



STAR-System™

RF Narrow Band
Solution for Mobile
Applications



General Description

The Datalogic STAR-System™ brings one of the widest range of wireless data capture devices into a business while taking advantage of the most interesting RF Narrow Band Solution for mobile applications. Many processes in the Distribution & Retail as well as the Manufacturing industry (such as Inventory, Picking, Shipping/Receiving, etc.) require data collection operations to supply/receive information to/from the ERP/WMS system. This data should be provided to the information system automatically and in real-time to assure the best accuracy, precision and efficiency, using a low-money investment.

STAR-System™ takes advantage of the most advanced Datalogic automatic data capture devices to provide a RF Narrow Band Solution featuring total mobility, real-time communication and affordability comparable to wired applications. Free from cable constraint and entanglement, many time consuming activities can now be executed quickly and directly on field exploiting the distinctive features of pocket-sized pen shaped and hand-held wireless terminals, as well as gun shaped mobile devices, to read linear and PDF stacked codes and offer instinctive and distance reading.

STAR-System™ offers scalable solutions to solve both simple applications and complex projects: taking advantage of its unique seamless active roaming capability even large plants requiring contiguous/non-contiguous large area coverage, or warehouses needing to overcome physical limits given by concrete walls, firewalls or metal shelving can profit from the STAR-System™'s impressive coverage capability. A wide range of mobile devices, an incredible price/performance ratio and quick return on investments are the key features of the STAR-System™: most returns on investment in RF Narrow Band Solutions are within one year due to distinct economic and business benefits such as productivity improvement, lower costs and a substantial competitive advantage for the company.

Data Capture Devices



Portable Data Collection Terminals

The Portable Data Collection terminals included in the STAR-System™ provide a variety of solutions to many applications. Thanks to its unique reading and communication features, the F734-E/RF pocket-sized laser handy terminal is suitable for many different intensive-use applications in both the industrial and non-industrial fields. Most Distribution & Retail and light industrial applications can take advantage of the F725-E/RF laser pistol grip terminal features, especially in warehousing/back office environments, while the F660-E/RF optical pen terminal is ideal for retail and commercial applications.



Hand-Held Readers

The Gryphon™ and Dragon™ Mobile Series cover a wide range of applications in both industrial and residential environments. The Gryphon™ Mobile Series addresses the needs of many retail applications, wherever mobility is a must, such as small warehousing, POS In-Store and Cash & Carry. The Dragon™ Mobile Series meets all the industrial sector's needs providing the highest level of robustness, reliability and durability. It represents the key to increase productivity and flexibility in any demanding working area.

Base Stations



STARGATE™, the core component of Datalogic's STAR-System™, is a narrow band radio base station that allows data transmission between several Datalogic RF devices and a host system (standard PC, Windows based) via a wireless network. A single STARGATE™ RF base station covers an area of about 8,000 m² outdoors, manages up to 2,000 mobile devices and supports up to 255 simultaneous active clients in real time. STARGATE™ is equipped with RS232 and RS485 high-speed serial interfaces. The RF base station can be connected to a standard PC to solve the simplest applications, taking advantage of the "RS232 stand-alone" layout. STARGATE™ exploits its seamless active roaming capability, combined with the "RS485 network configuration," to extend the covered area or to overcome physical limits given by concrete walls, firewalls or metal shelving.



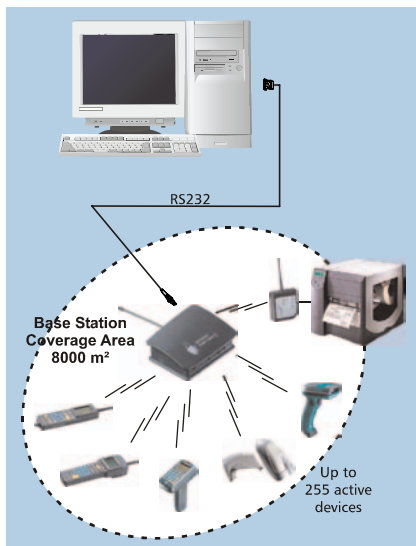
STAR-Modem™ is an industrial radio modem which enables wireless communication between Datalogic narrow band RF devices and a host system. In a basic point-to-point configuration, it transmits, via radio, any terminated string received through its RS232 port and vice versa. To satisfy various user needs and cover a wide range of applications STAR-Modem™ makes it possible for any wired RS232 device to become wireless. Bar code printers, industrial scales, industrial scanners can send/receive data to/from the Datalogic STAR-System™ like a RF device. Specifically conceived for tough industrial use, STAR-Modem™ can operate in all environmental conditions including outdoor applications, without affecting its functioning. Furthermore, it can be mounted on a forklift truck without compromising performance, while resisting vibrations and mechanical stress.

Technical Overview

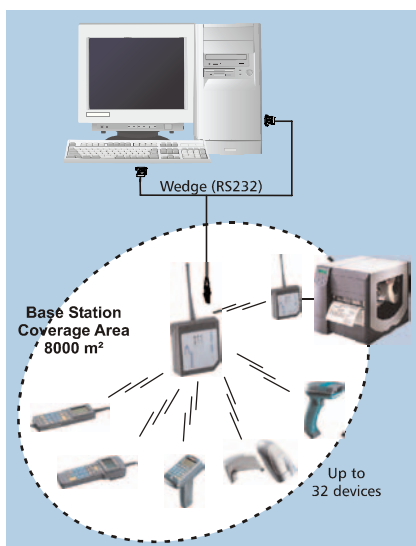
The STAR-System™ addresses both industrial & residential environments and takes advantage of the distinctive characteristics of the various RF devices supported. It satisfies and improves the performance of most common data collection applications requiring mobile automatic data capture (e.g. bar code) and real-time feed-back (e.g. price, description, location, etc.) to/from the ERP/WMS system. Any warehouse management process can take advantage of the STAR-System™ RF solution to increase the precision, speed and quality of many operations, constantly keeping the central host system updated. Real-time communication is really impressive and data collection operations performed by the wide range of different RF devices are faster than ever. The client-server architecture, in which each operation is driven by the RF device (client), combined with the CSMA/CA (Carrier Sensing Multiple Access/Collision Avoidance) access protocol type, boost overall performance.

STAR-System™ conforms with the European ETSI standard EN300 220-3 and does not require any operating license. It provides one of the most flexible wireless connections between data and business. With its industrial features, STAR-Modem™ offers both RS232 and Wedge connections, and can make RS232 wired devices become instantly wireless. By means of the STAR-GATE™, it is possible to take advantage of both the Stand-Alone and Network solutions and easily exchange data with any Windows based application. STAR-System™ is a reliable, fast and cost-effective solution with minimal installation costs. Moreover, to fully support sales offers and complete equipment installations an entire set of hardware accessories & software tools have been developed, such as the professional STAR-Box™ for network cabling and maintenance and STAR-Survey™ to perform a qualified site-survey service.

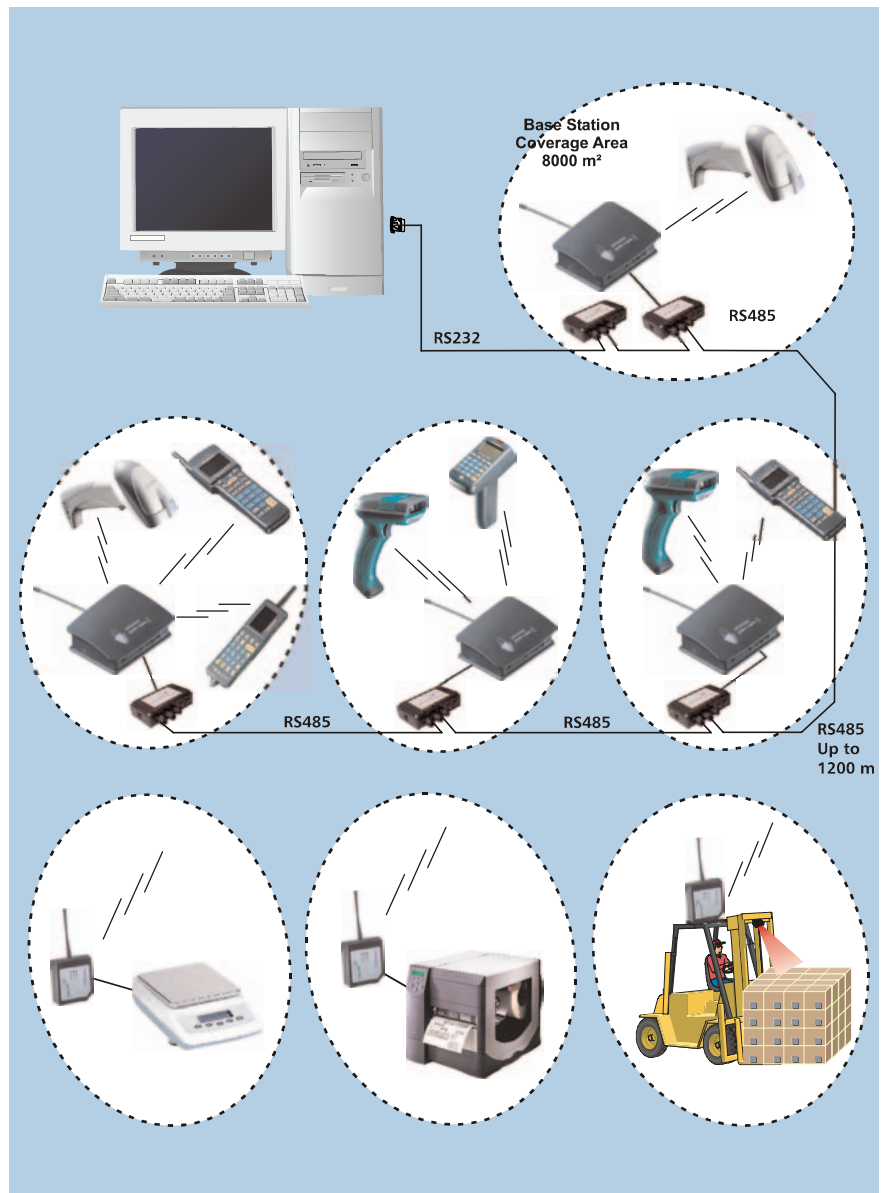
System Configuration



STAR-GATE™ Stand Alone RS232 configuration

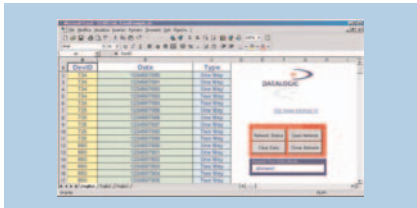


STAR-Modem™ Stand Alone Wedge (RS232) configuration



STAR-GATE™ network configuration with seamless active roaming (up to 16 base stations)

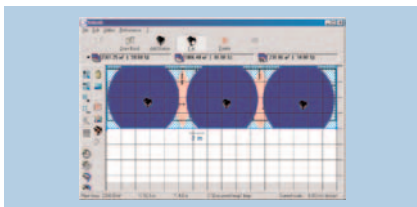
Main Software Tools



STAR-Link™ is a professional free-of-charge Automation COM object implementing a dual interface (it is possible to use it with Visual Programming Tools and Office applications). STAR-Link™ ActiveX administers, at a low level, the RF network based on the new Datalogic CSMA/CA protocol. It provides "properties" and "methods" to easily set-up and monitor communication, and "events" to manage incoming data (e.g. it is possible to associate each RF device with its own host application and establish a real-time connection between mobile operators and a company's database or ERP/WMS system). It can be downloaded free of charge from www.datalogic.com.



ForWin™ is a valuable software tool, dedicated to Windows programmers, to develop structured and personalized applications for STAR-System™ RF terminals (with no need for "C" programming). ForWin™ makes the RF terminal application software development easy and fast thereby improving service to the customers. ForWin™ is made up of 3 main components (a screen generator, interpreter and ActiveX) and is completely compatible with all Basic Line RF terminals and STARGATE™. The custom Windows application project can be done using the most common RAD languages and can take advantage of the most widespread databases.



RADAR™ is a unique Software Tool developed to help sales people, product & technical managers to easily sell, design and maintain any STAR-System™ Solution. It is possible to easily create the RF network layout design, estimate the overall system performance and manage the project data. Furthermore, RADAR™ provides the possibility of dramatically reducing sales time, while increasing offer accuracy. In fact, once the RF layout has been defined, it is possible to generate a complete system part list. It can be downloaded free of charge from www.datalogic.com.

Specifications

RADIO COMMUNICATION

RADIO FREQUENCY 433.92 MHz
 RADIO POWER OUTPUT < 10 mW
 RADIO RANGE* 50 m (164 ft)
 ROAMING SEAMLESS ACTIVE ROAMING
 ACCESS PROTOCOL CSMA/CA
 DATA TRANSFER RATE Up to 19,200 baud
 CONFORMITY European ETSI standard EN 300 220-3

MOBILE DEVICES

DEVICE TYPE Gryphon™ Mobile series; Dragon™ Mobile series; Formula 734-E/RF; Formula 725-E/RF; Formula 660-E/RF
 TOTAL DEVICES Up to 2,000 mobile devices
 ACTIVE DEVICES Up to 255 mobile devices for each STARGATE™

* The radio range depends on the environment characteristics.

SERIAL COMMUNICATION

STAND-ALONE Single STARGATE™; RS232 serial connection (max. length 15 m); RS485 serial connection (max. length 1,200 m); Communication speed up to 115,200 baud
 Single STARGATE™; RS232 serial connection (max. length 15 m); Communication speed up to 19,200 baud; Wedge emulation connection
 NETWORK CONFIG. Up to 16 STARGATE™ RF base Stations supported; RS485 serial connection (max. length 1,200 m); Communication speed up to 115,200 baud; Single power supply for multiple STARGATE™s

STARGATE™ SPECIFICATIONS

ELECTRICAL FEATURES Micro-controller 16bit CMOS; Program memory 128 Kb; Data memory 128 Kb; Supply voltage 9÷30 Vdc
 ENVIRON. FEATURES Working temperature 0° to +50 °C / 32° to 122 °F; Storage temperature -20° to +70 °C / -4° to 158 °F
 HUMIDITY 90% non condensing
 PROTECTION CLASS IP30
STARGATE™ MECHANICAL FEATURES
 DIMENSIONS 141x111x52 mm / 5.6x4.4 x2.0 in (without antenna)
 WEIGHT 210 g / 7.4 oz (without fixing plate)
 LED INDICATOR Power on/Data Comm., Communication/Downloading error, Firmware downloading



Corporate Headquarters
 Tel. +39 051/3147011
 Fax +39 051/726562
info@datalogic.com

Sales International (Central and South America, Far East, Middle East / Africa)
 Tel. +39 041/5986511
 Fax +39 041/5986550
sales-intl@datalogic.com

www.datalogic.com



Australia
 Tel. +61 3/95589299
 Fax +61 3/95589233
info@au.datalogic.com

Austria
 Tel. +43 2236/258820
 Fax +43 2236/258825
info@at.datalogic.com

Denmark
 Tel. +45 70/239970
 Fax +45 70/239972
info@dk.datalogic.com

France
 Tel. +33 1/60921111
 Fax +33 1/60921340
info@fr.datalogic.com

Germany
 Tel. +49 7026/6080
 Fax +49 7026/5746
info@de.datalogic.com

Italy
 Tel. +39 051/3147011
 Fax +39 051/3147170
sales@it.datalogic.com

Japan
 Tel. +81 78/3033400
 Fax +81 78/3033402
ldlmarke@zumi-datalogic.com.jp

Netherlands
 Tel. +31 346/572888
 Fax +31 346/568736
info@nl.datalogic.com

Spain
 Tel. +34 91/3837755
 Fax +34 91/3837962
info@es.datalogic.com

Sweden
 Tel. +46 40/385000
 Fax +46 40/385001
info@se.datalogic.com

United Kingdom
 Tel. +44 1582/464900
 Fax +44 1582/464999
info@uk.datalogic.com

USA
 Tel. +1 859/6897000
 Fax +1 859/3344970
info@us.datalogic.com

