

Informational Sheet

TECHEON Wireless Data Link - BFM02 Series



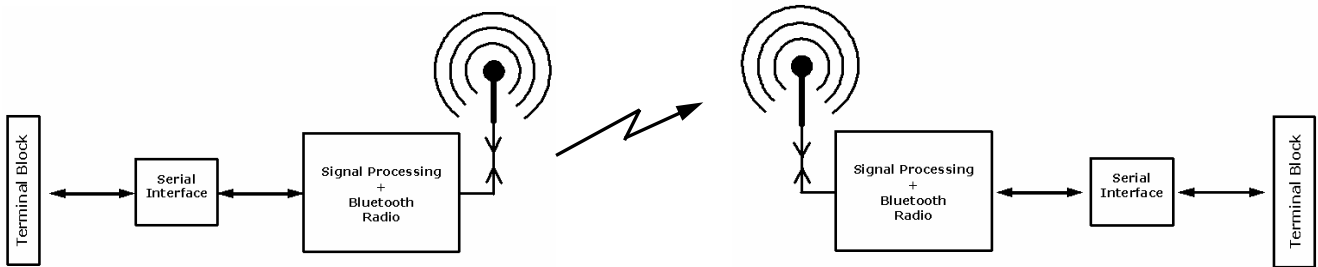
BFM02

This sophisticated system is conceived as a cost effective wireless data link for the transmission of serial data, using the Bluetooth Standard. It can be configured by the manufacturer in various kinds of connection topologies. The BFM01 transceivers can not be adopted by third or other Bluetooth devices, excepted if a third device is paired by using the available configuration software. The BFM02 devices are offering a high grade of data security. Due to the application of 79 transmission channels in the frequency hopping mode with 1600 channel alternations per second, the systems offers a high grade of immunity against interferences. No influences by W-LAN devices according to IEEE 802.11b/g. The high radio frequency output power of +17dBm (50mWatts) is representing a good range performance.

The high RF output power utilizes a high grade performance. The units operate within the 2.4GHz ISM-Band, what means that those units can be used licence free and free of charge. All Bluetooth Software Stacks are already integrated and certified.

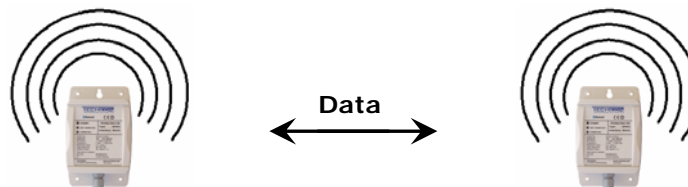
The installation housing (BFM02-1 series) has mounting holes for a fixation on walls or other objects and consists of the robust and weatherproof material of polycarbonate. It offers the insulation class **IP56** and is suited for outdoor use. Modules without the housing are offered as well (BFM02-0 series).

Block Diagram

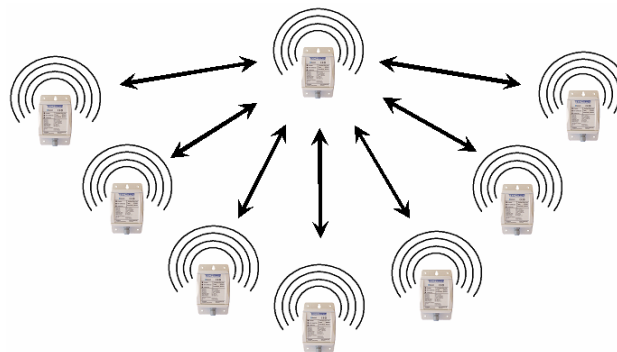


Topology examples

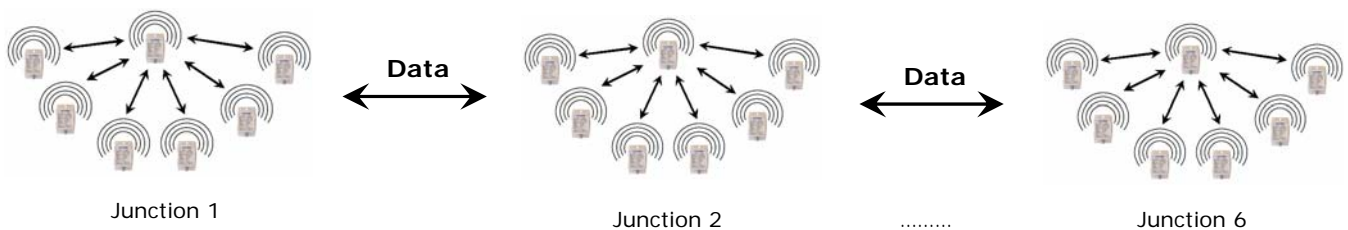
Point-to-point:



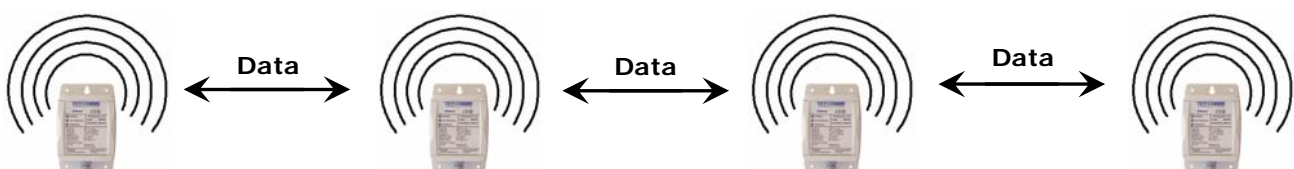
Wireless multipoint:



Network with up to 6 junctions:



Raising the range by employing a repeater:



Connecting to other Bluetooth devices (for e. g. PDA, USB-Stick):



Technical Data:

Technology:	Bluetooth Class 1, Qualification 2.0
Frequency:	2,402 – 2,480GHz, ISM-Band
RF-Channels:	79
Alternations per second:	1600
Max. Range:	approx. 200 meters in line of sight; also depending on data rate 30 – 50 meters (approx. 90 – 150 ft) inside of buildings. Depending on the wall construction
Available Interfaces:	RS232, RS422, RS485, TTY
Used Protocol:	7 or 8 Bit Transparent data mode or AT-commands
Baud rates:	300, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115.2k, 230.4k, 460.8k Other Baud rates on request; Baud rates can be selected by a configuration software
Handshake:	DTE (Hardware handshake) or DCE (no Handshake)
Profiles:	Serial Port Profile (SPP), Dial-up Networking Profile (DUN GW, DUN DT), Generic Access Profile (GAP)
Wireless Multi drop:	up to 7 subscribers can build a network; more junctions by cascading possible
Interface Connector:	Terminal Blocks, max. 1,0mm ² wires
Relief Fitting:	M12, max. cable cross-section 8,0mm
Power consumption:	max. 800mW
Voltage supply:	7 to 30V DC
Conformities:	EN 300 328-2 V1.1.1 EMC: EN 301 489 V1.3.1, EN 301 489 V17.1.1, EN 61000-6-2 Low Voltage Directive: EN 61131-2 Medical Electrical Equipment: IEC 60601-1-2
Type Approval:	ETS 300 328, ETS 300 826 FCC ID: PVH070201
RoHS:	Our products are conform to RoHS
WEEE-Registration No:	DE 64490879
Module BFM02-0	
Dimensions:	64 x 60 x 17mm, 2.52" x 2.36" x 0.67" (W x L x H)
Weight:	35g
Operating Temperature Range:	-25°C - +55°C (-13°F - +131°F)
Storage Temperature Range:	-30°C - +85°C (-22°F - +185°F)
Humidity:	5 – 90%, not condensing

Housing Version BFM02-1

Dimensions:	141 x 91 x 42mm, 5.55" x 3.58" x 1.56" (W x L x H), without Relief fitting
Weight:	180g
Insulation Class:	IP56
Material of housing:	Polycarbonate
Operating Temperature Range:	-25°C - +55°C (-13°F - +131°F)
Storage Temperature Range:	-30°C - +85°C (-22°F - +185°F)
Humidity:	5 – 90%

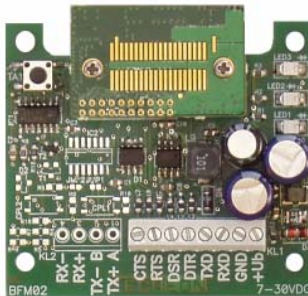
Ordering Information:

Purchase Orders: The units were delivered in configuration with the customers needs

Wireless Data Link Module BFM02-0-0, with RS232 Interface:	part No. 106.000.00
Wireless Data Link Module BFM02-0-1, with RS422 Interface:	part No. 106.000.10
Wireless Data Link Module BFM02-0-2, with RS485 Interface:	part No. 106.000.20
Wireless Data Link Module BFM02-0-3, with TTY Interface:	part No. 106.000.30

Wireless Data Link BFM02-1-0, IP56 housing, with RS232 Interface:	part No. 106.001.00
Wireless Data Link BFM02-1-1, IP56 housing, with RS422 Interface:	part No. 106.001.10
Wireless Data Link BFM02-1-2, IP56 housing, with RS485 Interface:	part No. 106.001.20
Wireless Data Link BFM02-1-3, IP56 housing, with TTY Interface:	part No. 106.001.30

Wall outlet power supply, 230V mains / 12V 250mA:	part No. 100.003.00
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Module BFM02-0-x
(Other versions with different component assembling)



BFM02-1-x
(IP56 Housing)

Pictures are not true to scale!

Technical changes reserved!

Release V10