PRODUCT CATALOG

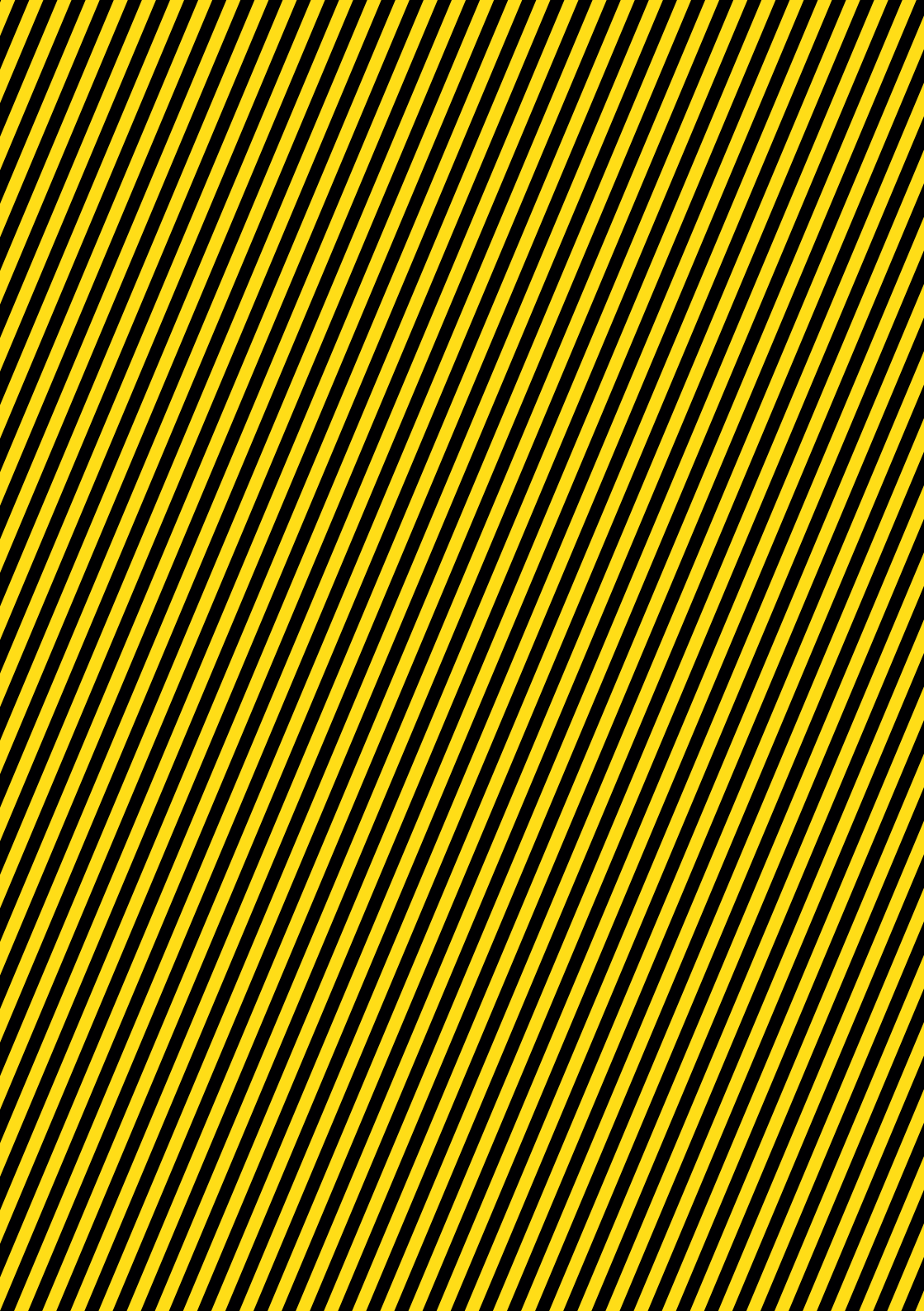
BLUSKY

Simple yet effective

BLUSKY brand is a trade mark of Aktif Enerji Ltd. Sti. With each passing day, BLUSKY is expanding its product portfolio and approaching its goal to become a world brand. BLUSKY which offers rational and practical solutions to its customers is one of the world's rapidly recognized brand with its engineers and staff who are well equipped with strong technological and innovative culture.

Aktif Enerji Ltd. Sti. who gives life to BLUSKY brand was established in 1996 to provide innovative solutions to the needs of the energy market. The company has achieved a good reputation in Turkey in a short time, and it begins to offer world-wide innovative products and solutions. BLUSKY Communication devices and Energy Meters which are used with appreciation in all transmission and distribution companies and customers in Turkey have become a world wide solution for customers needs.

Our company identifies its priorities as human health, environmental safety and product quality and above all more importantly after sales services and we thank to market participants of energy sector, customers and our friends who made contributions to our company and who made us ourselves and we would like to commit that we will keep developing our vision and we will continue to provide the best services as we always did.



BSC9000 SERIES

GPRS Modems

BSC9000 series GPRS modems makes data transmission possible by using any network of an operator which works in 900/1800MHz or 850/900/1800/1900 MHz bands. Modem is designed to work with any device that has RS-232 or RS-485 type serial output.

Modem provides remote reading of electricity, water, gas meters and other measuring devices having serial port by GPRS.

On the side of GPRS network, connection is performed in TCP/IP protocols. On the side of device, connection is established with RS-232 and RS-485 type serial outputs.

BSC9000 series GPRS modems is equipped with one digital input and one digital output. By using this, BSC9000 series GPRS modems can get signals from a door detector, alarm unit or any device having digital output. Situation of these signals can be report as an SMS or they can be read remotely by using GSM/GPRS communication protocol or locally by using service connection.

COMMUNICATION INTERFACES

To use with external serial devices, BSC9000 series GPRS modems are equipped with RS-232 and RS-485 interfaces.

DIGITAL INPUTS AND OUTPUTS

BSC9000 series GPRS modems are equipped with one digital input and one digital output. These inputs enable to acquire signals such as door opening state or alarm unit state.

NOTATION LEDS

LEDs are located on front side of modem and they give information about operation status of modem. Following cases can be observed without connecting an external device.

SMS

BSC9000 series GPRS modems enable to send information to user with SMS.

ORDERING INFO

BSC9136	GPRS Modem operating in 900/1800Mhz bands with RS232, RS485 and digital I/O interface
BSC9136W	GPRS Modem operating in 900/1800Mhz bandswith RS232, RS485 and digital I/O interface with wide range 85-265V AC, 50 - 60Hz supply input
BSC9236	GPRS Modem operating in 850/900/1800/1900Mhz bands with RS232, RS485 and digital I/O interface
BSC9236W	GPRS Modem operating in 850/900/1800/1900Mhz bands with RS232, RS485 and digital I/O interface with wide range 85-265V AC, 50 - 60Hz supply input

TROLL THE CONFIGURATION SOFTWARE

"Troll" is used to display configuration and operation status of modem and to change operation parameters of BSC9000 series GPRS modems. It runs on computers with Windows operating system and it is supplied with a BSC9000 series GPRS modem free of charge. It provides executing service commands, monitoring operation status of device, reading and editing configurations, loading factory settings, restarting of device, updating firmware etc. Also, this program lets user to set all parameters of modem.

TECHNICAL SPECIFICATIONS

			BSC9136	BSC9236
SUPPLY VOLTAGE	Normal Version		9-56VDC	
	Wide Range version		85-265V AC, 50 - 60Hz	
MAX CURRENT			2A	
GSM BAND			Dual band 900/1800MHz	Quad Band 850/900/1800/1900MHz
GPRS CLASS	Multi-slot		Class12/10/8	1~12 Configurable
OPERATING MODES			TCP server or TCP client	
COMMUNICATION INTERFACES	RS232	baud rate	300 ~ 115200baud	
		data bits	7, 8	
		parity	none, even, odd	
		stop bits	1, 2	
		flow control	none, hardware	
	RS485	baud rate	300 ~ 115200baud	
		data bits	7, 8	
		parity	none, even, odd	
		stop bits	1, 2	
		operating mode	2 wire or 4 wire	
SECURITY	Login		Login with username and password for setup and/or monitoring	
	White List		Five IP and net mask is suppoerted for white list	
	Black List		Five IP and net mask is suppoerted for black list	
	Terminal cover		Sealable Terminal cover protecting all connectors with terminal cover manipulation detection	
SMS EVENT LOGGING			SMS sending available when; terminal cover is opened or closed, white or black list is violated, login attemp with wrong user name or password, signal detected or disapperad on digital input, GSM signal is below user defined threshold	
INPUT/OUTPUTS	Input		Optomosfet, 9 - 240 Volts AC/DC, 60mA	
	Output		Solid state relay, 9 - 240 Volts AC/DC, 120mA	
	Additional DC Supply		Additional 12V DC supply is available to be used with input and/our output circuit	
CONFIGURATION	Software		Win7, WinXp supported user friendly TROLL software	
	AT Commands		BLUSKY AT Command set is vailable upon request	
LEDS			10+2 LEDs are available to easily monitor modem without connection with software	
ELECTRICAL PARAMETERS	Isolation voltage	Power supply input	2kV	
		Digital input	5,3kV	
		Digital Output	1,5kV	
		12V DC Output	1kV	
		RS232	15kV	
TEMPERATURE RANGES	Operating Temperature		-40˚C...+70˚C	
	Storage Temperature		-40˚C...+70˚C	
HUMIDITY			40˚C, 90%, non-condensing	
HOUSING	Dimensions	with terminal cover	164x118x38 mm	
		without terminal cover	164x80x38 mm	
	Protection	Protection	IP 51	
	Weight	Weight	~0,5 kg	

CONVER-
TERS

ETHERNET TO FIBER CONVER-TERS

BSC8000 SERIES

Ethernet to Fiber Optic Converters

BLUSKY BSC8000 series Ethernet to fiber optic converters help the user to extend the network transmitting distance up to 120 kilometers. Although the 1000Base-T technology and the appearance of related adaptors reduced the construction cost of 1000M Ethernet in the majority network, the copper wire still sets limit on extending network distance. BSC8000 series devices offer best solution to overcome that problem.

BSC8000 offers internal high-level transceiver engine to control false dissemination effectively and MAC address self-learning, self-renewal function to provide quick and stable transmission. It also offers ultra-wide switching power supply in order to effectively resist the instability of the external voltage thus provide the stable fiber optic transmission and data exchange.

FEATURES

- Conversion between auto-adaptation 10Base-T, 100Base-TX or 1000Base-T and 1000Base-SX/LX, full duplex 1000M working pattern
- With distinct HIC solution, low-temperature-rise chip, no need of cooling system, realization of flow control, decrease of broadcast storm
- With famous brand optical-electronic-integration module providing excellent optical and electrical properties to ensure reliable data transmission and long working life
- Supporting broadcast filtering, address auto-learning and auto-updating, and store-and-forward operating mechanism
- Supporting Link Fail Pass fiber breaking defecting (can be chosen)
- Supporting full-duplex flow control or half-duplex back pressure working pattern, along with Auto-negotiation
- Supporting 1916 byte super data packet transmission
- Providing indicator lamps for link-loss, electrical and optical link diagnostics, dynamic data transmission and full/half duplex data rate
- With more than 50,000 hours MTBF, complying with telecom operating standard
- Supporting dual fiber(MM), dual fiber(SM), single fiber(SM)
- 35mm DIN rail installation kit for BSC8114 series
- FCC, CE, RoHS approved

TECHNICAL SPECIFICATIONS

CONNECTION		
Ethernet	10/100/1000Mbps (Giga supported by BSC8214G, BSC8224G and BSC8244G)	
Standard	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX/FX Fast Ethernet IEEE802.1q IEEE802.1p QoS IEEE802.1d Spanning Tree	
Fiber Wavelength	850nm/1310nm/1550nm	
Fiber/ETH Distance	**Dual Fiber Multi-mode:** at 100M speed: 2Km at 1000M speed: 550m **Dual Fiber Single-mode:** at 100M speed: 20/40/60/80/120Km at 1000M speed: 20/40/60/80/100Km	**Single Fiber Single-mode:** at 100M speed: 20/30/40/60Km at 1000M speed: 20/40/60Km **Ethernet:** 100m
Interfaces	**RJ-45 Port (1, 2 or 4 pieces depends on product type):** STP/UTP Ethernet Cable **Fiber Optic x 1:** Multi-mode connector: Multi-mode ST/SC Single-mode connector: Single-mode SC/FC Single Fiber Single-mode: SC/FC	
Time Delay	<10us	
BER (Bit Error Rate)	< 1/1.000.000.000	
Indicators	Led indicators to show activity, speed etc.	
POWER		
Input	9~36V DC or 100 - 275VAC (50, 60Hz) or DC-48V (internal power)	
Power Consumption	200mA@12V (BSC8114) 5Watt (BSC82XX)	
MECHANICAL FEATURES		
Dimensions	110 x 80 x 26mm (L x W x H) (BSC8114) 155 x 128 x 32mm (L x W x H) (BSC82XX)	
Weight	~160gr(BSC8114) ~350gr(BSC82X4)	
Operating Environment		
Operating Temperature	0~60˚C	
Storage Temperature	-40~70˚C	
Humidity	10% - 90%, non-condensing	
Certificates	FCC, CE, RoHS	

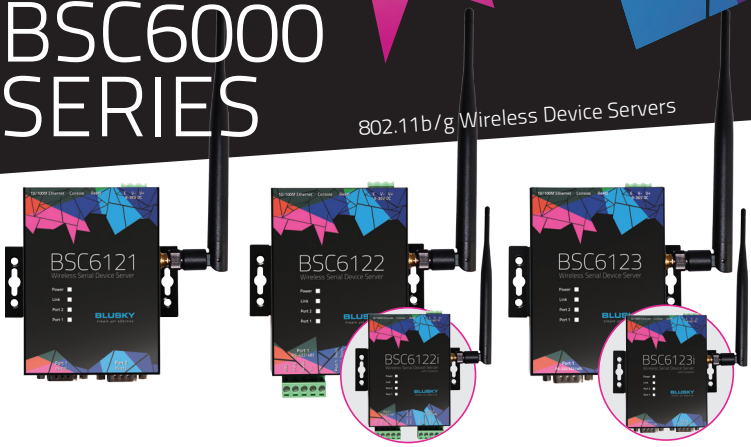
ORDERING INFO

BSC8114	X (Optical Mode)	XX (Interface)	XX (Distance, km)		X Temperature
	M (Multi Mode) S (Single Mode)	SC: SC Interface ST: ST Interface FC: FC Interface	20 40 60	80 120	0~60˚C T: -40~75 ˚C

BSC82X4 (G) — Device Type	X — (Optical Mode)	XXX — (Interface)	XX — (Distance, km)		X Temperature
1: 1 port ETH 4: 4 port ETH (G) stands for Gigabit ETH speed option	M (Multi Mode) S (Single Mode)	SC: SC Interface ST: ST Interface FC: FC Interface SCS: SC Single-Fiber STS: ST Single-Fiber FCS: FC Single-Fiber	20 30 40 60	80 100 120	0~60˚C T: -40~75 ˚C

BSC6000 SERIES

802.11b/g Wireless Device Servers



The BSC6000 series device servers lets you connect RS-232 (BSC6121), RS-422/485(BSC6122) or RS-232/422/485 (BSC6123) serial devices (such as energy meter, card reader, PLC, CNC) to IP-based Wireless and Wired Ethernet networks quickly and easily. You can access your serial device at any place over network with BSC6000 series devices. Highly compatible with user's existing web application program, BSC6000 series devices also provides TCP Server, TCP Client, UDP, Virtual Com and some other operation modes. Under the Virtual Com mode, users can manage their serial port devices on the network with their current serial port monitoring software perfectly.

FEATURES

- Enabling IEE 802.11b/g Wireless networking with low cost (also supports wired networking)
- Supports WEP, WPA/WPA2 security protocols
- 10/100M auto-negotiation to the wired Ethernet
- Baud rates: 50-921600 bps
- 15kV ESD protection
- 2.5kVrms electromagnetic isolation (only in BSC6122i and BSC6123i)
- Integrated web server for remote and local configuration web interface
- One button reset to default settings
- Supports multiple TCP connections under TCP Server/Client mode, and up to 8 users can manage the device simultaneously
- Supports UDP multiple objects, up to 8 groups of users can manage the device simultaneously
- Supports virtual port, provides Windows virtual port driver
- Open Linux operating system
- Supports multiple systems: http, ftp, telnet, etc.
- Highly customizable web page, web development available with CGI
- Standard Linux/GCC development platform, and cross compiling tools for development
- Supports simple and effective Lua dynamic programming language
- Security systems like login control and IP address filter based on black/white list
- 35mm DIN rail installation kit
- FCC, CE, RoHS approved

ORDERING INFO

BSC6121	2-ports RS-232 to 802.11b/g Wireless device server
BSC6122	2-ports RS-422/485 to 802.11b/g Wireless device server
BSC6122i	2-ports RS-422/485 to 802.11b/g Wireless device server, with electromagnetic isolation
BSC6123	2-ports RS-232/422/485 to 802.11b/g Wireless device server
BSC6123i	2-ports RS-232/422/485 to 802.11b/g Wireless device server, with electromagnetic isolation

TECHNICAL SPECIFICATIONS

SERIAL PORT		
Interface		**BSC6121** Port 1: RS-232 full modem signal (TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND) Port 2: TXD, RXD, RTS, CTS, GND **BSC6122** RS-422: T+, T-, R+, R-, GND RS-485 (2-wire): D+, D-, GND RS-485 (4-wire): T+, T-, R+, R-, GND **BSC6123** Port 1: RS-232, RS-422 or RS-485 (2/4 wire) Port 2: RS-232, RS-422 or RS-485 (2/4 wire)
Connector		DB9M pin interface x 2
Baud rate		50~921600 bps
Parity		None, Even, Odd, Space, Mark
Data bits		5, 6, 7, 8
Stop bits		1, 1.5, 2
Flow control		None, XON/XOFF, CTS/RTS
LAN INTERFACE		
Wireless Interface		IEEE 802.11b/g Wireless Ethernet, External Antenna
Frequency		2.412~2.4835GHz
Data Rates		Up to 54Mbps
Security		WEP, WPA/WPA2
Wired Interface		10/100Base-T(X) auto-negotiation, embedded surge protection
Connector		RJ45 x 1
PROCESSOR AND MEMORY		
Processor		200 MHz, 32-bit ARM9
Memory		16M RAM, 32M Flash
SOFTWARE FEATURES		
OS		Linux2.6.X
Application System		BusyBox
Protocol		ARP, IP, ICMP, TCP, UDP, HTTP, DHCP, DNS, Telnet, FTP etc.
Operation Modes		TCP Server, TCP Client, UDP, Virtual Com
Configuration method		HTTP, Telnet, Debug port, port 1, Windows management software
Configuration Software		BLUSKY Device Manager, integrated virtual port driver
Development	Compiler	GCC
	Cross	Provides Windows environment and cross compilation under Linux
	C/C++ base	uclibc
	Language	C/C++, Lua
POWER		
Input		9~36V DC
Power Consumption		1.8Watt (max.)
Isolation		15kV ESD protection 2.5kVrms electromagnetic isolation (only in BSC6122i and BSC6123i)
MECHANICAL FEATURES		
Dimensions		110 x 80 x 26mm (L x W x H) (excluding antenna)
Weight		~250gr
OPERATING ENVIRONMENT		
Operating Temperature		0~60˚C
Storage Temperature		-40~85˚C
Humidity		10% - 90%, non-condensing
Certificates		FCC, CE, RoHS

BSC5000 SERIES

Serial Device Servers

The BSC51X1 device server lets you connect RS-232 serial devices, BSC51X2 device server lets you connect RS-422/RS-485 serial devices and BSC51X3 device server lets you connect RS-232/RS-422/RS-485 serial devices (such as power meter, card reader, PLC, CNC) to IP-based Ethernet networks quickly and easily. You can access your serial device at any place via the networks with BSC5000 series serial device servers. Highly compatible with existing web application program, BSC5000 series serial device servers also provide TCP Server, TCP Client, UDP, Virtual Com and some other operating modes. Under the Virtual Com mode, users can manage their serial port devices on the network with their current serial port monitor programs perfectly.

NOTE: 'i' on the end of device model indicates an isolated model and 'T' indicates an extended temperature model.

FEATURES

- Enabling networking with low cost
- 10/100M auto-negotiation to the Ethernet
- Baud rates: 50-921600 bps
- Integrated web server for remote and local configuration web interface
- One button reset to default settings
- Operation modes: TCP Server, TCP Client, UDP, Virtual Com
- Supports multiple TCP connections under TCP Server/Client mode, and up to 8 users can manage the device simultaneously
- Supports UDP multiple objects, up to 8 groups of users can manage the device simultaneously
- Stable and user friendly Windows configuration software
- Supports virtual port, provides Windows virtual port driver
- Open Linux operating system
- Supports multiple systems: httpd, ftpd, telnetd, etc.
- Highly customizable web page, web development available with CGI
- Standard Linux/GCC development platform, and cross compiling tools for development
- Supports simple and effective Lua dynamic programming language
- Security systems like login control and IP address filter based on black/white list
- 35mm DIN rail installation kit
- FCC, CE, RoHS approved

TECHNICAL SPECIFICATIONS

SERIAL PORT		
Interface	**BSC5111 and BSC5111L:** RS-232 full modem signal (TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND) **BSC5112:** RS - 422 or RS-485 (2/4 wire) **BSC5113:** RS - 232, RS-422 or RS-485 (2/4 wire) **BSC5121:** Port1: RS-232 full modem signal (TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND) Port2: TXD, RXD, RTS, CTS GND **BSC5122, BSC5142:** RS-422: T+, T-, R+, R-, GND RS-485(2-wire): D+, D-, GND RS-485(4-wire): T+, T-, R+, R-, GND **BSC5123:** Port1: RS-232, RS-422 or RS-485 (2/4 wire) Port2: RS-232, RS-422 or RS-485 (2/4 wire) **BSC5141:** Port1: RS-232 full modem signal (TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND) Port2: TXD, RXD, RTS, CTS, GND Port3: TXD, RXD, RTS, CTS, GND Port4: TXD, RXD, RTS, CTS, GND	
Connector	**BSC5111, BSC5111L and BSC5113:** DB9M pin interface x 1 **BSC5112:** Terminal block with 5 inputs x 1 **BSC5121, BSC5123:** DB9M pin interface x 2	**BSC5122:** Terminal block with 5 inputs x 2 **BSC5141:** DB9M pin interface x 4 **BSC5142:** Terminal block with 5 inputs x 4
Baud rate	50 ~ 921600 bps **Only BSC5111L:** 300 ~ 921600 bps	
Parity	None, Even, Odd, Space, Mark **Only BSC5111L:** Non, Even, Odd	
Data bits	5, 6, 7, 8	
Stop bits	1, 1.5, 2 **Only BSC5111L:** 1, 1.5	
Flow control	None, XON / XOFF, CTS /RTS **Only BSC5111L:** None, CTS / RTS	
LAN INTERFACE		
Interface	10 / 100 Base-T (X) auto-negotiation, embedded surge protection	
Connector	RJ45 x 1	
Console Port	**Only BSC5141 and BSC5142:** RS-232 (DTXD, DRXD, GND), 5-pin output	
PROCESSOR AND MEMORY		
Processor	**BSC5111, BSC5112, BSC5121, BSC5122, BSC5142:** 200 Mhz, 32-bit ARM9 **BSC5113, BSC5123, BSC5141:** 32-bit ARM9	
Memory	16M RAM, 32M Flash (Except of **BSC5111L**)	

SOFTWARE FEATURES		
OS		Linux 2.6.X (except **BSC5111L**)
Aplication System		BusyBox
Protocol		ARP, IP, ICMP, TCP, UDP, HTTP, DHCP, DNS, Telnet, FTP etc. **Only for BSC5111L:** ARP, IP, ICMP, TCP, UDP, HTTP, DHCP etc.
Operation Modes		TCP Server, TCP Client, UDP, Virtual Com **Only for BSC5111L:** TCP Server, TCP Client, UDP
Configuration method		HTTP, Telnet, Debug port, port 1, Windows management software **Only for BSC5111L:** HTTP, Windows management software
Device Software		BLUSKY Device Manager, integrated virtual port driver
Development (except of BSC5112)	**Compiler**	GCC
	Cross compilation	Provides Windows environment and cross compilation under Linux
	C/C++ base	uclibc
	Yazılım dili	C / C++, Lua

POWER	
Input	9 ~ 36V DC
Power Consumption	150mA@12V (max.) **BSC5142:** 250mA@12V (max.)
Isolation	**BSC5112i, BSC5113i, BSC5122i, BSC5123i, BSC5142i:** 2,5kVrms electromagnetic isolation and 15kV ESD protection

MECHANICAL FEATURES		
Dimensions	**BSC5111, BSC5111L, BSC5112:** 90 X 58 X 23.5mm (L x W x H)	**BSC5121, BSC5122, BSC5123:** 110 X 80 X 26mm (L x W x H)
	BSC5113: 94 X 72 X 23mm (L x W x H)	**BSC5141, BSC5142:** 180 X 110 X 30mm (L x W x H)
Weight	**BSC5111, BSC5111L, BSC5112, BSC5113:** 92gr **BSC5121:** 160gr **BSC5122:** 175gr **BSC5123, BSC5141:** 350gr **BSC5142:** 300gr	

OPERATING ENVIROMENT	
Operating Temperature	-10 ~ 60˚C -40 ~ 75˚C (extended temperature)
Storage Temperature	-40 ~ 85˚C
Humidity	10% - 90%, non-condensing
Certificates	FCC, CE, RoHS

ORDERING INFO

BSC5111	1-port RS-232 to 10/100 Base - T(X) device server
BSC5111T	1-port RS-232 to 10/100 Base - T(X) device server with wide temperature range
BSC5111L	1-port RS-232 to 10/100 Base - T(X) device server
BSC5112	1-port RS-422/485 to 10/100Base-T(X) device server
BSC5112i	1-port RS-422/485 to 10/100Base-T(X) device server with isolation
BSC5112T	1-port RS-422/485 to 10/100Base-T(X) device server with wide temperature range
BSC5112iT	1-port RS-422/485 to 10/100Base-T(X) device server with isolation and wide temperature range
BSC5113	1-port RS-232/422/485 to 10/100Base-T(X) device server
BSC5113i	1-port RS-232/422/485 to 10/100Base-T(X) device server with isolation
BSC5113T	1-port RS-232/422/485 to 10/100Base-T(X) device server with wide temperature range
BSC5113iT	1-port RS-232/422/485 to 10/100Base-T(X) device server with isolation and wide temperature range
BSC5121	2-ports RS-232 to 10/100Base-T(X) device server
BSC5121T	2-ports RS-232 to 10/100Base-T(X) device server with wide temperature range
BSC5122	2-ports RS-422/485 to 10/100Base-T(X) device server
BSC5122i	2-ports R S-422/485 to 10/100Base-T(X) device server with isolation
BSC5122T	2-ports RS-422/485 to 10/100Base-T(X) device server with wide temperature range
BSC5122iT	2-ports RS-422/485 to 10/100Base-T(X) device server with isolation and wide temperature range
BSC5123	2-ports RS-232/422/485 to 10/100Base-T(X) device server
BSC5123i	2-ports RS-232/422/485 to 10/100Base-T(X) device server with isolation
BSC5123T	2-ports RS-232/422/485 to 10/100Base-T(X) device server with wide temperature range
BSC5123iT	2-ports RS-232/422/485 to 10/100Base-T(X) device server with isolation and wide temperature range
BSC5141	4-ports RS-232 to 10/100Base-T(X) device server
BSC5141T	4-ports RS-232 to 10/100Base-T(X) device server with wide temperature range
BSC5142	4-ports RS-422/485 to 10/100Base-T(X) device server
BSC5142i	4-ports RS-422/485 to 10/100Base-T(X) device server with isolation
BSC5142T	4-ports RS-422/485 to 10/100Base-T(X) device server with wide temperature range
BSC5142iT	4-ports RS-422/485 to 10/100Base-T(X) device server with isolation and wide temperature range

BSC3000 SERIES

Serial to Serial Converters

In digital communication systems, a repeater is a device that receives a digital signal on an electromagnetic or optical transmission medium and regenerates the signal along the next leg of the medium. In electromagnetic media, repeaters overcome the attenuation caused by free-space electromagnetic-field divergence or cable loss.

A series of repeaters make possible to extend the signal over a longer distance. In real application where the environment is tough, isolations become a necessity between the two digital ports and between the digital ports and the power supply. BSC3122i is the repeater and isolator designed for the above purposes.

FEATURES

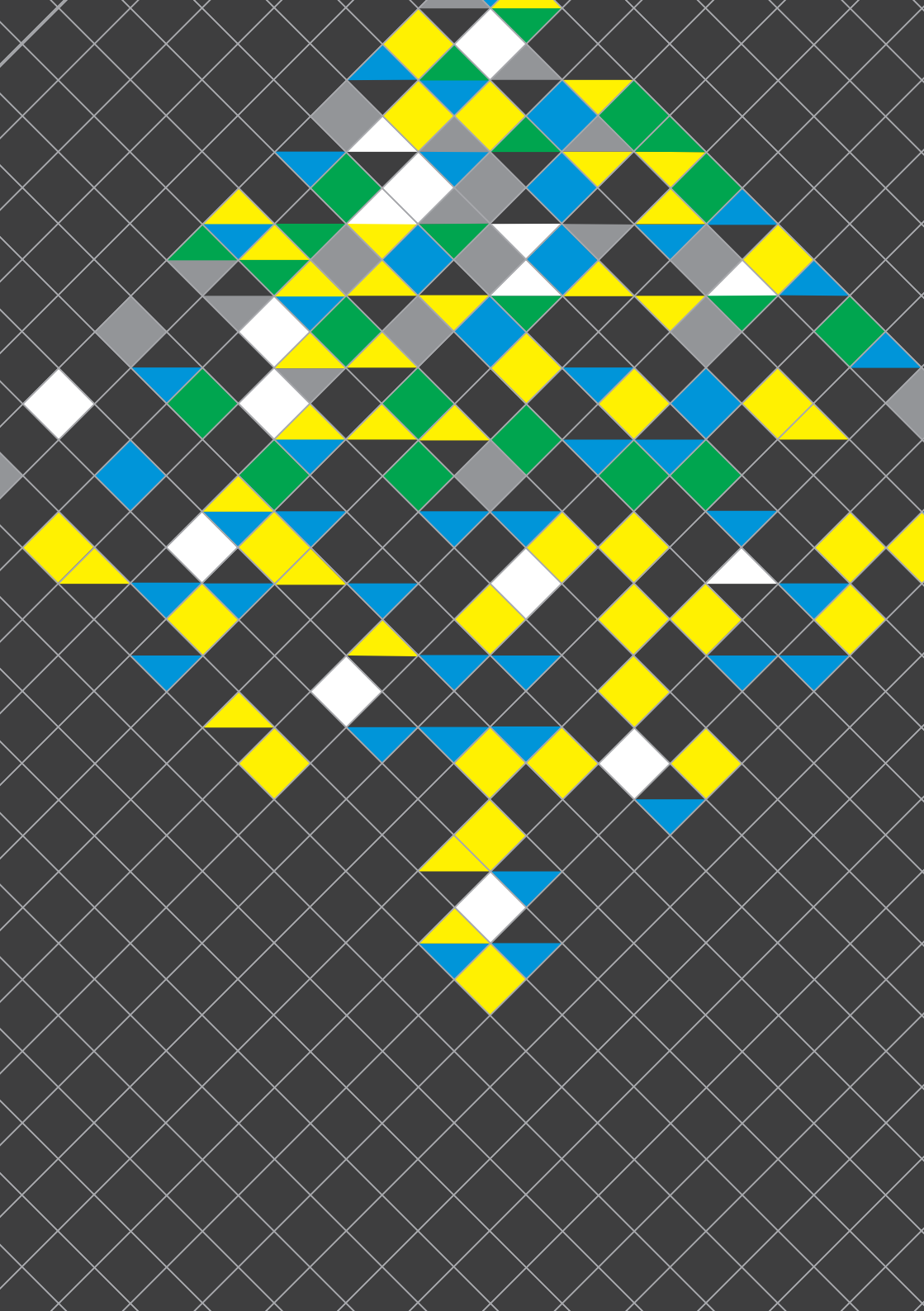
- Wide range of input voltage and power protection
- Polarity guard that prevents damage from reverse power connection and over voltage protection
- Rugged metal casing with better mechanical and EMI protection
- Provides CMR10KV/μs optical isolation between the two RS-422/485 ports and 1KV/μs isolation between the DC power and both RS-422/485 ports
- Can also act as the converters from RS-422 to RS-485, 4-wire RS-485 to 2-wire RS-485
- Clear LED indications of power status, RS-422/485 data signal status (TX/RX) and operation modes (RS-422/485 4W or RS-485 2W)
- Clear indications of all signals on the casing allow easy and proper connection
- Push high/pull low resistors for RS-422/485
- Plug-in screw terminal blocks for easy RS-422/485 and power supply wiring
- DIP switch settings for RS-485 2-wire with ERADC auto mode, RS-422/485 4-wire mode
- 15KV ESD surge protection

ORDERING INFO

BSC3122i	RS - 422 / 485 Isolator / Repeater / Converter with isolation
BSC3122iT	RS - 422 / 485 Isolator / Repeater / Converter with isolation and wide temperature range
BSC3123i	RS-232 to RS-422 / 485 Converter with isolation
BSC3123iT	RS-232 to RS-422 / 485 Converter with isolation and wide temperature range
BSC3152i	One channel RS-422/485 input and 4-way RS-485 Bus Splitter with isolation
BSC3152iT	One channel RS-422/485 input and 4-way RS-485 Bus Splitter with isolation and wide temperature range
BSC3153i	One channel RS-422/485 input and 4-way RS-485 output Converter with digital isolation
BSC3153iT	One channel RS-422/485 input and 4-way RS-485 output Converter with digital isolation and wide temperature range

TECHNICAL SPECIFICATIONS

RS-232 Signals	Supports TxD, RxD, RTS, CTS and GND DB9F connector
RS-422/485 Signals	Supports RS-422, 4/2-wire RS-485 (DIP switch selectable) Supports RS-422 4-wire, up to 10 nodes, 1.2Km Supports RS-485 2-wire, up to 32 nodes, 1.2Km Plug-in screw terminal block connectors
Interfaces	**BSC3152i:** One channel input (DIP switch selectable 2/4-wire) RS-422: T+, T-, R+, R-, GND RS-485: D+, D-, GND Four-way outputs RS-485: D+, D-, GND **BSC3153i:** One channel input Supports TxD, RxD, RTS, CTS and GND DB9F connector Two-way outputs RS-485: D+, D-, GND 2-wire RS-485 x 4: D+, D-, GND 4-wire RS-422/485 x 2 : RS-422: T+, T-, R+, R-, GND Plug-in screw terminal block connector
RS-485 Data Direction Control	**BSC3122i and BSC3123i:** ERADC **BSC3152i and BSC3153i:** Auto
Baud Rates	**BSC3122i:** 50 ~ 921.6Kbps **BSC3123i:** 50 ~ 230Kbqs **BSC3152i:** 50 ~ 921.6 Kbps auto-negotiation **BSC3153i:** 50 ~ 230 Kbps auto-negotiation
Surge Protection	**BSC3122i and BSC3123i:** 15KV ESD **BSC3152i and BSC3153i:** High surge capability transit array, IPP=40A; peak pulse power: 300W (8/20μs) for serial lines
Power Consumption	9 ~ 58VDC, 150mA @12V
Optical and Power Isolation	CMR - 10KV / μs optical isolation 1KVDC isolation
Temperature	**BSC3122i and BSC3123i:** Operating: 0 ~ 55°C (wide: -40 ~ 70°C) Storage: -40 ~ 85°C **BSC3152i and BSC3153i:** Operating: 0 ~ 60°C (wide temperature range: -40 ~ 70 °C) Storage: -40 ~ 85°C
Humidity	Operating: 10% ~ 80%, Storage: 5% ~ 90%, non-condensing
Dimensions	**BSC3122i and BSC3123i:** 94 x 72 x 23mm (L x W x H) **BSC3152i and BSC3153i:** 109 x 79 x 25mm (L x W x H)
Weight	**BSC3122i and BSC3123i:** 0.28Kg **BSC3152i:** 0.155Kg **BSC3153i:** 0.165Kg
Certicates	FCC, CE, RoHS



INDUSTRIAL
ETHERNET

BSC20100 SERIES

Wireless Access Point

BSC20100 series Wireless Access Points are reliable 802.11b/g WLAN with 2 ports LAN Access Points. They can be configured to operate in one of AP/Bridge/Repeater modes.

Users are able to configure BSC20100 series Wireless Access Points by WEB interface via LAN port or WLAN interface. BSC20100 series Wireless Access Points provide dual Ethernet ports in switch mode so that users can use Daisy Chain to reduce the usage of Ethernet switch ports. In addition, BSC20102POE Wireless Access Point also provides PD feature on ETH2 which is fully compliant with IEEE802.3af P.O.E. specification.

INDUSTRIAL WIRELESS ACCESS POINT

HIGH SPEED AND HIGH SECURITY CAPABILITY

With IEEE802.11b/g dual mode capability, BSC20100 series Wireless Access Points are able to operate with a maximum link speed of 54Mbps to maximize the capacity of communication channel. The security standards include WEP, WPA, WPA-PSK(TKIP,AES), WPA2, WPA2-PSK(TKIP,AES), 802.1X and Radius.

REDUNDANT POWER INPUT

BSC20100 series Wireless Access Points offer different power inputs to enhance its reliability. When the primary DC power input fails, the backup power input will take over immediately to guarantee a non-stop operation.

ORDERING INFO

BSC20102	Industrial Wireless Access Point, 802.11b/g and 2x10/100BaseT(x)
BSC20102POE	Industrial Wireless Access Point, 802.11b/g and 2x10/100BaseT(x) (with one P.O.E. port)

TECHNICAL SPECIFICATIONS

TECHNOLOGY	
Operating Modes	AP/Bridge/Repeater
Protocols	ICMP, IP, TCP, UDP, DHCP, BootP, ARP /RARP, DNS, SNMP MIB II, HTTPS, SNMP V1/V2, Trap, Private MIB
Frequency Bands	**America FCC:** 2.412~2.462 GHz (11 channels) **Europe CE/ETSI:** 2.412~2.472 Ghz (13 channels)
Transmission Rates	**IEEE802.11b:** 1/ 2/ 5.5/ 11 Mbps **IEEE802.11g:** 6/ 9/ 12/ 18/ 24/ 36/ 48/ 54 Mbps
Modulation	**IEEE802.11b:** CCK, DQPSK, DBPSK **IEEE802.11g:** OFDM with BPSK, QPSK, 16QAM, 64QAM
Transmit Power	**IEEE802.11b/g:** 18dBm
Receiver Sensitivity	-81dBm @ 11Mbps, PER< 8%; -64dBm @ 54Mbps, PER< 10%
Data Security	**WEP:** (64-bit ,128-bit key supported) **WPA: WPA2:** 802.11i (WEP and AES encryption) PSK (256-bit key pre-shared key supported) 802.1X and Radius supported TKIP encryption
Wireless Security	SSID broadcast disable

P.O.E	Present at ETH2 of BSC20102POE type **Power Device (IEEE 802.3af):** IEEE 802.3af compliant input interface **Power consumption:** 8 Watts max. Over load & short circuit protection **Isolation Voltage:** 1000 VDC min. **Isolation Resistance :** 10^8 ohms min.
SOFTWARE FEATURES	
Monitoring	Associated wireless clients (AP mode) Current DHCP mappings System event log (local log, remote syslog, SNMP trap) Wireless link status monitor (AP Client mode)
Alarm Indication	Link down/Power down alarm by Relay Output SNMP Trap System Log
DHCP	DHCP Client/Server
Configuration	Web HTTPS console Authentication by Username/Password MAC based access control, IP filtering DHCP server disable, static DHCP mapping Windows software (IP setting) Reset to factory defaults by button and HTTP/HTTPS
LED INDICATORS	
PWR	**Red On:** Power is on and booting up **Red Blinking:** Indicates an IP conflict or DHCP or BOOTP server did not respond properly **Green On:** Power is on and functioning normally **Green Blinking:** Located by Administrator
P.O.E	**Only in BSC20102POE type:** **Red On:** Power is on and booting up **Red Blinking:** Indicates an IP conflict or DHCP or BOOTP server did not respond properly **Green On:** Power is on and functioning normally **Green Blinking:** Located by Administrator
ETH	Link / Activity **Orange ON/Blinking:** 10 Mbps Ethernet **Green ON/Blinking:** 100 Mbps Ethernet
WLAN	Link / Activity **Green:** Link is on **Orange:** Poor signal
WLAN Signal Power	1<25%, 2<50%, 3<75%, 4<100%
Fault	Red: WLAN link is down
POWER REQUIREMENTS	
Power Input	Dual DC Power Input: 12~48VDC in 6-pin Terminal Block
Reverse Polarity Protection	Present
Power Consumption	6 Watt Max.
ENVIRONMENTAL FEATURES	
Operating Temperature	-40 - 70 °C (-40 - 158 °F)
Storage Temperature	-40 - 85 °C (-40 - 185 °F)
Operating Humidity	5% - 95% Non-condensing
MECHANICAL FEATURES	
Dimensions	52 mm(W)x 106 mm(D)x 144 mm(H)
Casing	IP-30 protection
STANDARDS	
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), Level 3, EN61000-4-6 (CS), Level 3
MBTF	200,000 hours at least

BSC20300 SERIES

Unmanaged Switches

BSC20300 series unmanaged switches are designed for industrial-grade Ethernet and particularly for facilities of rugged industry and infrastructure. BSC20300 series unmanaged switches are tailored to perform various features, such as wide temperature, redundant power input, relay output alarm, surge protection...etc. Thus, BSC20300 series unmanaged switches are the best choice for facility management, sewage treatment, power utility, telecommunication, transportation and all other mission-critical applications that require reliable Ethernet connectivity.

REDUNDANT POWER INPUT

BSC20300 series unmanaged switches offer different power inputs to enhance its reliability. When the primary DC power input fails, the backup power input will take over immediately to guarantee a non-stop operation.

RELAY OUTPUT ALARM BY POWER FAILURE

BSC20300 series unmanaged switches provide technicians with relay contact outputs for a warning when the power fails. It makes them to quickly respond with appropriate procedure and handle any emergent situation.

HIGH ESD PROTECTION

BSC20300 series unmanaged switches supports electrical surge protection. This unique design performs high ESD protection which meets EN61000-4-2 standard and the surge protection which meets EN61000-4-5 standard. This remarkable feature guarantees the best quality of communication under various critical conditions.

ORDERING INFO

BSC20306S-MM	6 Port Slim Type Industrial Ethernet Switch, 4x10/100BaseT(x) & 2x100Base-Fx (Multi-Mode)
BSC20306S-SS	6 Port Slim Type Industrial Ethernet Switch, 4x10/100BaseT(x) & 2x100Base-Fx (Single-Mode)
BSC20308	8 Port Industrial Ethernet Switch, 8 x 10/100Base-T(x)
BSC20308-MM	8 Port Industrial Ethernet Switch, 6x10/100Base-T(x) & 2x100Base-Fx (Multi-mode)
BSC20308-SS	8 Port Industrial Ethernet Switch, 6x10/100Base-T(x) & 2x100Base-Fx (Single-mode)
BSC20308S	8 Port Slim Type Industrial Ethernet Switch, 8 x 10/100Base-T(x)
BSC20308G	8 Port, Giga Speed Industrial Ethernet Switch, 6 x 10/100Base-T(x) & 2x1000Base-T(x)
BSC20308G-MM	8 Port, Giga Speed Industrial Ethernet Switch, 6 x 10/100Base-T(x) & 2x1000Base-Lx (Multi-mode)
BSC20308G-SS	8 Port, Giga Speed Industrial Ethernet Switch, 6 x 10/100Base-T(x) & 2x1000Base-Lx (Single-mode)
BSC20310-SFP	10 Port Industrial Ethernet Switch, 8x10/100Base-T(x) & 2x100Base-Fx SFP

TECHNICAL SPECIFICATIONS

TECHNOLOGY	
Ethernet Standards	IEEE 802.3 10-Base-T IEEE 802.3u 100Base-TX IEEE 802.3 100Base-FX IEEE 802.3x Flow control **Additionally in Giga Speed Models:** IEEE 802.3 1000Base-X IEEE 802.3ab 1000Base-T
Switching Latency	7 us
Mac Addresses	8K
Priority Queues	4
Flow Control	IEEE 802.3x Flow Control and Back-pressure
Processing	Store-and-Forward
LED INDICATORS	
Power	Green: Power on
RJ45 Ports	Green: Link/Activity Amber: Full duplex/Collision
Fiber Ports	Green: Link/Activity Amber: Speed
Fault	Amber: Power Failure
POWER REQUIREMENTS	
Power Input	**BSC20306 and BSC308S:** Dual DC Power Input: 12~48VDC in 7-pin Terminal Block **BSC20308 (other types) and BSC20310:** PWR1/2: 12~48VDC in 7-pin Terminal Block PWR3: 12~45VDC in Power Jack
Reverse Polarity Protection	Present
Power Consumption	7.5 Watt Max.
ENVIRONMENTAL FEATURES	
Operating Temperature	-40 - 70 °C (-40 - 158 °F)
Storage Temperature	-40 - 85 °C (-40 - 185 °F)
Operating Humidity	5% - 95% Non-condensing
MECHANICAL FEATURES	
Dimensions	**BSC20306 and BSC308S:** 33 mm(W)x 95 mm(D)x 144 mm(H) **BSC20308 (other types) and BSC20310:** 52 mm(W)x 106 mm(D)x 144 mm(H)
Casing	IP-30 protection
STANDARDS	
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), Level 3, EN61000-4-6 (CS), Level 3
MBTF	200,000 hours at least

BSC20500 SERIES

Smart Redundant Switches

BSC20500 series smart redundant switches are cost-effective redundant ring switches which adopt the newest structure to support ultra fast redundant ring function within 10mS (in 250 units). Its excellent performance protects the mission-critical applications from any network interruptions or temporary malfunctions. Additionally, it can automatically switch to other ports in 10ms when the master link fails. Therefore, BSC20500 series smart redundant switches are the best cost-effective option for redundant Ethernet network.

WORLD'S FASTEST REDUNDANT RECOVERY TIME < 10 MS (S-RING)

BSC20500 series smart redundant switches support the fastest 10ms redundant recovery time which makes Ethernet connection non-stop. If the primary communication path is disconnected, the Redundant Ring Technology would provide a redundant path to recover this fault. BSC20500 series smart redundant switches provide a solid foundation of highly fault-tolerant network and easily-managed network.

EVENT NOTIFICATION THROUGH E-MAIL & SYSTEM LOG

The BSC20500 series smart redundant switches provide event notification through email. In addition, it can be configured remotely by Web and windows utility.

REDUNDANT LAN PORTS: DEVICE COMMUNICATION IN REDUNDANT MODE

After selecting the redundant mode and connecting other LAN ports to different switches or the same switch with different ports, BSC20500 series smart redundant switches can automatically switch to other LAN ports within 10ms and still guarantee a non-stop connection while the connection of master link fails. Such a design can avoid any malfunctions and breakdown of data transmission.

ORDERING INFO

BSC20506	6 Port Industrial Redundant Switch, 6x10/100BaseT(x)
BSC20506-MM	6 Port Industrial Redundant Switch, 4x10/100Base-T(x) & 2x100Base-Fx (Multi-Mode)
BSC20506-SS	6 Port Industrial Redundant Switch, 4x10/100Base-T(x) & 2x100Base-Fx (Single-Mode)

TECHNICAL SPECIFICATIONS

TECHNOLOGY	
Ethernet Standards	IEEE 802.3 10-Base-T IEEE 802.3u 100Base-TX IEEE 802.3 100Base-FX IEEE 802.3x Flow control
Switching Latency	7 us
Switching Bandwidth	1.0Gbps
Mac Addresses	2K
Priority Queues	4
Flow Control	IEEE 802.3x Flow Control and Back-pressure
Processing	Store-and-Forward
VLAN	Port Based
Security Features	• Enable/Disable ports • VLAN to segregate and secure network traffic
Management Tools	• Web-Based • SNMP v1 • Centralized management software (BLUSKY - View)
Network Redundancy	• STP • RSTP • Redundant Ring(S-Ring) with recovery time less than 10ms over 250 units • C-Ring, compatible with other vendor's redundant ring technologies
LED INDICATORS	
Power	Green: Power on
RJ45 Ports	Green: Link/Activity Amber: Full duplex/Collision
Fiber Ports	Green: Link/Activity Amber: Speed
Fault	Amber: Power Failure
POWER REQUIREMENTS	
Power Input	PWR1/2: 12~48VDC in 7-pin Terminal Block PWR3: 12~45VDC in Power Jack
Reverse Polarity Protection	Present
Power Consumption	7.5 Watt Max.
ENVIRONMENTAL FEATURES	
Operating Temperature	-40 - 70 °C (-40 - 158 °F)
Storage Temperature	-40 - 85 °C (-40 - 185 °F)
Operating Humidity	5% - 95% Non-condensing
MECHANICAL FEATURES	
Dimensions	52 mm(W)x 106 mm(D)x 144 mm(H)
Casing	IP-30 protection
STANDARDS	
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), Level 3, EN61000-4-6 (CS), Level 3
MBTF	200,000 hours at least

&BSC20700 BSC20900 SERIES

Managed Redundant Ring Switches

BSC20700-BSC20900 series are managed Redundant Ring Ethernet switches. BSC20700-BSC20900 series managed Redundant Ring Ethernet switches can protect the mission-critical applications from network interruptions or temporary malfunctions with its maximum 10ms ultra fast recovery time. BSC20700-BSC20900 series managed Redundant Ring Ethernet switches series also support functions of network management, such as SNMP, RMON and Port/Tagbased VLAN security. Therefore, the Switch series are the best choice for highly-managed and Fiber Ethernet application.

WORLD'S FASTEST REDUNDANT RECOVERY TIME < 10 MS (S-RING)

BSC20700-BSC20900 series managed Redundant Ring Ethernet switches support the fastest 10ms redundant recovery time which makes Ethernet connection non-stop. If the primary communication path is disconnected, the Redundant Ring Technology would provide a redundant path to recover this fault. BSC20700-BSC20900 series managed Redundant Ring Ethernet switches provide a solid foundation of highly fault-tolerant network and easily-managed network.

RELAY OUTPUT ALARM BY PORT BREAK OR POWER FAILURE

BSC20700-BSC20900 series managed Redundant Ring Ethernet switches provide relay outputs that can be set up to indicate events with urgency to notify or warn the technicians so that they can can quickly respond to the message in priority.

REDUNDANT POWER INPUT

The redundant DC power inputs guarantee a non-stop operation. The backup power input will take over immediately when the primary DC power input fails.

NETWORK MANAGEMENT AND REMOTE CONFIGURATION

BSC20700-BSC20900 series managed Redundant Ring Ethernet switches can be configured smartly by web browser, Telnet, CLI, and windows software. Network administrators can determine to send event notifications through Syslog, Email, SNMP trap or relay output, as well as segment ports into different VLANs or filter multicast traffic by IGMP Snooping. To enhance the security, port access can be limited to pre-defined IP address table. Network determinism is answered by QoS for traffic prioritization.

TECHNICAL SPECIFICATIONS

TECHNOLOGY	
Ethernet Standards	IEEE 802.3 10Base-T, IEEE 802.3 100Base-TX and 100Base-FX IEEE 802.3z 1000Base-X, IEEE 802.3ab 1000Base-T, IEEE 802.3x Flow Control, IEEE 802.1D STP, IEEE 802.1w Rapid STP, IEEE 802.3ad Port Trunk with LACP, IEEE 802.1p COS(Class of Service), IEEE 802.1Q VLAN Tagging, IEEE 802.1X Authentication, IEEE 802.1AB LLDP **Additionaly in BSC20928GP:** IEEE 802.3at PoE specification (up to 30 Watts per port for P.S.E.)
Management Tools	7 us (BLUSKY - View)
Switching Bandwidth	**BSC20708:** 1.0Gbps **BSC20710, BSC20926GC and BSC20928GP:** 5.6Gbps **BSC207044GC and BSC207073GC:** 10Gbps
Mac Addresses	8k
Priority Queues	4
Flow Control	IEEE 802.3x Flow Control and Back-pressure
Processing	Store-and-Forward
VLANs	4096
IGMP Multicast Groups	**BSC20710:** 256 **BSC207044GC, BSC207073GC, BSC20926GC and BSC20928GP:** 1024
Port Rate Limiting	Except BSC20708: User defined
Security Features	• Enable/disable ports, MAC based port security • Port based network access control (802.1x) • VLAN (802.1q) to segregate and secure network traffic • Radius centralized password management • SNMPv3 encrypted authentication and access security
Software Features	• RSTP (802.1w) • Redundant Ring (S-Ring) with recovery time less than 10ms over 250 units • TOS/Diffserv supported • Quality of Service (802.1p) for real-time traffic • VLAN (802.1q) with VLAN tagging and GVRP supported • IGMP Snooping for multicast filtering • Port configuration, status, statistics, monitoring, security
Switching Latency	• Web-based, Telnet, CLI management interfaces • SNMP v1/v2/v3 • Remote Monitoring (RMON) • Rich set of diagnostics with logging and alarms • Central management windows software
Network Redundancy	• STP • RSTP • Redundant Ring(S-Ring) with recovery time less than 10ms over 250 units • C-Ring, compatible with other vendor's redundant ring technologies

RS-232 Serial Console Port	**Only in BSC20710,BSC207044GC and 207073GC:** RS-232 in RJ-45 connector with console cable. 9600bps, 8N1

LED INDICATORS

Power	Green: Power on
RJ45 Ports	Green: Link/Activity Amber: Full duplex/Collision
Fiber Ports	Green: Link/Activity Amber: Speed
Fault	Amber: Power Failure

LED INDICATORS – BSC20928GP

Power Indicator (PWR)	Green : Power is on
System Ready Indicator (STA)	Green : System is ready. Blinking during firmware upgrade
Ring Master Indicator (R.M.)	Green : System is operated in S-Ring Master mode
S-Ring Indicator (Ring)	Green : System is operated in S-Ring mode Blinking to indicate Ring is broken
System Running Indicator (RUN)	Green : System operated continuously
Supervisor Login Indicator (RMT)	Green : System is accessed remotely
Reset To Default Running Indicator (DEF)	Green : System reset to default configuration
Ping Command To The Switch Indicator (Ping)	Green : System is processing "PING" request
PoE indicator	Green : P.S.E. power output indicator
10/100/1000Base-T(X) RJ45 port indicator	Green: 1000Mbps Link/Act Amber:10/100Mbps Link/Act
1000Base-X SFP Fiber port indicator	Green: port Link/Activity

POWER REQUIREMENTS

Power Input	**BSC20708 and BSC20710:** PWR1/2: 12~48VDC in 7-pin Terminal Block PWR3: 12~45VDC in Power Jack **BSC207044GC and BSC207073GC:** Dual DC inputs: 12~48VDC in 6-pin Terminal Block
Reverse Polarity Protection	Present
Power Consumption	**BSC20708 and BSC20926GC:** 10 Watts Max **BSC20710 and BSC207044GC:** 12 Watts Max

ENVIRONMENTAL FEATURES

Operating Temperature	-40 - 70 °C (-40 - 158 °F)
Storage Temperature	-40 - 85 °C (-40 - 185 °F)
Operating Humidity	5% - 95% Non-condensing

MECHANICAL FEATURES	
Dimensions	**BSC20708 and BSC20710:** 52 mm(W) x 106 mm(D) x 144 mm(H) **BSC207044GC and BSC207073GC:** 74.3 mm(E) x 109.2 mm(B) x 153.6 mm(Y)
Casing	IP-30 protection
STANDARDS	
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), Level 3, EN61000-4-6 (CS), Level 3
MBTF	200,000 hours at least

ORDERING INFO

BSC20708	8 Port Industrial Managed Switch, 8x10/100Base-T(x)
BSC20708-MM	8 Port Industrial Managed Switch, 6x10/100Base-T(x) & 2x100Base-Fx (Multi-Mode)
BSC20708-SS	8 Port Industrial Managed Switch, 6x10/100Base-T(x) & 2x100Base-Fx (Single-Mode)
BSC20708G	8 Port Giga Speed Industrial Managed Switch, 6x10/100Base-T(x) & 2x1000Base-T(x)
BSC20708G-MM	8 Port Giga Speed Industrial Managed Switch, 6x10/100Base-T(x) & 2x1000Base-Sx (Multi-Mode)
BSC20708G-SS	8 Port Giga Speed Industrial Managed Switch, 6x10/100Base-T(x) & 2x1000Base-Lx (Single-Mode)
BSC20710-SFP	10 Port Giga Speed Industrial Managed Switch, 8x10/100Base-T(x) & 2x100Base-FX/1000Base-X SFP
BSC207044GC	8 Port Giga Speed Industrial Managed Switch, 4x10/100/1000T & 4xGigabit Combo ports
BSC207073GC	8 Port Giga Speed Industrial Managed Switch, 7x10/100/1000TX & 3xGigabit Combo ports
BSC20926GC	26 Port Giga Speed Industrial Managed Switch, Rack Mount Type, 24x10/100Base-Tx & 2x1000 SFP Combo Ports
BSC20928GP	28 Port Giga Speed Industrial Managed Switch, Rack Mount Type, 24x10/100/1000TX & 4x1000BaseX SFP Ports

ENERGY
METERS

RESIDENTIAL ENERGY METERS

BLUSKY Electricity Meters are developed by Aktif Enerji Co. who has more than 15 years experience in industrial metering and remote reading systems.
The meters are especially designed to be used in AMR systems. They have load proles and RS485 communication interfaces for automatic meter reading projects. The quality of the meters are approved by KEMA and all the meters are passed the MID tests module B in KEMA laboratories in Holland.

FEATURES

- MID Approved
- Both three phase and single phase meters fulfills all requirements for both class B (EN50470) and class 1 (IEC62053-21)
- RS485 Communication Interface
- 60 days recording capacity for hourly registered load profiles
- Terminal cover and main cover manipulation detection and logging the events of last 12 months
- Showing instantaneous current and voltage values on LCD
- Registering billing values at the end of each month and recording them for 12 months period
- Automatic switching the DST (Daylight saving time) zones
- Max demand measuring period is 15 min, and it is also settable to 30, 45, 60 min.
- IP54 protection

TECHNICAL SPECIFICATIONS

		SINGLE PHASE ENERGY METER	THREE PHASE ENERGY METER
NOMINAL VOLTAGE		220 - 230V	3x220/380V - 3x230/400V
NOMINAL/MAX CURRENT		10(40)A/10(60)A 20(60)A/10(80)A	3x10(60)A / 3x20(60)A 3x10(80)A/3x10(100) A/3x50(100)A
NOMINAL FRAQUENCY		50Hz	
ACCURACY	Active Energy	Cl:B EN50470 Cl:1 IEC62053-21	
METER CONSTANT	LED (Imp/kWh)	1000	500
ENERGY RECORDINGS	Max	Billing and demand values, terminal cover and main cover manipulation recordings and last 12 months' historical values	
MEASURED VALUES		Active energy values, RMS current and voltage values	
LOAD PROFILES		Load profile with 60 minutes registering period, capable of recording 60 days' profiles	
REAL TIME CLOCK (RTC)	Accuracy	±5ppm	
	Supply time with backup battery	>10 years	
DATA STORAGE LIFE SPAN		At least 10 years when there is no voltage at FLASH-ROM	

DATA INTERFACES	Optical data interface	Optical data interface D0	
	Optical data interface communication speed	9600 Baud (Mode C)	
	Electrical data interface	RS-485	
	Electrical data interface communication speed	4800 Baud (fixed)	
	Communication protocol	IEC62056-21, former IEC1107 protocol	
CONSUMPTION FOR EACH PHASE	Voltage	<0.8W, 8VA	
	Current	<0.2VA	
ELECTRICAL PARAMETERS	Isolation resistence	isolation:4kV AC, 50Hz, 1min.	
	HF field resistence	30V/m (under load)	
TEMPERATURE RANGES	Operating / Storage Temperature	-40°C...+70°C / -40°C...+70°C	
HUMIDITY		40˚C, 90%, non-condensing	
HOUSING	Dimensions	101.7 x 151.5 x 50mm	175 x 240 x 68mm
	Protection	IP 54	
	Weight	0.48kg	1.55kg

ORDERING INFO

		SINGLE PHASE METER						THREE PHASE METER					
PRODUCT VERSION	BSM1000 active energy DC meters	BSM1						BSM1					
	TEDAS Specifications monophase		11						31				
	TEDAS Specifications monophase - LowCost		12						32				
	Active+Reactive Meter		13						33				
	Import/Export Active Energy Measurement		14						34				
CONNEC-TION AND CLASS	DC Cl 1 10(40)A			B									
	DC Cl 1 10(60)A			C									
	DC Cl 1 10(80)A			D									
	DC Cl 1 5(80)A			E									
	CT cl.0,5s 1(10)A									A			
	DC Cl 1 10(50)A									B			
	DC Cl 1 10(60)A									C			
	DC Cl 1 10(80)A									D			
	DC Cl 1 10(100)A									E			
I/O CONFI-GURATION	no backlight + no I/O				00						00		
	no backlight + RS485				01						01		
ADDI-TIONAL FEA-TURES	no additional features					00						00	
	with internal breaker + no communication module					10						10	
	with internal breaker + PLC Modem					11						11	
	with internal breaker + GPRS Modem					12						12	
VOLTAGE CONNEC-TION	220V						2A						2A
	230V						2B						2B
	120V						2C						2C

OPTICAL
PROBES

OPTICAL PROBES

IEC and ANSI Types

RS232 OPTICAL PROBE

IEC	ANSI
BSC1111	BSC1211

USB OPTICAL PROBE

IEC	ANSI
BSC1141	BSC1241

MECHANICAL SPECIFICATIONS		
Diameter:	32mm	32mm
Height:	29,5mm	29,5mm
Magnetic Force:	N36	N36
Body Material:	Poly Propylene	Poly Propylene
Back Cover:	ABS	ABS
Transparent Parts:	Transparent Polycarbonate	Transparent Polycarbonate
Weight:	~125gr	~125gr
ELECTRICAL SPECIFICATIONS		
Standards (IEC Probes):	IEC 62056-21 (former IEC 1107)	IEC 62056-21 (former IEC 1107)
Standards (ANSI Probes):	ANSI C12.18 Type 2	ANSI C12.18 Type 2
Cable Length:	3m	3m
Data Communication Speed:	max 19200 baud	max 19200 baud
Operating Voltage:	3,3V (Passive port powered by DTR and/or RTS signals)	5V (Passive, port powered by USB)
Electrical Interface:	RS232	USB 2.0 or 1.1
Wavelength:	~900nm	~900nm

RS232 optical probe to use with all types of meters. It is the economical and easy to integrate solution for local reading of meters with handheld units or laptops with RS232 interfaces. The optical probe has two LEDs on the back side which show the operating conditions of the communication and this also makes it very easy to use and monitor the communication status.

USB optical probe saves your time for finding a USB to serial converter device to use with non USB optical probes in case of you don't have RS232 input on your laptop computer and it also avoids you to overcome the problems that have been introduced by those converters. The optical probe has two LEDs on the back side which show the operating conditions of the communication and this also makes it very easy to use and monitor the communication status.

All type of BLUSKY optical probes are manufactured according to the IEC62056-21 (former IEC1107) standards and they are compatible with all brand and type of meters. It has been successfully tested more than 40 types of meters from more than 20 different brands.

Various types of optical probes are available according to the customer needs and even custom type optical port can be manufactured according to the desired specifications. Also free meter reading software READY is available with the optical probes for reading the data of all kind of meters that are equipped with IEC 62056-21 optical probe interface with different language options.

MINI USB OPTICAL PROBE		CUSTOM MADE OPTICAL PROBE	
IEC BSC1151	ANSI BSC1251	IEC OTHER TYPES	ANSI OTHER TYPES
32mm		32mm	
29,5mm		29,5mm	
N36		N36	
Poly Propylene		Poly Propylene	
ABS		ABS	
Transparent Polycarbonate		Transparent Polycarbonate	
~125gr		~125gr	
IEC 62056-21 (former IEC 1107)			
ANSI C12.18 Type 2			
3m			
max 19200 baud		Will be identified according to the customer needs.	
5V (Passive, port powered by USB)			
USB 2.0 or 1.1 (with replaceable mini USB cable)			
~900nm			

Flexible usage with detachable mini USB cable. Save space and get rid of cable mess. Easy to extend the cable length by just replacing the detachable cable with new longer one. USB optical probe saves your time for finding a USB to serial converter device to use with non USB optical probes in case of you don't have RS232 input on your laptop computer and it also avoids you to overcome the problems that have been introduced by those converters. The optical probe has two LEDs on the back side which show the operating conditions of the communication and this also makes it very easy to use and monitor the communication status.

Custom purpose optical probe to use with customer specific devices. Just give us the specifications of the connected media and other necessary information and you will get instantly an easy to use optical probe that also has two LEDs on the back side which show the operating conditions of the communication to easily monitor the communication status. We have successfully implemented handheld unit and gas corrector optical probe versions and we are able to implement other types for other purposes. Please contact us for more details.


READY

METER READING SOFTWARE

READY

READY is the simple yet effective software, which is dedicated to read, store, and analyze the data of electronic electricity meters that communicates in IEC62056-21 (formerly known as IEC 1107) standard. It is designed by our company's software team to be used with BLUSKY optical probes and industrial communication devices.

The software supports current operating systems like Win7, Win Vista etc. and it comes in English and Turkish Language options. It is also possible to easily implement different language option to the system according to the user needs.

READY software is designed in modular format and available modules are:

- Serial Communication Module
- Ethernet Communication Module
- GPRS Communication Module
- Load Profile Module
- Settings Module

MODULES

READY software designed in a modular format as ribbon pages that have several advantages such as:

- Enabling to extend the software with different modules
- Upgrading to extra modules at any time
- Using the system with dedicated modules thus avoiding extra costs for extra modules

Each module has its own functionality and you may have one or more modules in your application depending on your license restrictions.

SERIAL, ETH AND GPRS COMMUNICATION MODULES

READY software lets you to read the displayed values on LCD in all type of electricity meters independent from brand and type that communicates in IEC62056-21 (formerly known as IEC1107) protocol. To read your meter via:

- Optical probe
- RS232 port
- RS485 port

With a direct communication cable and/or a communication device, Serial Communication Module should be used. To read your meter via:

- RS/ETH Serial Device Server
- RS/Fiber Optic Serial Device Server etc.

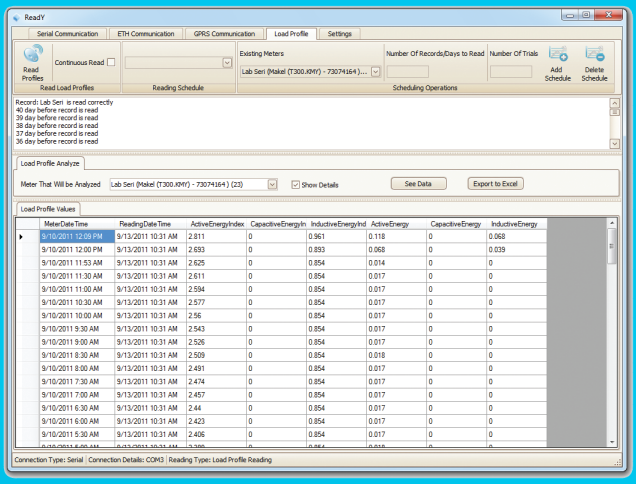
Over TCP/IP network, ETH Communication Module should be used. To read your meter via:

- GPRS/EDGE/3G Modem

Over TCP/IP network, GPRS Communication Module should be used.

Parameters for communicating in Serial Communication like COM port, initial Baud rate; in ETH and GPRS Communication like IP address, listening TCP Port, Final Baud Rate can be entered to the system to start reading the meter. In addition to that, entered parameters can be stored in the system along with data like meter location name, serial number for using the same parameters faster in the future.

All read out data can be shown in graphical interface and can be saved as text files for re-analyzing in the future. The data also can be printed in special formats or can be saved as PDF.



LOAD PROFILE MODULE

READY Software can read load profile values of selected meters such as Itron (formerly known as Actaris) SL7000 and ACE6000 series, Elster A1500 and A1350 series, Landis & Gyr ZMD and ZFD series (all mentioned brands are registered trademarks of mentioned companies), BLUSKY all types and some other meter types using communication structures of Serial, ETH and GPRS Communication modules. The profile values are stored in the system and can be analyzed according to the user needs in hourly or detailed format. Also the reports can be saved as Excel files.

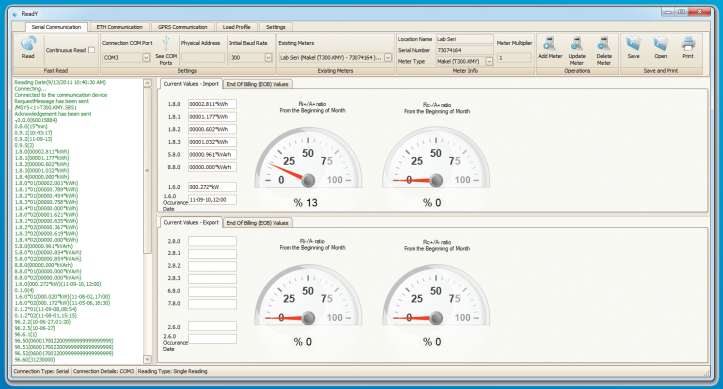
In order to integrate different brand of meters to the system, please contact our company.

SETTINGS MODULE

The basic module of READY software is the Settings module. It does not depend on the license type and it comes with the software in any license type. This module enables to select the language of the system, to manage the license of the system and gives general info about the software and its vendor.

PRICING

READY software comes free of charge for users who purchased BLUSKY communication devices. The modules and number of meters that could be saved in the system may vary according to the product that the customer purchased. Please contact our company for more information.



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