soon. They are assembled with a base radio modem ARM-S (serial) or ARM-E (Ethernet). They can also operate with ARM-S1 or ARM-E1 base (without radio modem) for a wired communication in RS232 or RS485 (mirror or Modbus mode).

The Windows software " ARM MANAGER " enables the configuration of ARM-X and the adjustment of digital input filtering time, fall-back position of digital outputs, counting on upward, downward front or on state as well as different specific features. For analog inputs (12 bits that is to say 4096 points), it is possible to select the type of input (0-10V, +/- 10V, 4-20mA) as well as automatic triggering of a digital output order depending on high or low threshold. For analog outputs (12 bits), it is possible to configure a fall-back value.



Simple solution
(no automaton needed)

Extensions for ARM-SE
radio modem (1 to 4 modules)

Up to 32i / 32o (or 16i + 16o analogical and 16i + 16o 4-20mA)

Mirror mode
point to point and multipoints

ModBus mode slave
(Modbus) **with advanced functions** filtering, memorization, counting, etc.

Configuration with web pages

Work with the **ARM-SE** radio modem (see technical sheet)

Aluminium box for **rail DIN** mounting

Compatibility with the **ARM-IO and ARM-D(A)** range

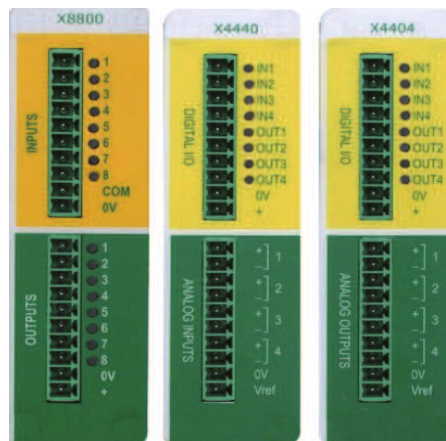
APPLICATIONS TYPE

STATES AND ALARMS TRANSMISSION

- Energy (hydroelectric central ...)
- Water and wastewater management
- Secured remote control
- Rolling crane
- Stacker crane, conveyor systems
- Call operator systems



>AVAILABLE VERSIONS



www.atim.com

ARM-X

Advanced Radio Modem
extended

Aluminum box IP40
for rail DIN mounting

Low thickness in an electric
caninet

Weight ~300 g / module



Compatibility with the ARM range

ARM-SE : radio modem Serial / Ethernet

ARM-D: "Digital" version, 2 inputs 2 outputs

ARM-DA: "Digital" & "Analogical" version

ARM-IO : -D / -A / -S / -D-LP / -A-LP versions

ARM-C8 et -U8 : transceivers O.E.M. versions

Articles references

ARM-X8800 : 8I+8O digital (optocoupled / Vmos)

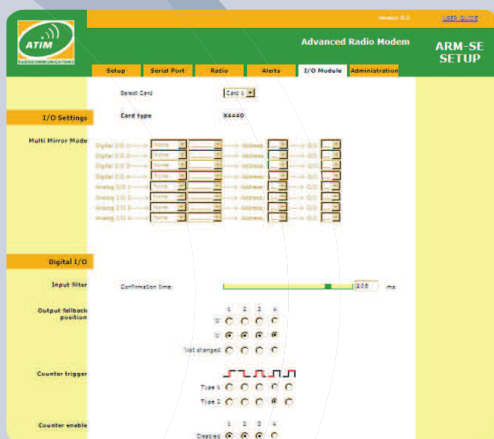
ARM-X4440/I : 4I+4O digital +4 inputs 4-20mA

ARM-X4440/U : 4I+4O digital +4 inputs 0-10V

ARM-X4404/I : 4I+4O digital +4 outputs 4-20mA

ARM-X4404/U : 4I +4O digital +4 outputs 0-10V

ARM-X..... : contact us for specfic uses



Technical specifications

FUNCTIONALITIES

- Mirror mode point to point or multipoint
- Modbus slave (radio or serial link)

GENERAL INFORMATION

ENVIRONMENTAL

- Operating temperature: -20 to +50°C
- Storage temperature: -30 to +70°C
- Humidity: 0 to 95% (no condensing)

MISCELLANEOUS

- Led for each digital input and output
- Plug connector (3.96mm pitch)
- Separated power supply for base module and input/output modules (0-30Vcc)

CONNECTIONS

INTERFACES

- Base module: RS232/RS485 (ARM-S) or Ethernet (ARM-E)
- Digital inputs: opto-isolated (common ground) - 32-bit counting (E1 to E7 : 500Hz / E8 : 10kHz)
- Digital outputs: protected Mosfet (10-30Vcc)
- Analog inputs 0-20mA / 0-10V 12-bit (common or differential mode)
- Analog outputs 0-20mA (version /I) 12-bit

power supply

Via ARM-SE power supply (10-30Vcc)



www.atim.com

Chemin des guillets • 38250 Villard de Lans - FRANCE
Tél. +33(0)4 76 95 50 65 • Fax +33(0)4 76 95 50 64 • Email : arm@atim.com

DISTRIBUTED BY :

SYDMA
Kablosuz Kontrol

ARM-D / -DA

Advanced Radio Modem

Licence free M2M*

>5 km in 868 MHz
500mW

Digital (-D) / Digital + Analog (-DA)

ARM-D and ARM-DA radio modems

are well adapted to data Booleans transmission applications (digital) and transfer of logic and analogical states: remote control, watch, distance management, feedback alarm, etc.

They work in mirror mode (inputs/outputs copy in the two directions, in a cyclic or released way), or in slave modbus mode, accessible in that case from a modbus/TCP or modbus/RTU dispositive, via an ARM-SE radio modem (or ARM-CS or ARM-IO).

More precisely, the ARM-DA radio modem is equipped with 2 digital inputs/outputs (VMos protected against short-circuit), and 1 analogical input/output 4-20mA.

The reception Rx LED allows to visualize received signal quality: green (good), orange (medium), red (bad).

It is also equipped with a serial RS232 port (adaptator cable required) reserved to its configuration (with software under Windows or Hayes commands).

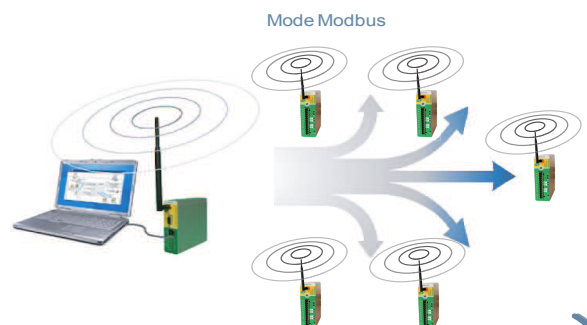
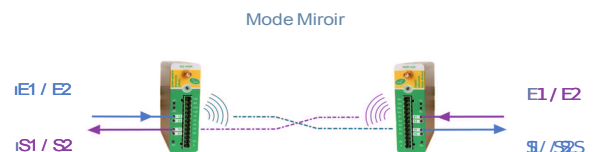
A performing sleep mode permits to supply it with a small solar panel dispositive.

It can be integrate in a wireless communication architecture with serial-Ethernet radio modems (ARM-SE), and also in multipoint mirror mode to the extension modules ARM-X.



- New evolutionary range of multichannel radio modems
- European norm, licence free
- 433MHz and 868MHz versions
- Powerful ERP (effective radiated power): 10mW at 500mW
- Great sensibility, high range
- Modes : Mirror, Trigger, & ModBus
- Repeater + routing table
- "Watchdog" function
- Configuration via software under windows, or Hayes commands, or ARM-SE web pages
- Aluminum box for DIN rail mounting

> M2M infrastructure example



APPLICATIONS TYPES

DEPORT SANS FIL SIMPLE ET PERFORMANT

- Simple and performing wireless transfer
- Billboards, synchronization
- Water management, telemetry
- Counting, traceability
- State transfers
- Remote control, alarms
- Etc.



* Machine to Machine

ARM-D(A)

Advanced Radio Modem
Digital & Analogique

Aluminum box for DIN rail
mounting

Low thickness in a cabinet

Weight: 250g



Compatibility with ARM range

ARM-SE : radio modem Serial / Ethernet

ARM-X : "eXtended" versions, inputs/outputs

ARM-CS : "Compact Serie" version, tight box

ARM-IO : -S / -D / -A / -D-LP / -A-LP versions

ARM-C8 et -U8 : transceivers O.E.M. versions

Articles references

ARM-D4/10 : (433 MHz / 10 mW) 2 digital I + 2 digital O

ARM-D8/500 : (868 MHz 500mW) 2 digital I + 2 digital O

ARM-DA4/10 : 2 digital I + 2 digital O and 1I + 1O 4-20mA

ARM-DA8/500 : 2 digital I + 2 digital O and 1I + 1O 4-20mA

CONNECTIONS



Connection with a 12 points terminal, thread 5,08mm

- 2 digital inputs optocoupled (terminal)
- 2 digital outputs Vmos 30V/0,5A max (terminal)
- 1 analogical input 4-20mA / 0-5V (version -DA)
- 1 analogical output 4-20mA / 0-5V (version -DA)

Technical specifications

FUNCTIONALITIES



"Mirror" mode

"Slave" mode

"Synchro" mode

GENERAL INFORMATION



CONFIGURATION:

Windows-based utility or Hayes commands

Parameter saving in EEPROM

RJ 13 in rear face for configuration using RS232 cable (in option)

ANTENNA:

SMA female antenna connector on front face

Recommended antennas: 1/2 wave length whip antenna with elbow (h : 17cm) or 1/4 wave length antenna for metal case or cabinet (with ground plan)

ENVIRONMENTAL:

Operating temperature: -20 to +50°C

Storage temperature: -20 to +70°C

Humidity: 0 to 100%

REGULATORY APPROVALS:

ETS300-220

R&TTE

CE certification (pending)

LEDS & MISCELLANEOUS:

Power LED

Tx LED

RADIO INTERFACE "RF"



433MHz or 868MHz bands

ERP: 10mW / 100mW / 500mW according to standards and frequency range

GFSK modulation

Radio throughput: NRZI 19200 bps

16 channels configurable by coding wheel or software

Reception sensitivity: -110dBm @9600bps

POWER SUPPLY



External 10 - 30 Vdc by screw terminal

Consumption: <50mA@12Vdc (10mW version)



www.atim.com

DISTRIBUTED BY :



Chemin des guillets • F-38250 Villard de Lans - FRANCE
Tél. +33(0)4 76 95 50 65 • Fax +33(0)4 76 95 50 64 • Email : arm@atim.com

Sarl capital : 30 000 - Siret 410 460 422 00026



Temperature radio modem

TEMPERATURE • ALERT • IP65 • IoT CLOUD • USB

Network

-  Sigfox™
-  LoRaWan®
-  Local Modbus

Performances

-  Range : up to 15km

Autonomy

-  5 years with 3 Tx/day
-  Two AA Lithium batteries
-  Battery level indicator

Divers

-  USB Configuration
-  SMS and Emails alerts
-  Web plateforme
-  Validation button
-  Waterproof IP65 box



The ACW-TM allows you to send **temperature** information collected with a **PT100** sensor. This transmission is done on regular basis and by **threshold alert**, in case of a problem, an email or an sms alert will be sent.

This temperature sensor exists in different versions intended to work on the new LPWAN networks dedicated to the IoT: Sigfox, LoRaWan or local Modbus radio. Ideal to supervise your equipment's on the web, It is perfectly adapted to an urban environment and to be used inside buildings.



ATIM Radiocommunications
Chemin des Guillels
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65



Technical features

Dimensions	160 x 53 x 53 mm		
Antenna	Integrated (¼ wave)		
Temperature	-20°C to +55°C (functioning mode) -40°C to +70°C (storage mode)		
Mounting	wall, tube, DIN-Rail		
Box	IP 65		
Power supply	2x AA Lithium batteries		
Weight	100 g		
Frequency	865 – 870 MHz		
Power	25 mW (14 dBm)		
Speed	Local : 1.2 to 115 Kbit/s Sigfox : 100 bps LoRaWan : 300 bit/s to 10 Kbit/s		
Consumption	Local :	Sigfox :	LoRaWan :
Tx mode	60 mA	60 mA	50 mA
Sleep mode	4 µA	4 µA	0,6 µA
Rx mode	35 mA	35 mA	18 mA
SNIFF mode	300 µA		

References

1 PT100 input :

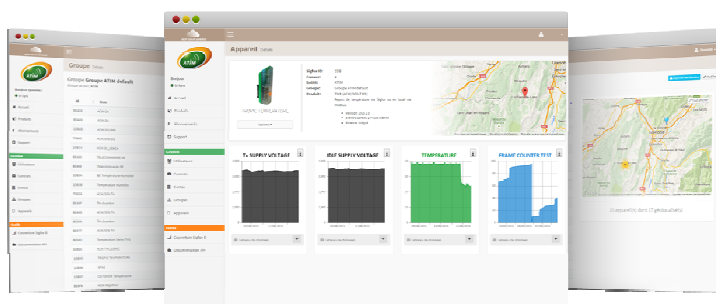
* ACW/SF8-TM
Sigfox and local

* ACW/LR8-TM
LoRaWan and local

* ACW/868-TM
Local only

Available with the ACW platform
or the modem on its own.

Atim Cloud Wireless™ Platform



Control all your atim devices using Sigfox and LoRa on the same secured Web platform !
Manage and Operate your IoT sensors data very easily!
Thanks to the new LPWAN network device remote management is simple and accessible to anyone.

 Managing the products by groups

 Signal quality

 SMS Alerts

 Email Alerts

 Secured API



Find all your data in real time on a graphic/control panel



Personalization of the graphics and information channels



Export your data (by product or by group)



Geo-tracking of your products



Radio coverage toolAtim Cloud Wireless™ Platform



ATIMRadiocommunications

Chemin des Guillets
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65





Digital input radio modem

COUNTER • ALERT • IP65 • IoT CLOUD • USB

Network

-  Sigfox™
-  LoRaWan®
-  Local Modbus

Performances

-  Range : up to 15km

Autonomy

-  5 years with 3 Tx/day
-  Two AA Lithium batteries
-  Battery level indicator



Divers

-  USB Configuration
-  SMS and Emails alerts
-  Web platform
-  Validation button
-  Waterproof IP65 box

The ACW-DI allows you report a digital input towards a web platform and also a sending of alert messages in case of **change of state** on the digital inputs. It also allows you to **remote-read** the informations from a **water, gas and electricity** counter done on a regular basis and by **threshold alert**.

This modem exists in two different versions 2 or 4 digital inputs intended to work on the new LPWAN networks dedicated to the IoT: Sigfox, LoRaWan or local Modbus radio. Ideal to supervise your equipment's on the web, It is perfectly adapted for an urban environment and to be used in a difficult environment.



ATIM Radiocommunications
 Chemin des Guillets
 38250 Villard de Lans
 France

www.atim.com
info@atim.com
 +33 4 76 95 50 65



Dimensions	160 x 53 x 53 mm
Antenna	Integrated (¼ wave)
Temperature	-20°C to +55°C (functioning mode) -40°C to +70°C (storage mode)
Mounting	wall, tube, DIN-Rail
Box	IP 65
Power supply	2x AA Lithium batteries
Weight	100 g
Frequency	865 – 870 MHz
Power	25 mW (14 dBm)
Speed	Local : 1.2 to 115 Kbit/s Sigfox : 100 bps LoRaWan : 300 bit/s to 10 Kbit/s
Consumption	Local : Sigfox : LoRa :
Tx mode	60 mA 60 mA 50 mA
Sleep mode	4 µA 4 µA 0,6 µA
Rx mode	35 mA 35 mA 18 mA
SNIFF mode	300 µA

2 digital inputs :

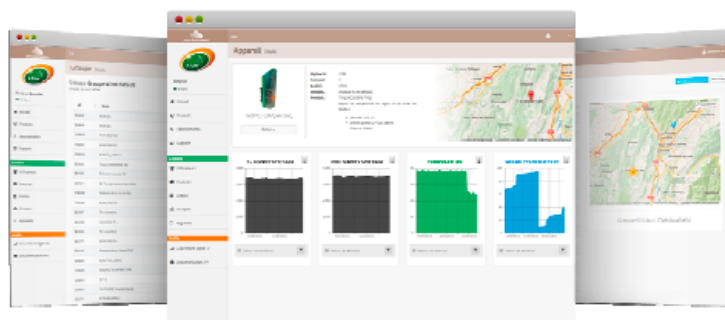
- ACW/SF8-DI2
Sigfox and local
- ACW/LR8-DI2
LoRaWan and local
- ACW/868-DI2
Local only

4 digital inputs :

- ACW/SF8-DI4
Sigfox and local
- ACW/LR8-DI4
LoRaWan and local
- ACW/868-DI4
Local only

Available with the ACW platform or the modem on its own.

Atim Cloud Wireless™ Platform



Control all your atim devices using Sigfox and LoRa on the same secured Web platform !

Manage and Operate your IoT sensors data very easily!

Thanks to the new **LPWAN** network device remote management is simple and accesible to anyone.

-  Managing the products by groups
-  Signal quality
-  SMS Alerts
-  Email Alerts
-  Secured API
-  Find all your data in real time on a graphic/control panel
-  Personalization of the graphics and information channels
-  Export your data (by product or by group)
-  Geo-tracking of your products
-  Radio coverage tool



ATIM Radiocommunications
Chemin des Guillels
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65





Home appliance Temperature/Humidity

TEMPERATURE • HUMIDITY • ALERT • SMART BUILDING

Network

-  Sigfox™
-  LoRaWan®
-  Local Modbus

Performances

-  Range : up to 15km

Autonomy

-  5 years with 3 Tx/day
-  Two AA Lithium batteries
-  Battery level indicator

Divers

-  USB Configuration
-  SMS and Emails alerts
-  Web plateforme



The ACW-TM allows you to send an ambient **temperature/humidity information**. This transmission is done on regular basis and by **threshold alert**. In case of a problem, an email or an sms alert will be sent.

This **temperature/humidity** sensor exists in different versions intended to work on the new LPWAN networks dedicated to the IoT: Sigfox, LoRaWan or local Modbus radio. Ideal to supervise your equipment's on the web, It is perfectly adapted for energy optimization for tertiary and industrial buildings.



ATIMRadiocommunications
Chemin des Guillels
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65



Technical features

Dimensions	80 x 80 x 35 mm		
Antenna	Integrated (1/4 wave)		
Temperature	-20°C to +55°C (functioning mode) -40°C to +70°C (storage mode)		
Mounting	wall, tube, DIN-Rail		
Box	Home automation		
Power supply	2x AA Lithium batteries		
Weight	100 g		
Frequency	865 – 870 MHz		
Power	25 mW (14 dBm)		
Speed	Local : 1.2 to 115 Kbit/s Sigfox : 100 bps LoRaWan : 300 bit/s to 10 Kbit/s		
Consumption	Local :	Sigfox :	LoRaWan :
Tx mode	60 mA	60 mA	50 mA
Sleep mode	7 µA	7 µA	0,6 µA
Rx mode	35 mA	35 mA	18 mA
SNIFF mode	300 µA		

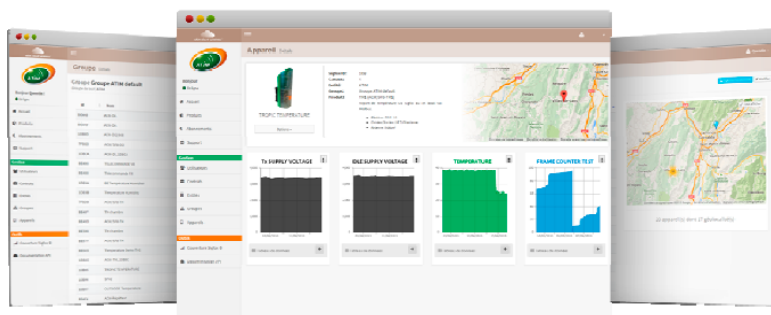
References

Internal sensor :

- ACW/SF8-TH
Sigfox and local
- ACW/LR8-TH
LoRaWan and local
- ACW/868-TH
Local only

Available with the ACW platform or the modem on its own.

Atim Cloud Wireless® Plateform



Control all your atim devices using Sigfox and LoRa on the same secured Web platform !

Manage and Operate your IoT sensors data very easily!

Thanks to the new LPWAN network device remote management is simple and accessible to anyone.

-  Managing the products by groups
-  Find all your data in real time on a graphic/control panel
-  Signal quality
-  Personalization of the graphics and information channels
-  SMS Alerts
-  Export your data (by product or by group)
-  Email Alerts
-  Geo-tracking of your products
-  Secured API
-  Radio coverage tool



ATIM Radiocommunications
Chemin des Guillels
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65



ACW_{XB}

SIGBEE o LORABEE o FLEXIBLE o THE AIRBOARD®

THE ACW SIGBEE/LORABEE

is a product that has been designed to send data over long distances from XBee® based devices with a low power consumption and using a large variety of radio technologies :



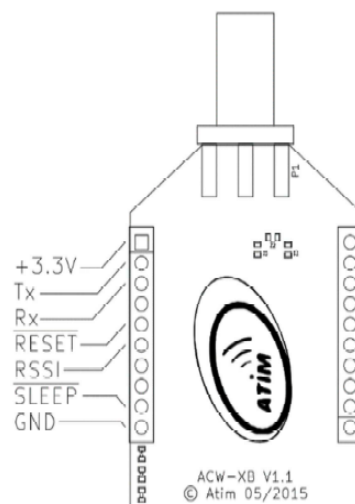
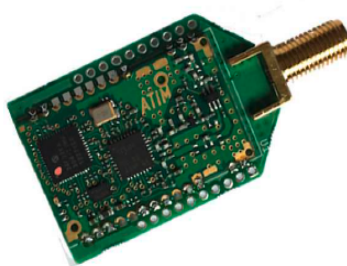
Sigfox™



LoRaWan®



Local Modbus



Flexibility: Several operating modes are available from 'AT' commands / settings via UART : transparent, secured, repeater, test, UART to Sigfox, radio (point to point) to Sigfox.



Low Power: less than 1 uA in sleep mode.



Range: A link budget up to 161 dBm. This allows you to have a range (Line-Of-Sight) more than 15km !



Adapters: ATIM provides a complete range of shields and evaluation boards: Raspberry PI® interface, Arduino®-interface, « The Airboard® » shield, « LoRaBee shield », USB Key and Mini PCI Express

Technical features

<i>Dimensions</i>	50 x 24 x 12 mm
<i>Radio Regulation</i>	EN 300 220 V2.4.1
<i>Operating Temp</i>	-30°C to +70°C
<i>Modulation</i>	2GFSK/BPSK (Sigfox)
<i>Sensitivity</i>	-143dBm @BER10 ⁻³
<i>Range</i>	>25 km (LoS)
<i>Frequency</i>	863 – 870 MHz
<i>Output power</i>	25 mW (14 dBm)
<i>Data rate</i>	100 bit/s to 115,2 Kbit/s
<i>Antenna</i>	50 Ω via SMA connector
<i>Power supply</i>	3,3 Vdc
<i>Interface</i>	2x10 pins (XBee® pinout)
<i>Setup</i>	AT commands via UART

Reference

- ACW-XB/868
- ACW-XB/SF8
- ACW-XB/SF8+
- ACW-XB/LR8



ATIM Radiocommunications
Chemin des Guillets
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65



ATIM RF SHIELDS

Adapters for the ARM-NANO family

Name	ACW-RPI	SigBee® LoraBee®	ACW-MPCIE	ACW-DUINO	ACW-USB	ACW-SDK
Adapter Type	Raspberry Pi	XBee	Mini PCI-Express	Arduino	USB Dongle	USB
Supported RF Modules	ARM-Nano 868 MHz / Lora / Modbus / Sigfox					
Provided driver	Yes, Debian	No	No	Yes	Yes	Yes, FTDI Driver
Interfaces	UART	UART	UART	UART	USB	None
Antenna	External SMA	External SMA	External UFL	External SMA	External SMA	External SMA
Power	3.3 V	3.3 V	3.3 V	3.3 V	-	USB/5V/AA
Picture						
Dimensions (mm)	67x35x13	50x25x13	50x30x4	70x53x13	73x22x10	125x60x38

Try the Atim Cloud Wireless® A dedicated Web platform for the entire ATIM ACW line of products. Makers, Get Ready !



ATIM CONNECTS EVERYTHING
AND EVERYWHERE...



ATIM Radiocommunications
Chemin des Guillets
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65



ACW DUINO

UART ◦ ADAPTER ◦ FLEXIBLE ◦ ARDUINO

THE ACW DUINO

is a product that has been designed to send data over long distances from ARDUINO based devices with a low power consumption and using a large variety of radio technologies :



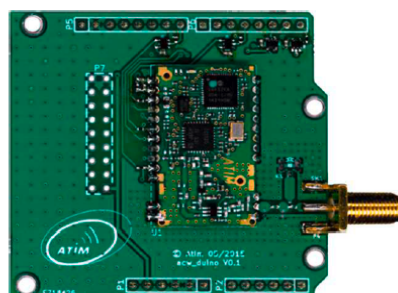
Sigfox™



LoRaWan®



Local Modbus



Flexibility: Several operating modes are available from 'AT' commands / settings via UART : transparent, secured, repeater, test, UART to Sigfox, radio to Sigfox.



Low Power: less than 1 uA in sleep mode.



Range: A link budget up to 161 dBm. This allows you to have a range (Line-Of-Sight) more than 15km !



Adapters: ATIM provides a complete range of shields and evaluation boards: Raspberry PI® interface, Arduino®-interface, « The Airboard® » shield, « LoRaBee shield », USB Key and Mini PCI Express

Technical features

<i>Dimensions</i>	70x53x13 mm
<i>Radio Regulation</i>	EN 300 220 V2.4.1
<i>Operating Temp</i>	-30°C to +70°C
<i>Modulation</i>	2GFSK/BPSK (Sigfox)
<i>Sensitivity</i>	-143dBm @BER10 ⁻³
<i>Range</i>	>25 km (LoS)
<i>Frequency</i>	863 – 870 MHz
<i>Output power</i>	25 mW (14 dBm)
<i>Data rate</i>	100 bit/s to 115,2 Kbit/s
<i>Antenna</i>	50 Ω via SMA/UFL
<i>Power supply</i>	3,3 Vdc
<i>Interface</i>	Arduino pinout (2x6 + 2x8)
<i>Setup</i>	AT commands via UART

Reference

- ACW-DUINO/868
- ACW-DUINO/SF8
- ACW-DUINO/SF8+
- ACW-DUINO/LR8



ATIM Radiocommunications

Chemin des Guillets
38250 Villard de Lans
France

www.atim.com
info@atim.com
+33 4 76 95 50 65



ACWRPI

RASPBERRY PI o ADAPTER o FLEXIBLE o UART

THE ACW RPI

is a product that has been designed to send data over long distances from a Raspberry Pi device with a low power consumption and using a large variety of radio technologies :



Sigfox™



LoRaWan®



Local Modbus



Flexibility: Several operating modes are available from 'AT' commands / settings via UART : transparent, secured, repeater, test, UART to Sigfox, radio (point to point) to Sigfox.



Low Power: less than 1 uA in sleep mode.



Range: A link budget up to 161 dBm. This allows you to have a range (Line-Of-Sight) more than 15km !



Adapters: ATIM provides a complete range of shields and evaluation boards: Raspberry Pi® interface, Arduino®-interface, « The Airboard® » shield, « LoRaBee shield », USB Key and Mini PCI Express

Technical features

<i>Dimensions</i>	67x35x13 mm
<i>Radio Regulation</i>	EN 300 220 V2.4.1
<i>Operating Temp</i>	-30°C to +70°C
<i>Modulation</i>	2GFSK/BPSK (Sigfox)
<i>Sensitivity</i>	-143dBm @BER10 ⁻³
<i>Range</i>	>25 km (LoS)
<i>Frequency</i>	863 – 870 MHz
<i>Output power</i>	25 mW (14 dBm)
<i>Data rate</i>	100 bit/s to 115,2 Kbit/s
<i>Antenna</i>	50 Ω via SMA/UFL
<i>Power supply</i>	3,3 Vdc
<i>Interface</i>	Raspberry pinout (2x13)
<i>Setup</i>	AT commands via UART

Reference

- ACW-RPI/868
- ACW-RPI/SF8
- ACW-RPI/SF8+
- ACW-RPI/LR8



ATIM Radiocommunications

Chemin des Guillels
38250 Villard de Lans
France

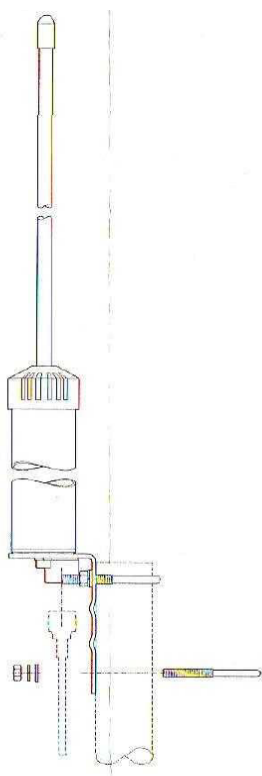
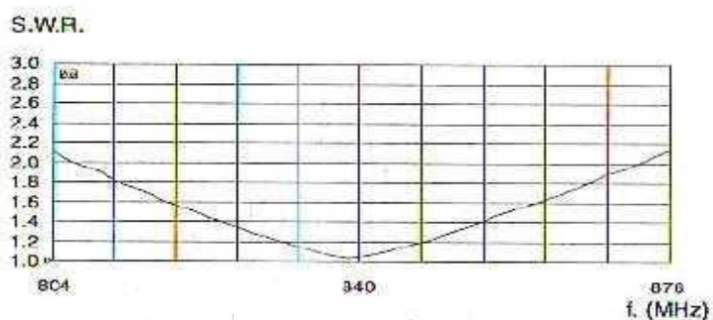
www.atim.com
info@atim.com
+33 4 76 95 50 65



ANT868-BZ Omnidirectional Antenna 868MHz

- « Bazooka » antenna 4.15dBi pole mounting.
- Frequency : 824-894MHz
- Vertical polarization
- Supply with pole fixation
- Shock protection
- Strong construction, excellent reliability

TYPICAL S.W.R. RESPONSE



TECHNICAL SPECIFICATIONS

CARACTERISTIQUES

- Antenna type: 3/4λ Coax, J-Pole
- Frequency range : 902-928MHz
- Impedance : 50 ohms
- Gain : 4.15dBi (2dBd)
- Band width : 26MHz @ V.S.W.R 2:1
- V.S.W.R : <1.2 :1 à f.res

PROTECTION

- All the metallic parts are linked to the ground
- N female connector
- Surface to the wind: 0,01m²
- Charge au to the : 17N to 150km/h –180km/h

DIVERS

- Material : Aluminum
- Total height: 360mm
- Weight : 0,485kg
- Supply with a pole fixation, diameter 35-42mm

ANT868-Y12 / Y15

868MHz Yagi antenna

- Base station antenna, directional
- Mono-band 824-960MHz, High gain
- Vertical polarization
- Mounting Mast Ø 25-42mm
- Protection from static discharges
- Anodised aluminium alloy
- 2 versions (11.5dBi et 15dBi)



TECHNICAL SPECIFICATIONS

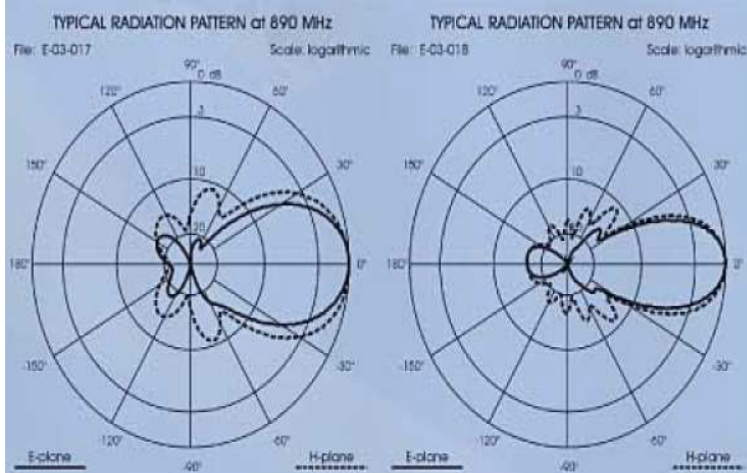
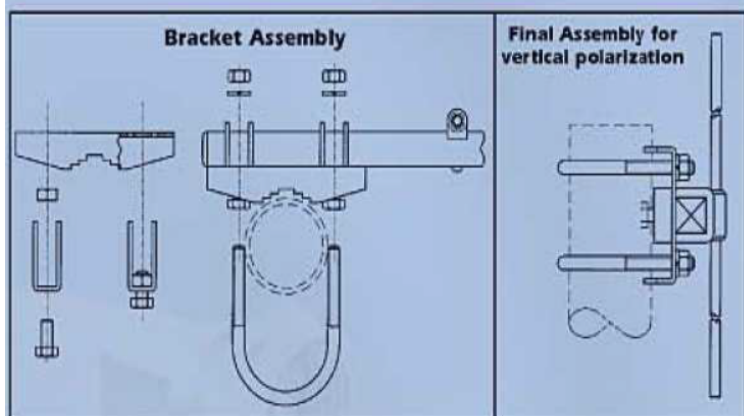
ELECTRICAL DATA

- Type: ANT868-Y12 : 6 elements yagi antenna, ANT868-Y15 : 10 elements yagi antenna
- Frequency range : 824-960MHz
- Impedance : 50 ohms unbalanced
- Gain : ANT868-Y12 : 11.5dBi / -Y15 : 15dBi
- Front to back ratio: -Y12 : $\geq 20\text{dB}$ / -Y15 : $\geq 15\text{dB}$
- V.S.W.R : $< 1.4 : 1$ in bandwidth
- Max Power: 10W (CW) at 50°C

MECHANICAL DATA

- All parts are at the ground
- Connector : FME-male
- Wind surface : 0,02 / 0.03m²
- Wind load : 27N / 48N at 150km/h
- Materials : Aluminium, PCB, thermoplastic
- Dimensions : -Y12 : 190x580x60mm
-Y15 : 190x980x60mm
- Weight : -Y12 : 410g
-Y15 : 500g
- Mounting mast Ø 25-42mm

Antenna Mounting

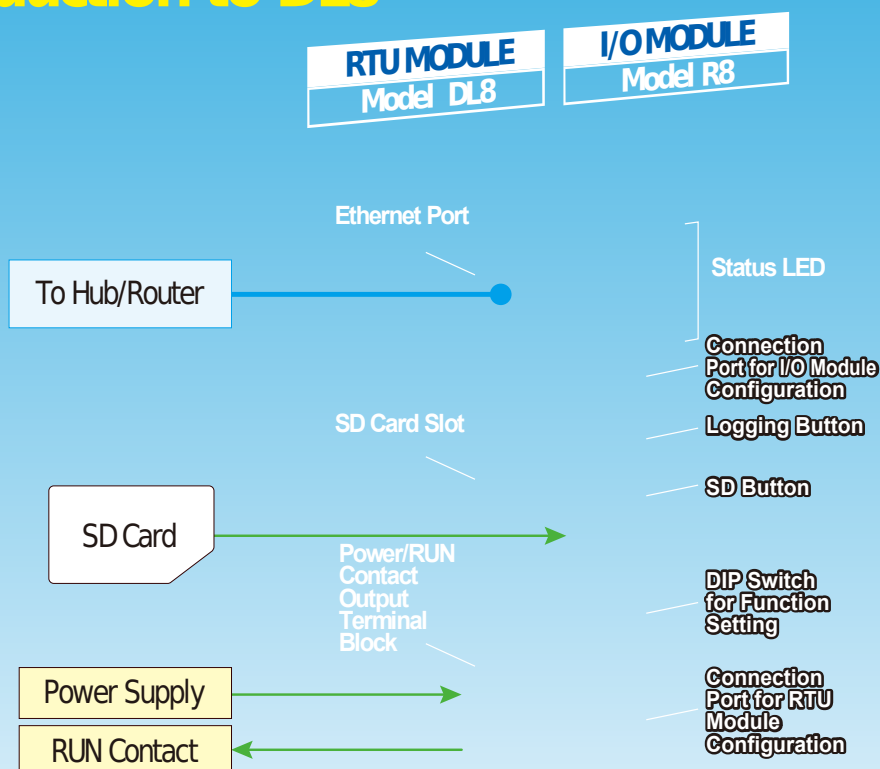


Internet of Things

IOT

That Can Be Implemented Right Now

Introduction to DL8



RTU MODULE

'Browsing,' 'Reporting,' 'Logging,' 'I/O Marshalling' and 'Advanced View' functions can be combined to suit your applications at the minimum cost.



I/O MODULE

Economical slim I/O modules are selectable by signal types and number of points up to 16 modules. External Modbus/TCP slave modules can be also added.



DL8-Type	Browse	Report	Log	I/O Marshalling Advanced View	Model
A	☐	—	—	—	DL8-A
B	☐	☐	—	—	DL8-B
C	☐	☐	☐	—	DL8-C
D	☐	☐	☐	☐	DL8-D

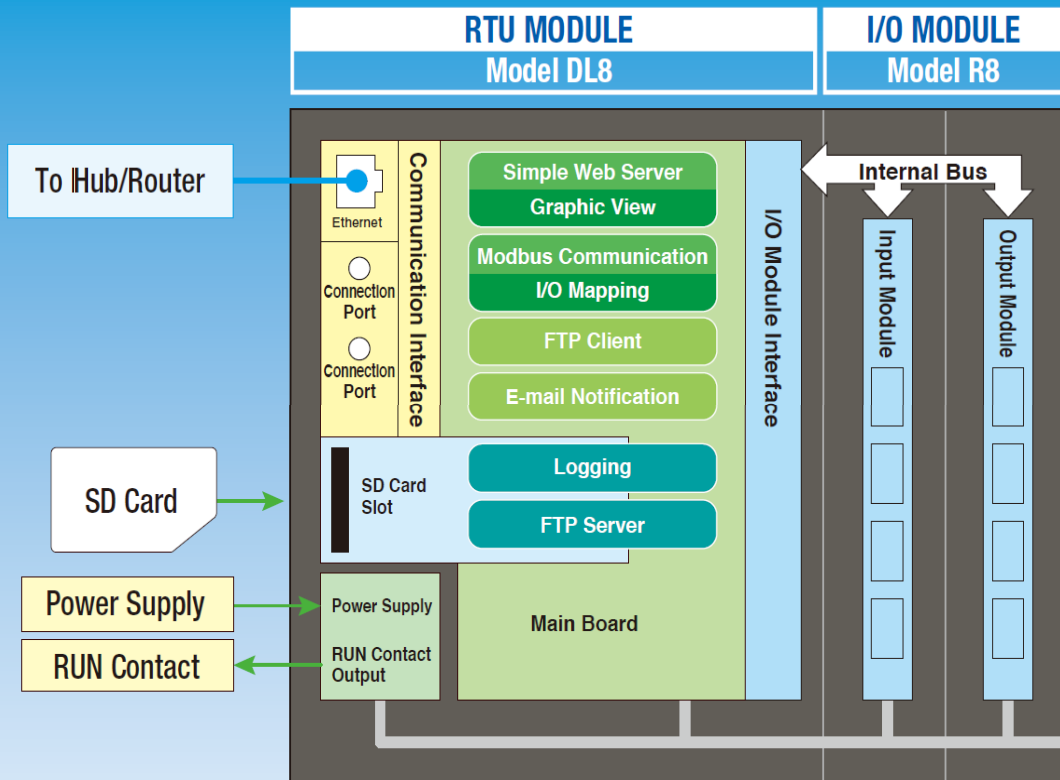
Signal Type	Max. Capacity per module*	I/O Module Type	Model
Analog Input	32 points	DC current input (2 points, isolated) DC current input (4 points, non-isolated) DC current input (4 points, sensor exc., non-isolated) DC voltage input (2 points, isolated) DC voltage input (4 points, non-isolated) Thermocouple input (2 points, isolated) RTD input (4 points, non-isolated)	R8-SS2 R8-SS4N R8-SS4N R8-SV2 R8-SV4N R8-TS2 R8-RS4N
Discrete Input	64 points	Contact input (4 points, NPN) Contact input (16 points, NPN)	R8-DA4A R8-DAM16A
Pulse Input	32 points	Totalized pulse input (4 points, NPN/PNP/voltage pulse)	R8-PA4
Analog Output	32 points	DC voltage output (4 points, non-isolated) DC current output (2 points, isolated, 24 mm wide)	R8-YV4N R8-YS2
Discrete Output	64 points	Transistor output (4 points, NPN, shortcircuit protection) Transistor output (4 points, NPN, shortcircuit protection) Photo MOSFET relay output (4 points) Transistor output (16 points, NPN, shortcircuit protection)	R8-DC4A R8-DC4A2 R8-DC4C R8-DCM16A

*: Including extended remote I/Os



On-site measurement data can be viewed on a Smart phone anywhere, anytime.

Functional Block Diagram



Remote Setting

All setting parameters except the communication setting are easily set and changed via the Internet.

Function Description of DL8

DL8-Type				Function	Details
A	B	C	D		
☐	☐	☐	☐	Simple Web Server	Allows data browsing and operation from the browser screen of a Smart phone or PC.
☐	☐	☐	☐	Modbus Communication	Interfaces the I/O data of the remote I/O.
	☐	☐	☐	FTP Client	Sends data to a server on the Internet.
	☐	☐	☐	E-mail Notification	Automatically reports alarms and events by e-mail.
		☐	☐	Logging	Stores the data collected at a constant cycle to SD card.
		☐	☐	FTP Server	Sends the data stored in the memory to FTP client over the Internet.
			☐	Graphic View	Can provide original graphic views defined by the customer.
			☐	I/O Mapping	Assigns Modbus/TCP signals to specific terminals of remote devices.

TOWER LIGHTS



it Series open network Capable tower Lights **NEW**

- Energy saving, maintenance free LED lights
- Direct Modbus/TCP and CC-Link control saves wiring and cost
- Wireless LAN access point and infrastructure mode (IEEE 802.11b/g/n, 2.4 GHz)
- Bright and even illumination thanks to M-System's original reflection system
- Number and color of LED modules can be freely combined
- Rugged IP 65 construction is ideal for harsh industrial applications

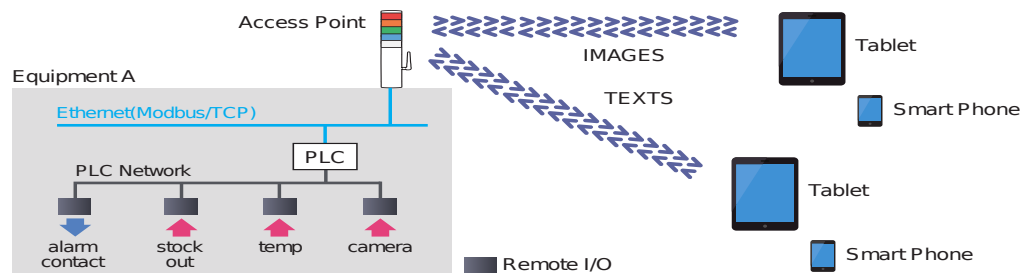
Modbus/TCP **CC-Link**



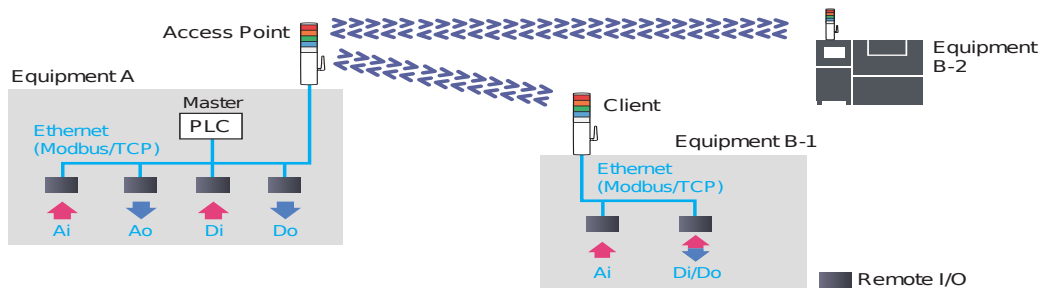
WLAN access point type

TOWER LIGHT APPLICATIONS

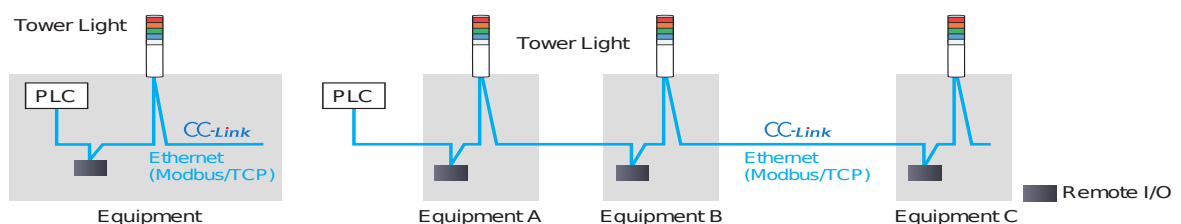
Remote monitoring and control of an equipment using mobile interface



No hardwiring between multiple sets of equipment to monitor and control by a single master PLC



The network capable tower lights can save a great part of parallel wiring between sensors, PLC and lights.



Open Network Capable Tower Light IT40SR, IT50SR, IT60SR Series

Functions & Features

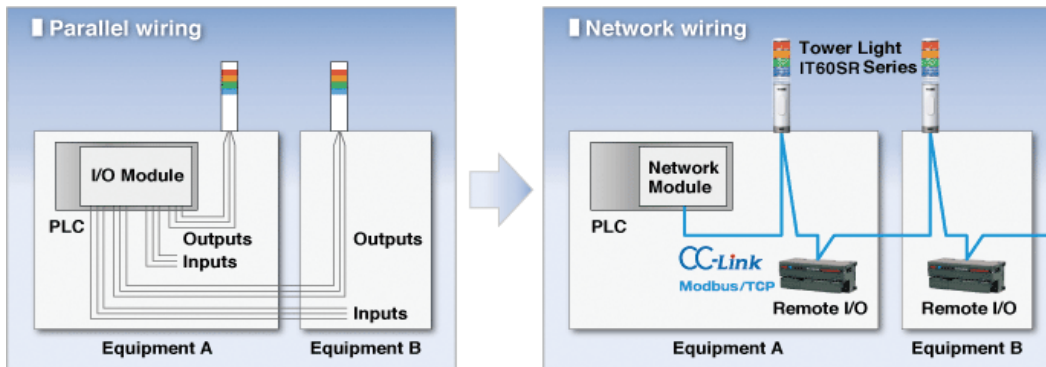
- Energy saving, maintenance free LED lights
- Direct Modbus/TCP and CC-Link control saves wiring and cost
- Bright and even illumination thanks to M-System's original reflection system
- Number and color of LED modules can be freely combined
- Rugged IP 65 construction is ideal for harsh industrial applications



The IT40SR, IT50SR and IT60SR Series are preassembled tower lights of 40-mm, 50-mm and 60-mm diameter LED modules. They feature direct control by PLC via Ethernet Modbus/TCP (model: ITxxSRE) or CC-Link (model: ITxxSRC).

In combination with M-System's remote I/O modules, local discrete signals can trigger the light modules connected with single network cables via a remote PLC, saving a great part of parallel wiring from sensor devices to the PLC's input cards, and from the PLC's output cards to the lights. Contact input type (ITxxSA1) without network connection is also available for local control.

APPLICATION EXAMPLE

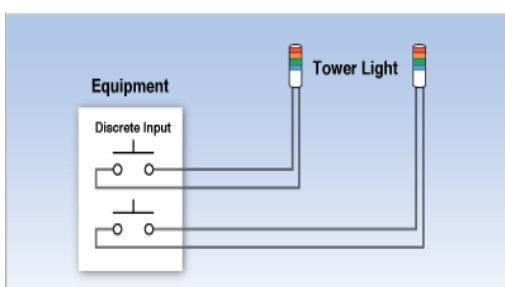


Discrete Input Tower Light IT40SA, IT50SA, IT60SA Series

Functions & Features

- Energy saving, maintenance free LED lights
- Discrete input tower light
- Bright and even illumination thanks to M-System's original reflection system
- Number and color of LED modules can be freely combined
- Rugged IP 65 construction is ideal for harsh industrial applications

APPLICATION EXAMPLE



The IT40SA, IT50SA and IT60SA Series are preassembled tower lights of 40-mm, 50-mm and 60-mm diameter LED modules. Lighting is controllable with PLC. Blinking and buzzing are controllable with PLC(except ITxxSA3). Direct & Pole mounting Tower Light, model ITxxSA2 and ITxxSA3 are new addition to the existing Tower Light Series. These new models have 1-5 layers and have small height, thus compact size compared to existing ITxxSA1.



SIGNAL CONDITIONERS



A signal conditioner is used to condition and convert a field sensor signal suitable for processing with the PLC/DCS in a wide variety of process plants and factories. Typical applications are:

- ✓ **Signal conversion**
- ✓ **Signal isolation to stop ground loops**
- ✓ **Signal boosting to increase load drive capability**

M-System signal conditioners are available with wide combinations of process signal I/O, power input and mounting configuration. Additionally, M-System offers the broadest line of signal splitters available.

Choose by Housing and Terminal Access Styles

- Plug-in base socket mounted
- Terminal block style
- Ultra slim housing
- Euro terminal block style
- Installation base mounted
- Rock mounted
- Field enclosure mounted
- Sensor head mounted
- PCB mounted
- Connector output

Choose by I/O Signal Types

- Universal input
- DC mV, V, mA
- Two-wire transmitter
- Temperature
- Potentiometer
- Strain gauge
- CT & VT
- Frequency and pulse
- Pneumatic
- AC power

Choose by Functions

- Isolation & Amplification
- Conversion & Transmission
- Signal splitting
- Limit alarm
- Filtering & Linearization
- Math / Process function

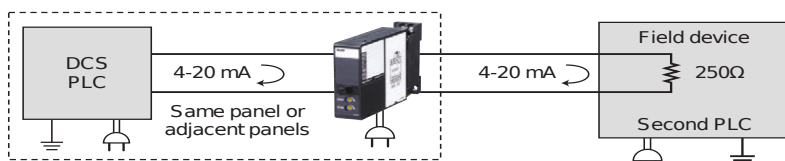
Choose by Power Supply

- AC line powered (4 Wire)
- DC line powered (4 Wire)
- Output loop powered (2 Wire)
- Input loop powered (self powered)

ISOLATOR APPLICATIONS

Isolator is installed between a transmitter (i.e. sensor) and a receiver to galvanically isolate DC signals. Breaking the path between a field instrument and a control room device minimizes various influences coming from the field site to the control room. In addition, each instrument separated by galvanic isolation can choose its own ground point independently from other ones, avoiding the 'ground loop' problem. Lastly, the isolator can provide impedance conversion to beat loop impedance constraints, and signal level conversion (e.g. from 10-50 mA to 4-20 mA) function.

Four-wire isolator : 4-20 mA (passive) input / 4-20 mA output / Line powered

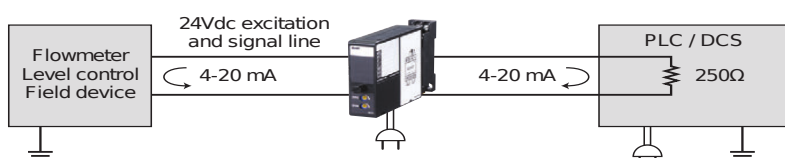


e.g. M2VS DC input, fixed range
 W2VS DC input, fixed range, signal splitter
 M6XXV DC input, programmable range

Designed primarily for front-ending PLC/DCS systems which are mounted within the same panel or adjacent to it. The isolator module is powered from terminals separate from signal lines.

manufacturing process

Four-wire isolator / current loop supply : 4-20 mA (active) input / 4-20 mA output / Line powered



e.g. M2DYS Fixed range
 W2DYS Fixed range, signal splitter
 M3LDY Programmable linearization

Basic isolator designed to interface a PLC and DCS system with a field instrument. The isolator module supplies 24 Vdc power to the field device and provides a linearized output signal if necessary.

system

manufacturing sites

M6 Series

Ultra-Slim Signal Conditioners

- Only 5.9 mm (0.23 in) wide ultra-slim design for M6D/M6S series
- Selectable connection styles: Tension-clamp, screw terminal or euro terminal
- Low power consumption, high load drive capability
- Backplane base available to save individual power input wiring
- 2000 Vac isolation



M6S Series



M6N Series



M6D Series

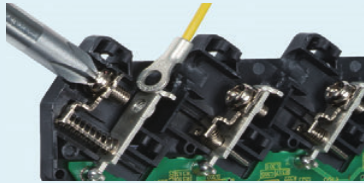
M6S Series : Tension Clamp Style

5.9 mm (0.23 in) wide module.
No special tool or skill is required when wiring.



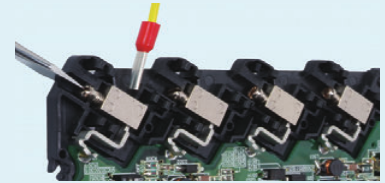
M6N Series : Screw Terminal Style

7.5 mm (0.30 in) wide module.
Self-up screws prevent falling off a terminal.



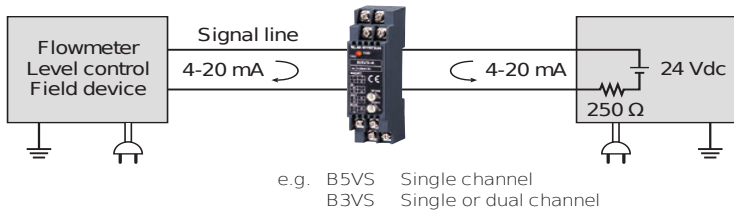
M6D Series : Euro Terminal Style

5.9 mm (0.23 in) wide module.
Suitable for solid wires, pin terminals.



ISOLATOR APPLICATIONS 3

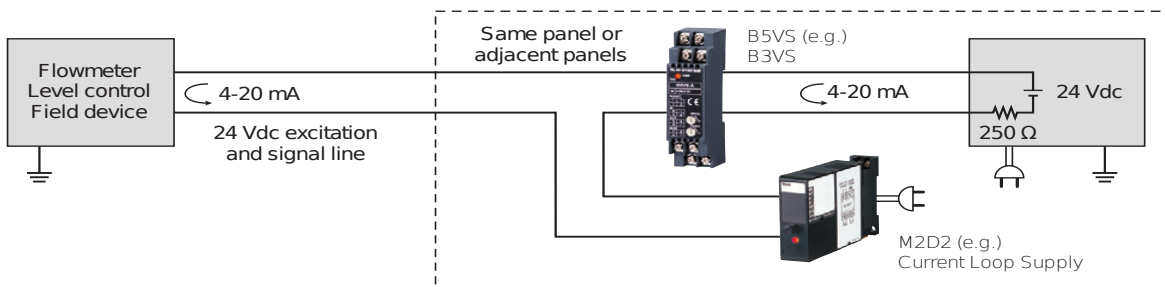
Two-wire isolator : 4-20 mA input / 4-20 mA output (loop powered)



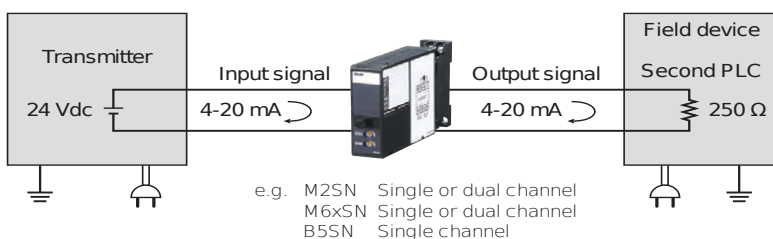
Basic isolator designed to interface a PLC and DCS system that provides a 24 Vdc power supply with a 4-20 mA input.

sites

With the excitation supply to the field device



Two-wire isolator : 4-20 mA input (loop powered) / 4-20 mA output



Mainly used to retrofit existing 4-20 mA process loops that need to add another instrument to the loop while maintaining isolation.



ADVANCED RADIO MODEM (ARM)



ARM-SE Radyo Modem

- . Seri (RS232/485) + Ethernet
- . 5Km Lisanssız (868MHz)
- . 19200bps RF hız (half-duplex)
- . Endüstriyel (-20, +50C çalışma sıcaklığı)
- . Wi-Fi'ye alternatif (uzun mesafe NLOS)
- . Tekrarlayıcı özelliği
- . MODBUS TCP/RTU Gateway
- . SCADA Uygulamaları



ARM-X Genişletme Modülü

- . ARM-SE Ana radyo modülü ile birlikte
- . X8800 - 8 sayısal giriş / 8 sayısal çıkış
- . X4440 - 4 sayısal G/Ç + 4 analog giriş
- . X4404 - 4 sayısal G/Ç + 4 analog çıkış
- . Toplam 32 sayısal giriş/çıkış ya da 16 sayısal G/Ç + 16 analog G/Ç



ARM-IOX Radyo Modem (uygun maliyet)

- . ARM-IOX Seri (RS232/485)
- . ARM-IOD Sayısal (1 Sayısal G/Ç)
- . ARM-IOA Analog (1 Analog + 2 sayısal giriş)
- . ARM-IOP PT100 (1 harici sıcaklık sensörü)
- . ARM-IOD-LP Low Power D (dahili Lityum pil)
- . ARM-IOA-LP Low Power A (dahili Lityum pil)

WLI-E / SW500Z ENDÜSTRİYEL ETHERNET

- . WLI-E 802.11a/b/g Wi-Fi Ethernet 2.4GHz Access Point, Client ve WDS modları, IP66 kasa, TCP/IP, UDP
- . EW5302 Ethernet wireless köprü +2 port seri sunucu, TCP/IP, UDP server, client protokol
- . Unmanaged/managed Ethernet anahtarlar





Tüm sektörler için
KABLOSUZ ENDÜSTRİYEL ÇÖZÜMLER

PROSES



ENERJİ ÜRETİMİ

ÇİMENTO



ENERJİ DAĞITIMI

KİMYA



PETROKİMYA

CAM



DOĞALGAZ

TAŞIMACILIK



GIDA



SPOR



SAĞLIK



PERAKENDE ve BÜYÜK MAĞAZACILIK



DEPOLAMA



TARIM



LOJİSTİK



OTOMOTİV



İNŞAAT



DEPOLAMA



SERACILIK



ENDÜSTRİYEL RF MODEM



ENDÜSTRİYEL ETHERNET



IIoT GATEWAY



ENDÜSTRİ 4.0 ÇÖZÜMLERİ

