2

happy new web 2016 ★

pf *2016*

new modern and responsive design

information in real time

new parametric search

multi shopping carts

improved work with products

new price offers tools

improved search with auto-complete

artificial intelligence

flexible content

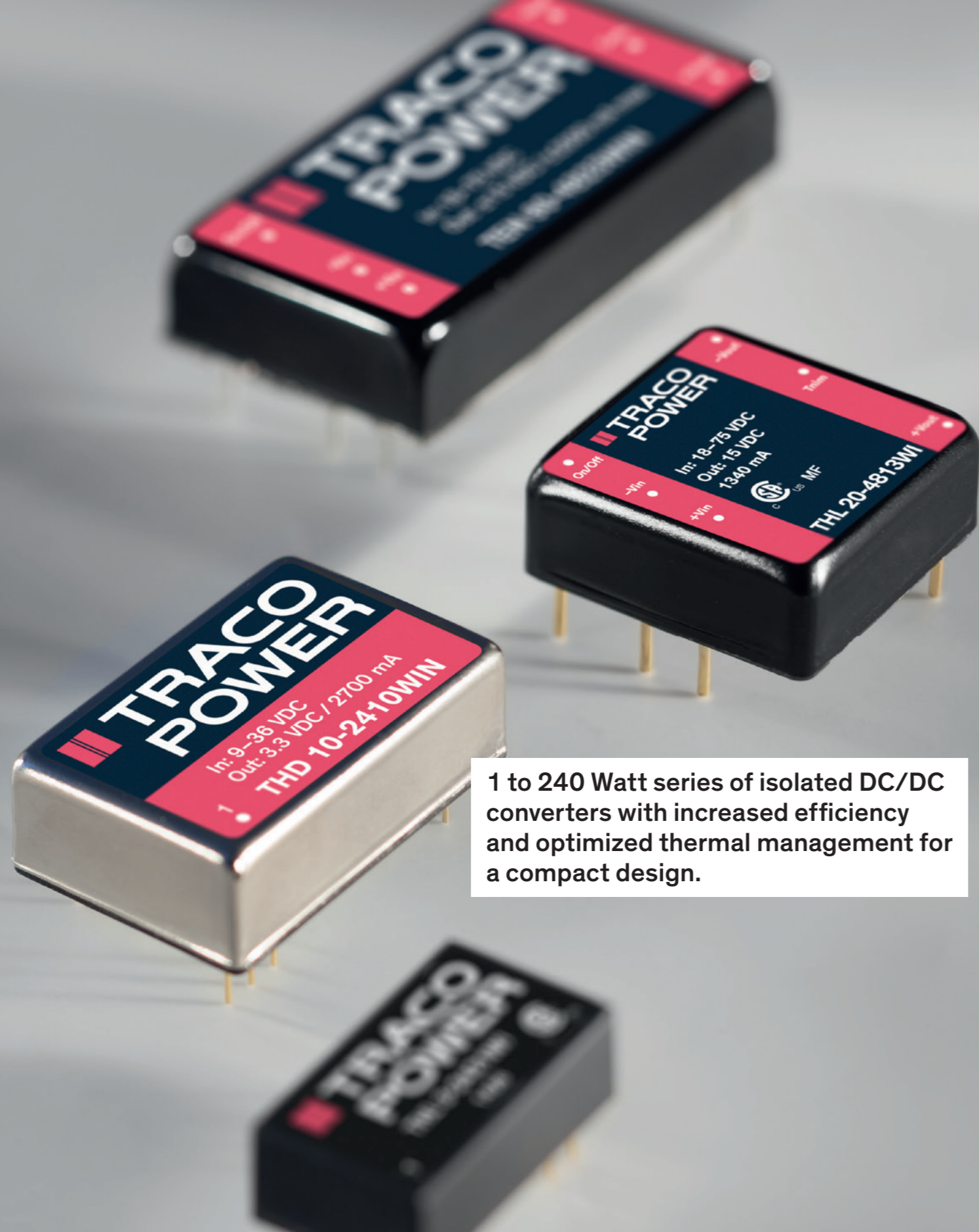**WE'RE PREPARING A NEW WEB FOR YOU** PAGE 5

1 to 240 Watt series of isolated DC/DC converters with increased efficiency and optimized thermal management for a compact design.

▌TRACO POWER

Reliable. Available. Now.   tracopower.com

/ Content

Dear customers,

Early summer, I have decided – I'm going: I sat in the car and within 3 days I visited 13 of our long-term customers that we have started with in 1995... Twenty years ago. Unbelievable?!

Maybe you're asking why. Nostalgia? Thanks? Praise? Yes, that as well. But it was also because we have grown within those years, internationalized to 7 countries, and subsequently many new departments, managers, levels of management were created. And I have realized that I receded from you – those I grew up with. For example, I meet with our customer from Elnec only during the exhibition in Munich, where our companies participate; with our customer from Elpro – during Amper in Brno. And I do not want to manage SOS electronic from the desk!

And what did I come to from "out of desk"?

When I was thinking about whom to visit, I realized, that all of those I thought of and chose are logically also at least 20 years successfully on the market. Then, during the visits, I heard many various stories, which included usual business sinusoids – once up, once down. I perceived beautiful new premises in Incom, RMC, or modern technologies in Elcom. From local deliveries from 20 years ago, you now distribute to the whole world, you support strategic projects, cooperate with important companies.

After usual nostalgia at the beginning; where we talked about how it was many years ago when we were so dependant from each other, or when we raised each other; we of course moved to this day and to changes. Half-year time for the development of devices is no longer accepted. Discrete components in your connections are replaced with goal-oriented modules. Processors prices are negligible when looking at the price of the software development, means for programming, not to mention the development. Times when you were buying everything yourself and then also assembled in amateur or semi-professional conditions are gone –majority of you does this externally now. You were also talking about how difficult it is to find good and loyal young people. Or about increasing cost of labor, or financing the business.

Of course, I also took many things for my work. It's crystal clear to me that today you have lots of options to get components and therefore, we still need to show you our advantages through the level of services, prices, speed and offer. You're comparing us with "the big ones" from all around the world. You do not accept 1- 2 days of waiting for the offer; you need it within 1 - 2 hours or you have it immediately on the web... You do not accept 2 – 3 weeks delivery time, but 2 - 3 days – or even immediately. You have much information, you need to select properly what you read or study. Quality is a crucial parameter and a commonplace. Modern measurement devices, tools, development kits and samples are commonplace. Cooperation with producers must be ensured for sophisticated modules, softwares. Antistatic packaging for SMD machines are standard and electronic data flow is inevitable.

Well, and I would like to declare that along with our team of 90 employees we will do everything we can to meet these parameters.

THANK YOU

Ján Seszták
CEO of SOS electronic SK, CZ, HU and DE

Read your SOS news with mobile!

You can read this issue of SOS news using so-called QR codes. At the end of every article you can find a picture with encrypted address of the Internet website to this article.

We strengthen our team...

Adrienn Tomesz – sales assistant for Hungary

I studied at University of Nyiregyhaza as an economist. After finishing my studies I was a financial assistant in a primary school in Miskolc. Then I decided to move to London for a couple of years, and I came back home this summer. I am really happy that I work for SOS Electronic in Miskolc, where I can find new challenges. My daily duties are: preparing quotations, processing orders, and keeping contact with customers. In my free time I love travelling, and spending nice time with my family and friends.

Kristína Csájiová – purchaser

I've been working for SOS electronic since March 2015 as a purchasing officer. I lived abroad for almost 6 years, most recently in Australia. I studied Business Management in Sydney and I worked as a supermarket manager during my studies. After coming back from Australia, I started to work for a company dealing with selling the flooring. I was in charge of purchasing and relations with foreign countries. I like music and actively play organ. I love travelling also to distant and exotic countries of the world. I like to taste "new" meals and get to know "different" cultures and languages. In my free time, I like to go jogging, watching a good movie or reading a good book.

Miroslav Piskor – product manager

I joined SOS electronic in Kosice at the end of April 2015. I was attracted to electronics since the elementary school. I created various electronic devices. I finished my studies at Faculty of Electrical Engineering, department of Radio electronics at Technical University in Kosice. I devoted more than 13 years to design and development of electronics. The last 8 and half of them I was in a company dealing with the design and production of cash registers. In my free time I like cycling in forest near Kosice, reading books, watching sci-fi movies and listening to music.

Ľubomír Verešpej – sales assistant for Germany

I became a member of SOS electronic in March 2015 and I work as a sales assistant for German-speaking countries. My main work duty is receiving the offer requests, as well as orders and their subsequent processing. My hobbies are ice-hockey, bicycle, football and tennis. I also like watching good movies and live broadcasts of Formula 1.

**Radek Petlach – sales assistant for Czech Republic**

I graduated from SPS in Jedovnice, majoring in mechanical engineering. After my studies, I started to work as a sales assistant for laboratory measuring devices in Metra Blansko. Later I worked for Eurodis Electronics Czech Republic and MSC-Vertriebs-CZ for many years as a sales and purchasing assistant of electronic components. Part of this activity was the support and cooperation with business representatives in the regions of Bohemia and Moravia. Since I always enjoyed work and communication with customers, I am very happy that I got the opportunity to work with a company as an SOS electronic sales assistant. My hobbies are listening to music and travelling with the possibility of discovering new places.

We're preparing a new web for you

NEWS
- **Work with price offers**
- **Single account for everybody**
- **Improved search engine**
- **100% current data**
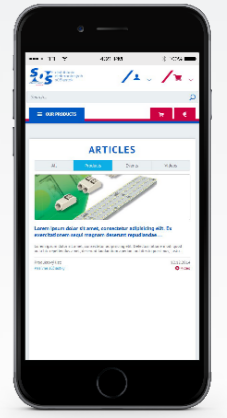
We were talking with Adrian Liptak, who is in charge of Internet applications, about what is "in" in IT world in recent time.

In recent time we hear about mysterious abbreviations such as API, SSL, REST etc. What do they mean?
It is associated with a big project that we work on for almost a year and a half. This is a brand new web of our company. We have decided that we'll develop it from scratch and build it on new, better technologies. For example, stock status is updated only once an hour. Therefore, new web will show the stock status completely online.

What news can customers expect?
An important change will be the way of signing in to the e-shop. Till now, we had one account per customer. That means that if more people from the company wanted to work in e-shop, they had to use one and the same login number and password. Majority of customer didn't mind, but there were some that did not like this system and requested its improvement. New e-shop offers unique username and password to every person.

That sounds good. But does a customer know which colleague does have the account and which doesn't?
It will be visible in e-shop in the list of people we registered. If they do not have an account, it'll be possible to create one – to define login, as well as password. It will be possible to add a new person, as well as de-lete one.

And how will customer actually sign in once we launch the new web?
All current passwords will be working. After signing in, a customer can define passwords for his colleagues and inform them about it. I recommend that the customers change their passwords so their colleagues cannot sign in with their password. This account will be the admin one, which means that it's only him who can set rights for colleagues.

And what about other news?
Absolutely new section in the e-shop will be the one with price offers. Till now, customers could only enter them via e-shop, there was no other way. In our new e-shop, price offers can be viewed and used for direct ordering as well. Thus, there will be visible price offers and delivery times. Part of this section will be also dedicated to the archive of old, not actual price offers. Another news is a search assistant. I'm sure that many customers know for example, recommendation system at Google. Once you start typing in the search box, the page will start showing the most-searched phrases and you can choose one of them. We believe that customers will get to the results more quickly thanks to that.

And what about the visual side of the web? Is it going to be different?
We're of course modernizing the web design as well so it reflects recent trends. What we want to achieve is that customer can control web intuitively, i.e. common things will be on common place. What I really want to mention is so-called web responsiveness. That means that pages will be readable also on smaller screens, mainly on smartphones. Although our customers work mainly on desktops and notebooks, the number of those using smartphones or tablets is increasing. And these have more difficult position today – for example, ordering products requires lot of zooming and moving screen to the left/right. This will no longer be an issue with the new web – website will adapt its size to smartphone, which means that some less important parts of the website will disappear or will be grouped in an icon. Website will only show what's important, for example product price and stock status.

And a final question, when are you going to launch a new web?
With IT projects it's a rule that deadlines are extended and budget doubles I believe that we are going to be an exception and we'll stick to the original deadline – we want to launch it within January 2016. It's gonna be a Big Bang system – we'll change the web within a day. It'll be during the weekend so the new web will welcome our customers on Monday when they usually start to work. Of course, all the data that our customers had in old e-shop will be still there.
Thank you for the interview.

Little bit more about a technical background of our new SOS electronic web

For readers that are also interested in the background of the web, we bring basic information on how our web is programmed.

New web is divided into two basic parts – API and front-end. API (ApplicationProgrammingInterface) is the range through which it is possible to get to data (in our case it is data about products, customers, articles, images etc.) and front-end is an application that puts these data together and nicely shows it on the screen. Basic reason for this division is simplification of the source code and enabling the development division (front-end and API is programmed by different people). This way, we can eliminate the code errors and fasten the development. And that's what we want.

API will be programmed in Python language. We'll use database systems Mongo and MySQL, cache system Redis. Data will be transmitted in JSON format. To connect with our ERP system (billing and inventory management), internally developed API interface will be used. Front-end will be programmed in PHP language with the help of Zend framework and layout will be in HTML5 and CSS3. Supporting programming languages and Technologies – XML, XSLT, Ajax, Javascript.

For the future, we count with the possibility to disclose API also for our customers. That would mean that customer could order products via his own ERP system and technologies would take care of the data transmission. Invoices would work the same way – customer would not have to enter prices from SOS invoice to his system manually.

LANTRONIX® xPico WiFi SMT doesn´t require connector neither antenna

High mechanical stability is one of benefits of a new „SMT" version of the popular Lantronix xPico WiFi module.

Lantronix xPico WiFi module may be already familiar to you from our articles, for example: xPico WiFi is a dream come true for producers and customers where we also mention the HW compatibility with the xPicomodule (wired, serial-to-Ethernet modul). New version - xPico WiFi SMT brings the same functionality as xPico WiFi and as the name saysm it´s intended for a direct soldering by an SMT (reflow) process, together with other components on a PCB. In contrast to original version which has an SMT (board-to-board) connector, SMT version is designed similarly like many GSM/GPS modules, i.e. as a module on a carrying PCB with soldering pads on PCB sides (half-vias, plus gnd on a bottom). At the same time, SMT version is also available with integrated small ceramic antenna, so no external antenna is required. Just this version XPCW1003100B we keep as a standard stock item. Perhaps the biggest advantage of SMT version is this possibility of a direct soldering bringing a **very high mechanical stability – also suitable for applications with a higher risk of vibrations.**
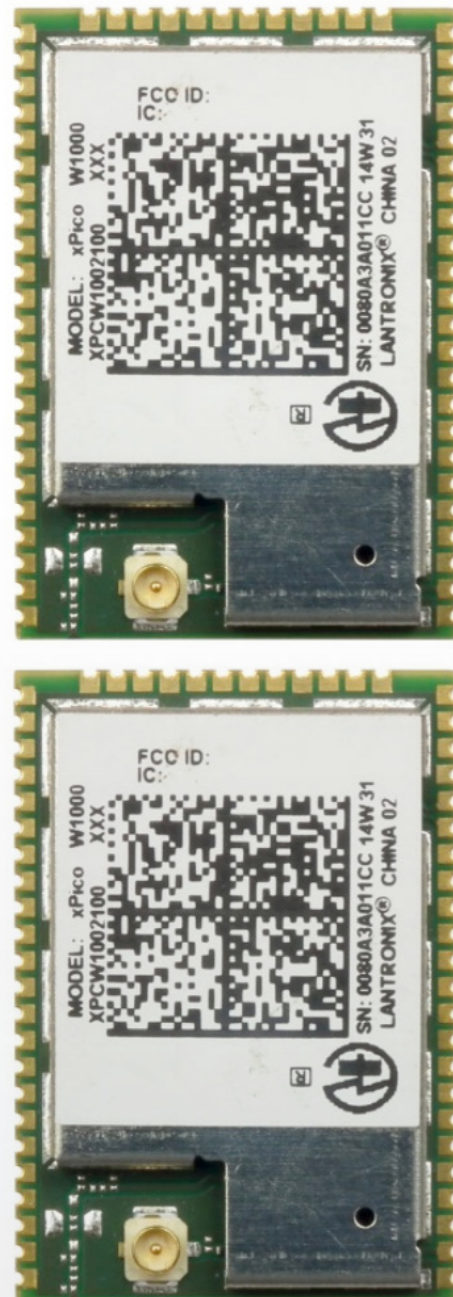
xPico WiFi SMT is the same powerful („device server") as a previous version and **offers easiest way how to add WiFi connectivity into a target device, practically without a necessity to write a single line of code.**

Simultaneous AP (Access Point) with a DHCP server and Client mode also enable a **direct access – communication with other WiFi device, for example with a tablet or a smartphone.**

Advantages/ Features:

1. miniature and complete embedded device server in an SMT version including antenna
2. IEEE 802.11 b/g/n (2,4 GHz), WPS 2.0
3. Low power consumption (6uA standby)
4. simultaneous soft AP and Client mode
5. simple communication with tablets and smartphones
6. dual serial port (up to 921 kbps)
7. 3,3V interface (5V tolerant)
8. SPI (up to 20 MHz)
9. USB 2.0 full rate, 8 GPIO
10. Eliminates need for a costly SW and FW development
11. Small size - 24 x 16,5 x 7,4mm
12. 256-bit AES encryption
13. Industrial range of operating temperatures -40 to +85°C

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

| Order no.	Type	Description	Guide price
174852	XPCW1003100B	xPico Wi-Fi-IEEE 802.11 b/g/n w On module Antenna	32,00€
196737	XPCW1003100K	xPico Wi-Fi-IEEE 802.11 b/g/n w On module Antenna Evaluation Kit	111,00€

IQRF module TR72D communicates at up to 600m distance

Higher RF power, GMSK modulation and extra low power consumption make a new communication module interesting even for rough conditions.

At cars, chip-tuning usually results in a higher power of a motor. Even the new communication module (transceiver) TR72D from IQRF has passed such „chip-tuning" of RF portion, resulting in a higher max. RF output (up to 12mW). New RF chip - Spirit1, used at TR72D also provides excellent sensitivity and GMSK modulation (Gaussian Minimum Shift Keying) with high resistance to interference. That´s why the new module is able to transfer data at much higher distance than previous types (up to 600m on a free space). This improvement has one limitation - the new module is usable with applications originally developed for previous types, but it´s not usable in one RF network simultaneously with older types (because of a different modulation).

Basically the new module TR72D offers the same straightforward development of devices with a wireless communication as previous modules. The best idea about differences among particular types will give you the attached table. TR72D is a hot novelty from which we have first engineering samples. Version „DAx" also contains built-in antenna.
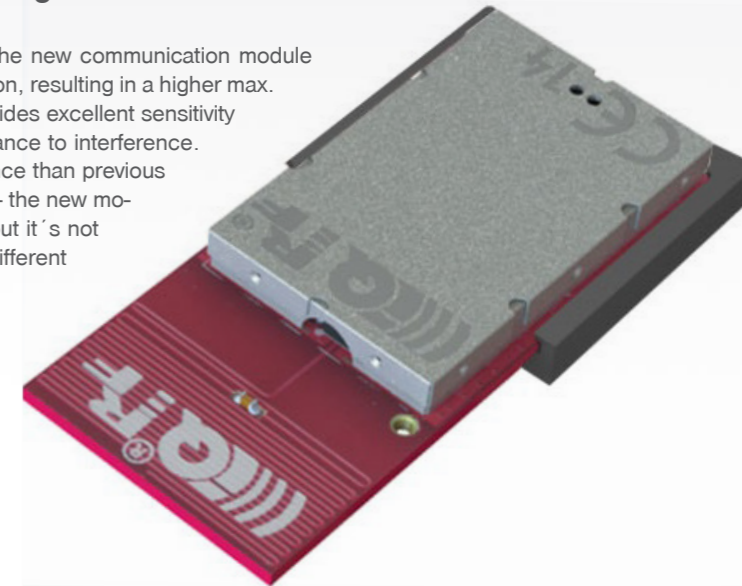
TR-52D vs. TR-72D
Products comparison

Feature	TR-52D	TR-72D	Notes
Pinout	SIM connector		Fully pin-to-pin compatible
RF circuitry	Different RF ICs		Some differences on physical layer
RF modulation	FSK	GMSK	Not interoperable
RF bands	868 MHz and 916 MHz		
RF output power	Up to **3.2 mW**	Up to **12.5 mW**	Both selectable in 8 steps
Range	300 m	600+ m	~19 kb/s, in free space
Adjacent RF channels	Interfering	Not interfering	
Bit rate		Higher	Not implemented yet
High sensitivity mode	-	Yes	Not implemented yet
MCU clock	8 MHz	16 MHz	
SPI		Several times faster	
Can shielding	Optional	Standard	Simplifies end products certifications
IQRF OS upgrade	By factory only	By the user	Not implemented yet

Advantages/ Features:

1. powerful RF transceiver for a wireless communication
2. GMSK modulation
3. built-in proprietary OS
4. open functionality, application in a C language
5. max RF output up to 12.5 mW
6. range in hundreds of meters (up to 600m on a free space)
7. extra low power consumption
8. 6 I/O pins
9. supports MESH networks, IQMESH implemented in OS

Type		TR-52D	TR-54D	TR-55D	TR-56D	TR-58D-RJ	TR-62D	TR-72D
Mounting		SIM	SMT	SIM / vertical	SMT	RJ-45 connector	SIM	SIM
Number of pins		8	18	12	18	8	8	8
I/O		6	12	10	12	4	6	6
MCU PIC		16LF1938	16LF1938	16LF1938	16LF1938	16LF1938	16LF1938	16LF1938
MCU internal memories	Flash	16 K x 14 b	16 K x 14 b	16 K x 14 b	16 K x 14 b	16 K x 14 b	16 K x 14 b	16 K x 14 b
	RAM	1024 B	1024 B	1024 B	1024 B	1024 B	1024 B	1024 B
	EEPROM	256 B	256 B	256 B	256 B	256 B	256 B	256 B
External serial EEPROM		2 KB	2 KB	2 KB	2 KB	2 KB	2 KB	16 KB
RF IC		MRF49XA	MRF49XA	MRF49XA	MRF49XA	MRF49XA	MRF49XA	SPIRIT1
RF band [MHz]		868/916 433	868/916	868/916	868/916 433	868/916	868/916	868/916
RF bit rate [5] [kb/s]		1.2 - 57.6	1.2 - 57.6	1.2 - 57.6	1.2 - 57.6	1.2 - 57.6	1.2 - 57.6	TBD
RF power [1] [mW]		3.5	3.5	3.5	3.5	3.5	7	12.5
RF range [2,3] ~19 kb/s		300 m	300 m	300 m	300 m	300 m	300 m	600 m
Typical supply current	Sleep	1.9 µA	380 nA	380 nA	380 nA	1.9 µA	TBD	TBD
	Rx STD	13 mA	13 mA	13 mA	13 mA	13 mA	TBD	TBD
	Rx LP	330 µA	330 µA	330 µA	330 µA	330 µA	TBD	TBD
	Rx XLP	25 µA	25 µA	25 µA	25 µA	25 µA	TBD	TBD
	Tx	14-24 mA	14-24 mA	14-24 mA	14-24 mA	14-24 mA	TBD	TBD
Temperature sensor		precision [4]	–	–	–	precision [4]	precision [4]	precision [4]
LDO voltage regulator		yes	–	–	–	yes	yes	yes
Supply voltage [V]		3.1 – 5.3	3.0 – 3.4	3.0 – 3.4	3.0 – 3.4	3.1 – 5.3	3.1 – 5.3	3.1 – 5.3
LEDs		2	–	2	–	2	2	2
A/D inputs		3	4	3	4	2	-	TBD
Dimensions [mm]	standard	25.0 x 14.9	20.2 x 14.9	–	15.2 x 14.9	–	25.0 x 14.9	25.0 x 14.9
	TR-xxxA [3]	31.8 x 14.9	26.4 x 14.9	27.5 x 14.9	–	29x40x52	31.8 x 14.9	31.8 x 14.9
Latest OS version		3.05D	3.05D	3.05D	3.05D	3.05D	–	3.10D
Status		current	current	current	current	current	new	EAP
Type		TR-52D	TR-54D	TR-55D	TR-56D	TR-58D-RJ	TR-62D	TR-72D

We offer you module TR72DA from our stock. Order number is 166925 and guide price is 21,50 EUR without VAT.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code. The article is accompanied by video. Watch webinar online at www.soselectronic.com/webinar.

Latest articles to read...

Do you need a „Raspberry Pi" with a display? Try Armadillo 43T

Armadillo 43T integrates a 4.3" TFT display, resistive touch panel and a single board computer with Linux OS into one compact unit.
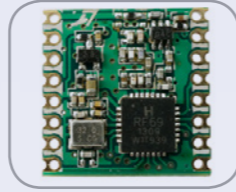
WXR3031 rework station will replace you three devices

Soldering, desoldering, hot-air works but also a record of your work in a PC – this is the Weller WXR 3031.
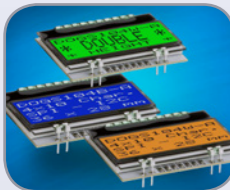
RFM69HCW transceiver can go up to 20dBm

This powerful RF transceiver is also highly secure thanks to a HW support of CRC-16 and AES-128.

EA DOGS displays – small by size, big by features

Minimum power consumption, very good legibility and a lot of versions – these are the EA DOG displays.
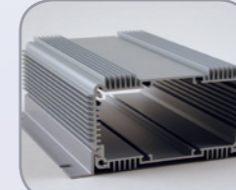
Visaton Exciter – an exciting loudspeaker

A loudspeaker without a membrane which can be mounted on any flat surface solves aesthetical and technical problems.

Enclosure 1455 NHD won´t be scared by a hot summer

The latest extruded aluminium enclosure from Hammond production - 1455 NHD is suitable even for devices requiring more intensive cooling.

UT602 – for those who are interested in miliOhms

We have for you a measuring device able to measure even small resistance with 0.01 Ohm resolution.

Würth Elektronik – a huge range of inductive components

Würth Elektronik is one of the largest European manufacturers of passive and electromechanical components. The range is really wide, judge for yourself.

Phoenix EH basic is more than just a „basic" enclosure

If you´re searching for an enclosure with a high variability and for a reasonable price, then we can recommend you the EH basic series enclosures.

How to test a power supply or solar system?

Electronic loads, programmable and with a recovery function are the best choice for dynamic testing simulating real conditions.

Usually you don´t test your power supply and you assume it is working well with your equipment. But what if not? Sometimes your equipment fails without any evident reason and it might be because your power supply is not sufficient for your application. We have a solution which helps you identify the problems with the power supple – electronic load.

With electronic load you can test your power supply or solar system and you can easily program the behavior of your device or even a bigger load. Elektro Automatik offers a wide range of electronic loads, even with energy recovering function.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Advantages/ Features:

1. Conventional loads, (series EL), loads with energy recovery (mains feedback, series ELR)
2. Powers 400 W up to 10,5 kW (systems up to 300 kW)
3. Remote control via analogue and digital interfaces
4. Factory-installed interfaces and „plug n play" slot
5. Operation modes CV, CI, CP, CR, Battery test, MPPT (PV) simulation

1A from the sugar cube sized module

With continuous improvement TRACO unveils the SMD version of enormously successful 1A DC/DC converter, the TSR1SM.

The TSR1SM series models of step-down switching regulators (non isolating – POL) have a high efficiency up to 96 % which allows full load operation up to +65°C ambient temperature without the need of any heat transmission layer. Excellent output voltage accuracy (±2%) and low standby current (˜1 µA) are features that distinguish these switching regulators from linear regulators.

To make a SMD version of such a DC/DC converter is not a simple task, the package should withstand temperatures up to 245°C, used in a lead free soldering ovens. TRACO solved successfully this problem and the TSR1SM is qualified for lead free soldering processes as per J-STD-020D.01 (to find at:www.jedec.org - free registration required) with max. peak body temperature 245°C. Also low MSL level 1 allows PCB washing after soldering with baking at 100°C for 30min.

Advantages/ Features:

1. Up to 96 % efficiency
2. Built in filter capacitors
3. Short circuit protection
4. Excellent line / load regulation
5. Low standby current

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Order no.	Type	Description	Guide price
179290	TSR1-2433SM	DC/DC modul 4,75-36VDC/3,3VDC/1A	6,20€
179293	TSR1-24120SM	DC/DC modul 15-36VDC/12VDC/1A	6,20€

TE Connectivity Power Tripple Lock – locked three times, for ever

Audible click, protection against backing out and disengagement together with many versions and attractive price – these are the Power Tripple Lock connectors.

In industrial applications we usually need various connectors, that´s why it´s usually a big advantage if it´s possible the same connector for several applications. This "versatility" is considerably met by a new series of connectors Power Tripple Lock. What does the „Tripple Lock" mean? As already the name says, it is a triple locking – protection against disconnection. The basic and the most important is a sophisticated design with exactly mating parts and a reliable lock. Audible click is a discreet but very useful feature contributing to a correct connector assembly.
Optional protections are „CPA" and „TPA"
• CPA (connector position assurance) is an optional plastic part – additional lock against mistaken disengagement.
• TPA (terminal position assurance) is an optional plastic part used from the rear connector side (from leads) ensuring a 100% exact leads, helps precise mating and improves overall reliability and immunity to vibrations and stresses.
Connectors are available with pins in a single row (2,3,4,5), two rows (2x3,2x4,2x5,2x6) and in a matrix (3x3,3x4,3x5) with 6mm pin spacing. Basic parameters are 20A/600VAC or DC.

Advantages/ Features:

1. 20A/ 600Vac
2. many versions including panel mount and wire-to-PCB
3. 3 material versions (105°C, 155°C and glow wire 750°C)
4. 4 keying possibilities as a prevention against improper assembly
5. for AWG 22-12 wires (0,34-3,3mm2)

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Order no.	Type	Description	Guide price
177870	1-1971771-2	Power Triple Lock Connector System 1x2P P6mm	0,30€
177873	1-1971771-4	Power Triple Lock Connector System 1x4P P6mm	0,30€
177877	1-1971773-2	Power Triple Lock Connector System 1x2P P6mm	0,16€
177892	1-1971773-7	Power Triple Lock Connector System 1x5P P6mm	0,25€

High quality bezel will provide professional look to your displays

If a production of a professional bezel is over above your possibilities, leave it to us.

Also can be added, that even in case you have a possibility to produce a suitable bezel, it can easily happen (especially at smaller batches) that it simply isn´t worth it. Design, prototyping,… all this costs something. On the other hand we have here a ready-made solution with true brass bushings and precisely designed spring clips. The result is an immediately usable bezel, while it´s only necessary to make a simple cut-out into the front panel of the device. There´s no need to drill mounting hols to exactly defined positions or so. We talk about 4D Bezel-s. Novelty in our stock offer are bezels for 7" displays uLCD70. Bezels are available in a black and white version. In our standard offer can also be found bezels for 3,2" and 4,3"displays from company 4D Systems.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Advantages/ Features:

1. ready-made quality bezels for 4D Systems displays
2. made from ABS
3. precise brass bushings
4. including M2 screws, washers and spring clips

Order no.	Type	Description	Guide price
155249	SMA-13LV-S	Mounting bezel for uLCD-43PT White	12,50€
155250	SMA-13LV-P7,5	Mounting bezel for uLCD-32PTU Black	12,90€
185339	SMA-13LV-P10	Mounting bezel for uLCD-70DT Black	20,60€

LoRa = RF modules with a long range

Modern spread spectrum modulation enables HopeRF LoRa modules to communicate on a long distance or in severe environment.

This time we come with a novelty - module RFM95SW with a „LoRa" suffix, indicating membership with a „Long Range" family of modules. Long range of HopeRF LoRa modules is reached by usage of a modern efficient modulation with a spread spectrum, able to transmit data even on a noise floor level. RFM95Wsolves a traditional compromise among range, immunity (selectivity) and a power consumption while conforming to limits for usage in free bands.
LoRa modulation is quite complex and a user has a possibility to adjust all three main modulation parameters in order to fully meet requirements of a given application. These parameters are spreading factor, modulation bandwidth and error coding rate. For example if don´t need maximum transmission speed, we can set parameters so as to gain the highest possible quality and reliability of connection.

RFM95W is ideal for OEM products with higher production series, where development costs usually get quickly refund also thanks to a very affordable price of these modules.

Advantages/ Features:

1. Powerful RF modules with a long range of several 100m
2. also supports FSK, GFSK, MSK, GMSK a OOK modulations
3. high sensitivity of -148 dBm
4. wide configuration possibilities to reach optimal speed and transfer reliability

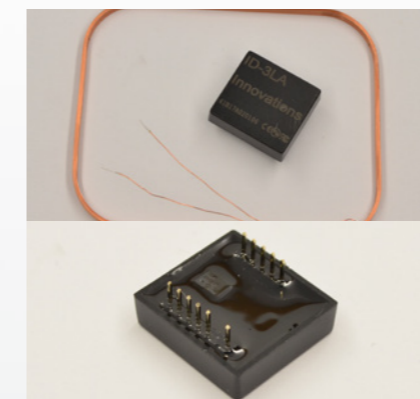*This is a short version of the article. The whole article can be found at web. Decode the link in QR code.*

Order no.	Type	Description	Guide price
178438	RF-EVB_RFMXX	Test board pair for RFMxx modules	35,00€
178439	RFDK_RFMXX	Development and test board pair for RFMxx	99,00€
180936	RFM95W-868- S2	LoRa 868MHz transceiver module +20dB	13,00€

With the ID3LA RFID module it´s possible to read a tag up to 30cm

A possibility to read an RFID card even on a longer distance is usually highly appreciated at its everyday usage.

As we know, RFID module range is expressively depending on a size and shape of the RFID antenna (coil). That´s why the module with a big antenna has a potentially bigger chance to reach a long range. This is exactly a case of the ID3LA module – working in a wider operating voltages range (2,8-5V) than its predecessor – the ID2 module. This enables its usage even with a 3.3V logic and also for example in battery-operated devices (3-4x NiMH, or 1x Lithium cell, …) not requiring DC converters or a precise voltage regulation. ID3LA belongs to the „ID3/ID12/ID20" family with very similar electrical parameters and a way of usage. All modules of this family function as readers sending data – a unique ID of a given RFID tag. The most favourite type - ID12(LA) has a very decent range (approx.. 12cm) sufficient for majority of applications. However, if the space in your application allows you to use ID3LA, you´ll reach a significantly longer range. ID3LA requires an external.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Advantages/ Features:

1. ready-made RFID solution
2. new version with enhanced range of operating voltages (2,8-5V)
3. EM4001 64-bit RFID tag
4. up to 9600bps TTL and RS232 output
5. very simple usage

Order no.	Type	Description	Guide price
142011	ID 20 LA	RFID reader with built-in antenna 2,8VDC 125kHz 16+cm	27,80€
145498	ID 12 LA	RFID reader with built-in antenna 125kHz 12+cm 2,8VDC	23,80€
185859	ID 3LA + ANT	RFID reader w/external antenna 125kHz	16,90€

With HAMMOND 1553W enclosures the rain won´t surprise

HAMMOND MANUFACTURING

Favourite series 1553 hand-held enclosures are now available even in a water-resistant version with IP65 rating.

Ergonomic enclosures of the 1553 series with a non-slipping surface found their place on a market very quickly. Precise construction with brass bushings, stainless steel screws included, easy PCB placing on standoffs and other details make this series of enclosures universal for practically any "mobile" applications.

Despite very well fitting parts of an enclosure minimizing a possibility of a dust ingress into enclosure, there certainly are applications with a higher risk of water and dust penetration. For these cases the new "W" version is suitable,

i.e. 1553W with integrated sealing and a whole construction designed so as to meet IP65 requirements. Fixing positions for screws are located outside the gasket ensuring sealing integrity.

Hammond 1553W series is available in "B", "C" and "D" sizes, i.e. 1553WB (117x79x25mm), 1553WC (117x79x32mm) and 1553WD (147x90x25mm). All sizes are further available in two colours – whit-grey and black (GY/BK).

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Advantages/ Features:

1. Integrated silicone rubber sealing
2. Three sizes in two colours
3. Soft side grips in RAL7012 grey colour
4. Black stainless-steel screws included

Order no.	Type	Description	Guide price
186882	1553WBBK	Enclosure ABS 117x79x25mm Black IP65	12,30€
186883	1553WCBK	Enclosure ABS 117x79x32mm Black IP65	12,00€
186885	1553WDBK	Enclosure ABS 147x89x25mm Black IP65	12,20€

Do you know Hirschman ST industrial connectors?

HIRSCHMANN A BELDEN BRAND

Power supplying, control, but also signal transmission from various sensors can be confided to ST series connectors.

A word „versatility" describes well know series Hirschmann ST (STA) perhaps the besgt. ST connectros are universal because as for parameters, they´re sufficient for majority of applications (16A/250VAC) and they maintain a decent compcáctness. At the same time, they´re available in many versions (M/F, panel/ cable) , so we can create a desired combination – cable/cable, cable/panel.
ST connectors have 2,3,4 or 5 contacts + PE in a compact polyamid (PA) body. Safety and reliability is supported by a metal lock STASIx (bought separately), preventing accidental disconnection and also enabing a fast disconnection in case of necessity.
Connectors for a cable are also available Kwith an extra cable support against pulling off from a cable gland („strain relief"). ST series is so to say a standard for many industrial applications and it finds its place also for example in building automation (intelligent houses, ….).
A novelty in our portfolio is price-gainful set called SETSTAx3 for a cable+cable connection, containing STAS 3N, STAK 3N and a metal lock.

Advantages/ Features:

1. widely used connectors for control, power supply and industrial automation
2. 2, 3, 4 or 5 contacts + PE
3. 16A/250VAC, up to 1,5 mm2 cables
4. rigid PA body with integrated cable gland
5. versions with or without strain relief (against cable pull-off)

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Order no.	Type	Description	Guide price
50810	STAK 20 grey	Rectangular Industry Connector F 2P+PE, IP54	5,00€
51122	STAKEI 3 N grey	Rectangular Industry Connect. F,Panel 3P+PE, IP54	3,90€
187012	SET STAx3	Set of STAS 3 N + STASI 3 + STAK 3N	6,60€

Would you also like to locate a fault within few seconds?

FLIR

Top-class thermal imaging cameras Flir E6 and E60 with a high resolution, dual displaying and WiFi connection are now available for schools with a 50% discount!

Thermal imaging cameras find their place in many industrial segments also because they´re still more affordable. At the same time, top-class full-featured IR cameras are available in a midle price level. This is also a case of FLIR E6 and E60 cameras. Flir E6 - Advanced camera with a big 3" display, 160x120 px (IR) + 640x480 px (camera for a visible spectrum). Possibility to combine images from infra and visible spectrum („MSX") , wide setting possibilities and 0,06´C sensitivity. Spot metering and area metering make possible fault identification easier.
Flir E60 - Top-class camera with a WiFi and Bluetooth connectivity (video and pictures). High resolution (320x240px= 76000 pixels) together with a built-in 3,1Mpx camera for a visible spectrum enable to detect sources of faults very exactly. Spot metering, digital zoom, picture-in-picture and other functions make this camera truly versatile. A real bonus are (optional) exchangeable lenses (wide, 2x tele) as well as possibility of manual focus control enabling to make sharp images even at small distances. Big 3,5´ LCD with a touch panel also contributes to easy and intuitive control. Maximum measurable temperature of 650´C make the camera usable for a whole range of demanding industrial measurements.Moreover, company FLIR, the leader in a segment of thermal cameras comes with exceptional offer for a support of education. Special offer applies to E6 and E60 FLIR thermal cameras. For exceptional price with a 50% discount you´ll get not only a camera itself, but also a complete „Educational kit" containing:
• FLIR camera
• Educational DVD
• Building guide
• Industrial guide
• R&D guide

Flir E6 kit is available for 1247.50 Euro and the Flir E60 kit for 3747.50 Euro.

Advantages/ Features:

1. exceptional offer for schools with up to 50% discount
2. top-class devices for education and also for a serious industrial measurement
3. Wifi and Bluetooth connectivity (E60) enables to present measurement (video) for a whole group of students at once

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Even the humidity & temperature sensors can be „3G"
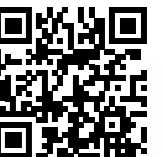
SENSIRION THE SENSOR COMPANY

±2% accuracy in a whole range of relative humidity measurement - that´s just one of several improvements brought by the third generation of miniature calibrated sensors from company Sensirion.

Even the actual series like SHT1x and SHT2x belong to a top in this segment. Forthcoming series SHT3x (SHT30, SHT31 and soon also SHT35) addresses mainly those of you, requiring maximum accuracy even in limit values, miniature dimensions and ultra low power consumption. So a main difference of a new SHT31 compared to SHT21 is, that a typical +-2% is maintained in a whole range. Together with a precise temperature measurement in element we still have a possibility to simply compute a dew point, what´s one of the key parameters for ventilation control. Output of the SHT3x sensor is the linearized value, which can be easily transformed to a final value (%RH, °C).

SHT31 is available in 2 versions - SHT31-DIS-B with a digital output via well-proven I2C bus and also in a version SHT31-ARP-B with a linearized analogue (proportional) output. That´s why SHT31-ARP-B is an interesting alternative for direct processing in analogue circuits, as it contains 2 independent outputs with output voltage of 10-90% Vdd, responding to 0-100%RH and -45 to +130°C temperature. Digital output version also features wide possibilities of setting regarding measurement frequency, communication speed and other parameters.

We offer you sensors SHT31-ARP-B and SHT31-DIS-B from our stock. Order numbers are 182219 and 182220. Price upon the request.

Advantages/ Features:

1. new improved generation
2. excellent reliability and long-term stability
3. wide supply voltage range of 2.4-5.5V
4. extremely low power consumption
5. high resistance to external disturbances (EMI/EMC)

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Apacer
Access the best

SD or microSD? Mainly, let it be SSD

Industrial memory cards Apacer comprise hide in themselves much more than usual cards.

If we label a component as "industrial", we automatically expect that it brings something extra, that it has high reliability, is able to work in a wider range of operating temperatures or by one word, it simply "withstands more". We can confirm, that this also applies to memory cards and to SSD solutions in general. We often solve situation, when a customer asks us to recommend a suitable memory card because common cards are "going away" after a short time. Real praxis shows, that industrial cards - even though noticeably more expensive than usual cards, are a cheaper alternative in result. Significantly higher reliability and consequently spared money for servicing (data loss, break-off, journey to a customer, …) say clearly in favor of industrial SSD Flash solutions.

Apacer components belong to a top in this segment and they provide a whole set of features and improvements optimizing their performance and contributing to a reliable operation. For example:
- usage of MLC or extremely reliable SLC chip
- enhanced range of operating temperatures -40 to +85°C
- ECC algorithms (Error Checking and Correction), protects data integrity
- optimal usage of blocks (Wear-Leveling, Flash management) S. M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology).
- automatic standby and sleep mode
- Power Loss Detection, Power Failure Recovery
- possibility to mark protected zones (Secured Protection Zone)
- safe erase (Core Eraser - quick/ full/ military)
- multiple protection from data theft (Core protector)
- resistant to water, dust and oxidation (IP57)

*This is a short version of the article. The whole article can be found at web. Decode the link in QR code.*

Order no.	Type	Description	Guide price
125837	AP-MSD01GISI-T	Industrial microSD card 1GB SD2.0 SLC,-40°C+85°	19,40€
125838	AP-MSD02GIDI-T	Industrial microSD card 2GB SD2.0 SLC,-40°C+85°	45,30€
127788	AM530	Super speed USB3.0 Multi-slots Card Reader max. 5Gbps	25,90€

CRYDOM – solid state relays from specialists

crydom

Silent operation, immunity against mechanical shocks and magnetic field and other factors make a solid state relay the best choice for many applications.
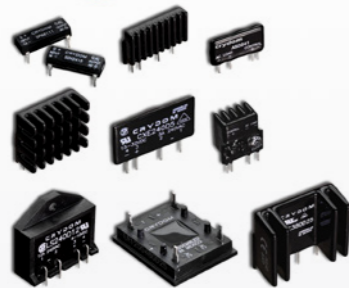
Where to start? We´ll try to name "pluses" of solid state relays - SSR:
- long lifetime, no moving parts, no contact burning
- silent operation, very desirable for commercial and medical applications
- minimum electrical noise thanks to a possibility of zero-crossing switching
- resistance to shocks and vibrations, installation in any position
- fast switching (approx. 0.1 ms)

From above mentioned features result, that SSRs are a great choice everywhere, where it´s necessary to switch frequently and/or also to change rotation of motors (integrated in a single component). SSRs are also maximally suitable for switching of DC currents as they don´t suffer by arcing and contact wearing like classic EMRs. Much longer lifetime in comparison to EMRs result in very low operation/ service costs and significantly eliminates losses caused by eventual downtimes.

Among novelties in our stock can be found Crydom SSR for PCB in SIP and miniSIP packages, panel mount types, as well as types for a DIN-rail mount.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Advantages/ Features:
1. heating control HVAC
2. motion control
3. medical equipment
4. food industry
5. intelligent buildings

Order no.	Type	Description	Guide price
121623	MP240D4	PCB SIP SSR 280VAC/4A, 3-32VDC, ZC	20,60€
178749	CX380D5	PCB SIP SSR 530Vac/5A, 3-15Vdc,ZC	16,40€
181932	ASO242	SSR PCB Mini-SIP 280V/2A,4-10VDC,ZC	13,10€

DIAMETRAL

Variolab+ laboratory furniture can help also to you

Highly variable tables and furniture Variolab+ are suitable for education and also for production/ service. Thanks to a wide range of various modules it´s possible to arrange a configuration that

It´s possible to work in various conditions. However, for a really effective work it´s certainly better to use a table, where everything is there, where you want, it has a correct height, offers a lot of space for the work itself, it´s safe and it also might be ESD safe…

Variolab+ laboratory tables produced by a Czech company Diametral meet the highest criteria of ergonomics and safety. A few-thousand (Euro) investment for a common configuration of such table is probably too much for a beginning designer, but for fully engaged production-, service- and testing workplaces as well as school classrooms this equipment quickly "refunds". For example thanks to these reasons:
- maximal workspace while maintaining all devices easy to reach (power supplies, circuit breakers, measuring equipment, isolating transformer,…)
- minimum time to start a work, high efficiency of work/ education
- possibility of a central remote control (for example by a teacher) or also to adjust max. voltage limit and similar
- high safety, certified solution
- enables to compose a table exactly according to your needs with maximal usage of available space
- stable construction from robust steel components treated by a powder baked coating (long-term stable construction, stronger than similar one from aluminium)
- modular design enables to choose from a large amount of electric and electro-mechanical modules, which can be installed in a rear part of a work-desk as well as above the work-desk
- up to 150 kg work-desk load capacity thanks to a robust frame beneath the desk
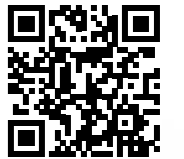- possibility to equip also with pneumatic elements (air distribution,…)

Advantages/ Features:
1. schools, laboratories and classrooms
2. testing and service
3. production of electronics
4. production of electromechaical and mechanical parts

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

mec switches

High-temperature versions of MEC switches now for the price

No need to consider temperature resistance of Multimec 3 and Unimec switches anymore.

Company MEC, Dutch producer of top-class push-button switches Multimec, Unimec and others comes with good news for developers and producers of electronics.

Well-known reliable push-buttons were in majority of cases available in so called standard version (L6, –40…+115°C) and in a high-temperature version (H9, –40…+160°C). From now on, all types will be gradually available only in a „high temperature" version, which can be identified by „H9"marking in suffix. This applies to Multimec 3 and Unimec series (series Multimec 5 is already from the beginning only available in a high-temperature version).

The main „good news" is, that these high-temperature types will be available for practically identical prices like standard types. That´s why, even in applications where you wouldn´t necessarily need that high thermal resistance, you can use this high-temp version and profit from unchanged price and potentially wider possibilities of usage of your product.

Advantages/ Features:
1. top quality push-buttons with a pleasant operation (actuation)
2. huge choice of caps and combinations
3. versions with a backlight
4. possibility to add backlight even with your own LED
5. THT and also SMT versions
6. versions with a various actuation force (2/3.5/ 6 N,...)

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Order no.	Type	Description	Guide price
141909	5GSH935NCNO	Multimec Switch NCNO SMD 10x10mm 3,5N	0,96€
141914	5GTH935NCNO	Multimec Switch NCNO to PCB 10x10mm 3,5N	0,96€
141916	5GTH965NCNO	Multimec Switch NCNO to PCB 10x10mm 6,5N	0,82€

QUECTEL

Do you want to speed up to a „Long Term Evolution"?

Company Quectel brings to a market its first high-speed module EC20 which you can try yourself. More than fifty developers worked for over ten months on this module.

Are you interested in compatibility with previous modules?
Module EC20 arises from the M10 GPRS module and the UC20 UMTS module. These modules can be designed to a PCB in a way that you have ensured variability and a possible replacement in case, that you wish to have one board for several solutions. From theory to the praxis. Discussions about LTE already last for some time. One LTE transmitter (800MHz) manages up to six times bigger area than one UMTS transmitter (2100MHz). LTE protocol is already from the beginning (in contrast to UMTS) written as a high-capacity with a fast response. The first phase of area coverage is usually equal to speed of UMTS uplink/downlink. After reaching almost a 100% coverage, then usually starts the second phase, which actually speeds up to current theoretical speeds of 172,8Mbps (downlink) and 57,6Mbps (uplink).

In presence, 4 bands are functional – on frequencies 800/900/1800/2100MHz and the 2600MHz band is not used so far. EC20 manages all these bands. EC20 will be produced in 2 versions, as EC20-E (for Europe) and EC20-A (for USA).
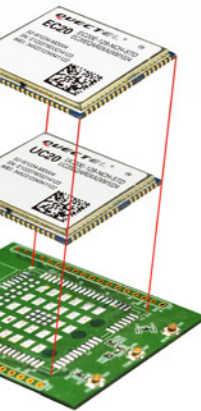**And at last – advantages of EC20**
• No doubt and after experience with developers – the LCC package offering a possibility to assemble by hand or by machine.
• Module is not the smallest LTE module in the world, but belongs to the smallest LTE ones. EC 20 also incorporates implemented GPS/GLONASS receiver.
• Supports MIMO technology – multiple-input multiple-output, i.e. – multi antenna systems.
• The EC20 module is able to communicate via USB port in Windows, LINUX, as well as in Android.

The eCall function also related to another advantages and functions in the module, for example:
• Low power consumption
• High RF power and high sensitivity <-108.5dBm
• Fimware can be updated remotely - DFOTA (firmware over the air)

Country / Region	Operator	B1 FDD 2100	B2 FDD 1900	B3 FDD 1800	B4 FDD AWS1700	B5 FDD 850	B7 FDD 2600	B8 FDD 900	B9 FDD 1800	B11 FDD 1500	B12 FDD 700	B13 FDD 700	B14 FDD 700	B17 FDD 700	B18 FDD 850	B19 FDD 800	B20 FDD 800
EC20	EC20-E	✓	✓		✓	✓	✓										✓
	EC20-A		✓	✓	✓			✓			✓		✓				

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

We offer you Quectel module EC 20 from our stock. Order number is 182285. Price upon request.

WIZnet

„Non-breakable" interface converter combined with MCU?

In the last period we can see, that producers go on the way of processors combined with interface converters grouped into a single chip. Company Wiznet also goes this way.

At the end of May 2015, Wiznet launched on the market the new W7500, combining the HW TCP/IP interface converter W5x00 with an MCU. W7500 is a solution combining ARM Cortex-M0, 128kB Flash and the HW TCP/IP. It´s suitable for applications where you use TCP, UDP, IPv4, ICMP, ARP, IGMP and PPPoE. In these devices it´s usually undesired to upgrade SW resulting in resetting a device.
MCU W7500 uses HW TCP/IP thus selecting data which arrived from allowed source. W7500 processes only desired data, so "only" 50 MHz is enough. That´s approximately half the power necessary for SW TCP/IP solutions and it also doesn´t require so big Flash and RAM. When comparing all data with other MCU, you can notice that with a small power you can make the same things as with the Wiznet solution. This fact is associated with not only reliability and comfort but also with approximately half the price of the chip.

Advantages/ Features:
1. Stable and safe MCU thanks to HW TCP/IP
2. Internal 128kB flash, 16k RAM
3. 3xUART, 2xSPI, 2xI2C
4. 64TQFP package

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.
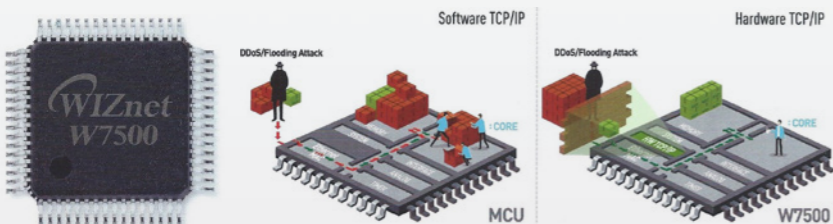
We offer you evaluation board WizWIKI-W7500 from our stock. Order number is 196279 and guide price is 36,00 EUR without VAT.

Do you know, what´s a top-class programmable power sup-

If you need to simulate overvoltage, slow start, fluctuations and other situations, which may occur in real life, then the TDK Lambda power supplies won´t disappoint you.

Imagine a laboratory (testing) power supply able to provide a virtually any function. Switching on, drop-out, repeated switch-on and many other functions, by which we can test our product in a „single shot" - those are programmable laboratory power supplies from company TDK Lambda. Perhaps the biggest advantage of programmable power supply is the fact, that there´s no need to adjust, watch, set at testing itself. It´s obvious that this sophisticated device is feelingly more expensive than usual laboratory power supplies, however it´s able to bring enormous time savings and reliability into your work.
In majority of cases it´s possible to reach simulation of a real-life voltage fluctuations, dropouts, disturbances,… This „dynamic" testing is also able to discover the risk of „freezing" of your product (undervoltage lockout) at a short-time undervoltage..
Company TDK Lambda belongs to the very top in this segment and its devices provide a literally unlimited possibilities of usage, configuration and control. Whether it´s extremely fast response, possibility of a parallel operation of several units, control over LAN,USB, RS485, GPIB,… almost all possibilities and options known in this field can be found in the TDK Lambda power supplies.
Main series:
• Z+ (200-800W) – extraordinarily low and compact series. Arbitrary functions generator with 16 bit resolution (+ inner memory), max. output voltage 10-650 VDC. RS232/485, USB and analogue interface. Active PFC (typically 0,99). Advanced parallel master/slave mode.
• ZUP (200-800W) – max. out voltage 6-120V, max 132A. CC/CV, software calibration, last setting memory, active PFC. RS232/485 and analogue interface.
• GENESYS (750-15000W) – extraordinary reliability and power. Max 650V, max 1000A. Auto--restart or safe start (user selectable). Last setting memory, available in four sizes – GENH, GEN 1U, GEN 2U and GEN 3U. Optional USB or LAN interface and further accessories.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Advantages/ Features:
1. unappreciable for development, production and service
2. ideally suitable for devices "burn-in"
3. arbitrary functions generating
4. RS232/485. USB, LAN, GPIB ...

Even you switch ecologically?

MARQUARDT

More exactly, we talk about switching-off a device. Marquardt 1550 Eco Switch enables this extraordinarily easily.

Do you know a situation, when a seemingly usual thing is fact not that usual… Whether it´s a car with a hybrid drive or a lot of devices which we meet every day – usually in every segment can be found something "inconspicuous" but in fact unusual and exquisite. This is exactly the case of the 1550 Eco Switch series.
At the first sight – a usual rocker switch of this series is able to switch off a device in a pre-defined time or it can be switched off remotely – by a pulse (4A/250V, 10ms). Both cases result in a physical contacts disconnection, what´s advantageous from a safety point of view (total galvanic isolation and overvoltage protection) as well as from a zero power consumption point of view. In case of a remote-off version a given switch can be controlled also by the controlled device itself (which is powered through this switch). In this case it results to self "cut-off" of a device and it can be switched on again only physically by an operator. A typical example of use can be a safety function of temperature monitoring inside a device which is able to switch off itself in case of a fault.
1550 Eco Switch series can be used not only for power supply line. The contacts reliably switching even small DC voltages enable usage also for transition of various control signals and similar.

Advantages/ Features:
1. automatic switch off by means of an integrated precise timer, 4s - 71 h (auto-off)
2. automatic switch off by a pulse (remote-off)
3. contacts distance >= 3mm
4. galvanic isolation – increased safety and zero power consumption
5. for small DC signals and power supply up to 10(4)A/250VAC

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

SUNON®

Have you ever seen a fan resistant to dust and water?

New series of Sunon fans with IP68 protection brings reliability even to conditions, where a usual fan doesn´t withstand too long...

Still more noise and vibrations and in extreme case even a total malfunction – this is a typical "end" of the fan after a long-time operation in a dusty or corrosive environment. In a usual dry and relatively clean environment, this scenario is not that dramatic and high-quality fans hold on to work for many years without problems. It can be also said, that common industrial environment is quite far from an ideal = clean one.

So, which fan to use? Company Sunon this time declares, that they shifted a level of lifetime and durability a step higher… They "wrapped" all the motor into a „high-tech" coating and incorporated a mechanism for automatic dust removal from a motor part. **And the result?** The fan works reliably even after a 60 minute ingress into water and into 1m depth. New series carryGExxxx or GFxxxx marking and they´re available in three sizes - 80x80x25mm, 80x80x38mm and 90x90x25mm. All types are equipped by two ball bearings.

Advantages/ Features:

1. fans resistant to dust, water and salt
2. meets IP68 and GR487
3. patented encapsulated motor
4. automatic dust removal
5. suitable for demanding industrial and outdoor environment
6. available in 3 sizes
7. 3 versions for 12, 24 or 48 VDC

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

Order no.	Type	Description	Guide price
180777	GF80251B1-AE9	Fan 80x25 12VDC 3,96W 101,9m3/h IP68 Ball	27,20€
191005	GE80252B1-AE9	Fan 80x25 24VDC 4,8W 101,9m3/h IP68 Ball	31,10€

Even a small figurine can play a big performance

New aerial from 2J will surely not surprise you by its size, however features of the antenna are worth noticing.

2J antenna conceptor

2JW035 antenna measures only 52,5mm and is intended for WiFi and Bluetooth devices in 2.4 a 5GHz bands. The gain is 5dBi and the VSWR value is below 2.6:1. A big advantage of this antenna is a possibility of its versatile placing, as it contains a hinge.
So as to suit various customers´ requirements, the producer offers a possibility to order this antenna with three various connectors:
• 2JW035-C20Nb is equipped with hexagonal black SMA connector
• 2JW035-C675 is equipped with a round SMA connector
• 2JW035-C442, which is also our standard stock type is equipped with a round black reverse-polarity SMA connector (RP).
For special applications, there´s also a possibility to order this antenna in a custom specified colour.

Frequencies	WIFI / BLUETOOTH (2.4 GHz) WIFI (5.1-5.9 GHz)
Impedance	50 Ohms
Polarization	Linear
Gain	5dBi Max
VSWR	<2.6:1
Operating temperature	-40°C to +85°C

We offer you antenna 2JW035-C442B from our stock. Order number is 166362 and guide price is 3,10 EUR without VAT.

This is a short version of the article. The whole article can be found at web. Decode the link in QR code.

eCUBE Examples of your solutions...

LVS VLOERVERWARMING
SCHLOSS HEATMAT 4060750
The Schloss rubber heatmat is ideal for indoor use but also for use in damp environments. This heatmat is very good to use at worksites and workshops.

Hjelmslund Electronics
USB485-STIXL
USB to RS485 converter with isolation barrier.
The USB485-STIXL is the latest member of our RS485 converter series, featuring 2 wire RS485 with automatic receive / transmit switching, fifo and a 2.5kVolt isolation barrier.

RoboVend
RoboCopy
It's an automated machine with low power consumption, durable ergonomic design, large supply of consumables, user-friendly interface adjustable for all languages and all currencies (accepts and gives change in bills and coins). Online monitoring of work processes and remote control of settings are supported.

BelektroniG GmbH
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The temperature controller of the HAT Control series are robust and have a long durability. They come with 6 main configurations and a maximum output power of 270W, giving you the flexible solution for your temperature control applications in laboratory and field.

Wanet s.r.o.
WarioWeather
WARIOWEATHER is an independent IP weather station that is plugged directly into the Internet through any kind of computer network. Thanks to this arrangement, the user has a direct and immediate access to the data compounded by the weather station from any computer and mobile device. Therefore the common problem of all till now existing weather station of the necessity of the user unit need to be close to the outside detector has been resolved.

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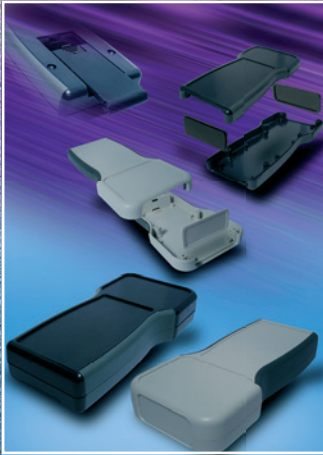
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Wide range of converters for copper and fiber optic network, simple to order and easy to install. Our RS232 / RS485 / RS422 / USB / Fiber Optic converters are available in a number of varieties and form factor, including 9 pin Port Powered and DIN rail mounting, both 9-24V and 230V power supply.
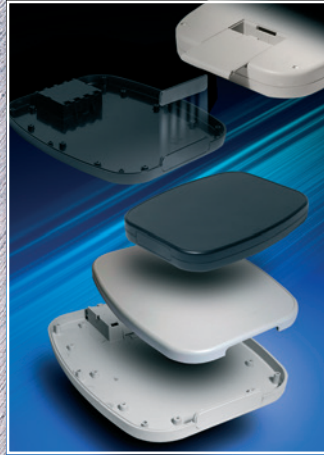
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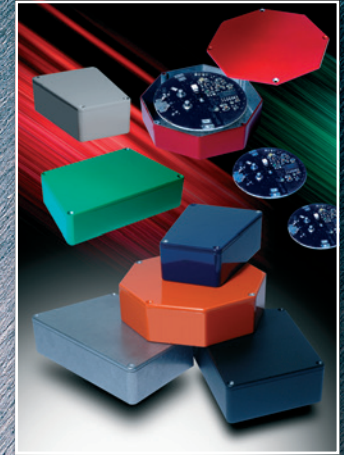More information can be found at www.ecubeportal.com