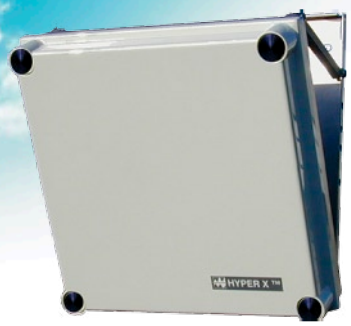
HYPER X ™

2.45 GHz

RFID for SECURITY

LMB 6033 / LMB 6034 / LMB 6035

Compact Readers - 2.45 GHz
Nominal Range* : 4m / 6m / 8m
Antenna Pattern : 45°x 45°



HIGH SPEED IDENTIFICATION

DEPENDABLE IDENTIFICATION

MULTIPLE READERS IN CLOSE PROXIMITY

EASY AND QUICK INSTALLATION

LOW ENVIRONMENTAL INTERFERENCE

INTERFACES :

WIEGAND 26bits,

ISO2 (Clock & Data)

RS232, RS422/485

I - INTRODUCTION

Balogh HyperX™ LMB6033, LMB6034, LMB6035 compact readers enable high speed identification of all tags in the HyperX™ product range. These readers are available in 4 meter, 6 meter and 8 meter guaranteed ranges.

A waterproof housing protects the electronics against harsh weather conditions. Its compact design contains all the functional parts of the reading unit: antenna, RF source, demodulator, processor, and interface module.
The reader can be mounted against a wall or metallic surfaces and should be mounted on a support that can be adjusted to direct the identification field towards the direction of the tags.
The HyperX™ compact readers have 2 optocoupled outputs that can be used to inform tag holders of identification by activating lights or gates..

II - OPERATING PRINCIPLE

Electromagnetic radiation characteristics in the 2.45 GHz frequency band allow high data transmission rates and directional antenna beams. Tag detection is therefore very rapid and relatively insensitive to environmental interference.

The HyperX™ tag is electro-magnetically inactive when outside of the reader's range. It's state-of-the-art feature (registered patent) is its capacity to reflect incident microwaves - a tag receiving a 2.45 GHz carrier will echo this signal, modulated by its individual identification code, back to the reader. The reader receives and processes this signal, sending the data to a host system via a standard interface.

III - COMMUNICATIONS

These readers can substitute for most of the traditional contact and proximity card readers.
Connection is made to the host system via the available standard data links.
Two standard data link types are available on the HyperX™ readers:
- TTL links (Open Collector) :
  ISO2, Wiegand (26 bits)
- Computer Serial Links :
  RS232, RS422, RS485

For computer serial links, a complete dialogue can be implemented utilizing the JBus/ModBus protocols (by interruption from readers or by polling from the system).

IV - INTERFACES

These readers dispose of:
- 2 optocoupled OUTPUTs that commute when the host system sends commands (via JBus), or automatically for each identification burst according to set-up.
- 2 optocoupled INPUTs that enable validation or interpretation of identifications in real time or in deferred mode through the on-board log.

V - ON-BOARD LOG

The HyperX™ readers allow the logging of the last 2000 events. The messages are dated and time-stamped. The interface system can retrieve the messages via the RS link and JBus protocol.

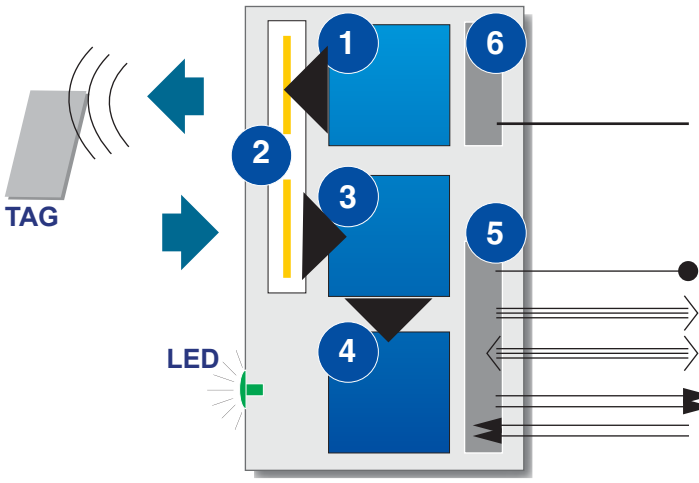
VI -POWER SUPPLY

These readers have an integrated regulator that is powered from 12 to 24VDC.
A "switch-off" device puts the reader in standby mode when the voltage is insufficient.
Connection to the mains is made with an external 18W power supply (not included)

RFID
INDUSTRY
LOGISTICS
RAILWAYS
SECURITY

BALOGH

ARCHITECTURE



1 - RF Source
2 - Antenna - I/O
3 - Demodulator
4 - Processing Unit
5 - Interfaces
6 - Voltage Regulator

12 to 24VDC
12W

Analog measuring point for the RF reception

1 TTL Link - Wiegand 26bits/ISO2 Protocol
1 RS232/422/485 - ModBus™ Protocol.

2 Outputs - Detection of Vehicles with a ground tag,É
2 Inputs - Enabling of identifications, Alarm, ...

TECHNOLOGY

APPLICATIONS

High-speed identification of vehicles
- Vehicles controlled in narrow and wide lanes
- Doppler effect filtered at high speeds.
- Well-defined reading field in the passing lane.

Fleet management
- Long range identification of vehicles
- High speed vehicle identification
- Multi-ID of drivers, trucks and containers

Railway convoys
- Reader adapted to environment
- Many readers can be installed in the same area
- On-board log for dated messages

Special vehicle access control
- Simultaneous ID of tag holders and their vehicles
- Tag identification in any position
- Robust design

CHARACTERISTICS**

Dimensions	300 x 300 x 85 mm
Weight	5 Kg
Color	Light Grey
Operating temperatures	- 20°C to +70°C
Storage temperatures	- 25°C to + 80°C
Protection level	I.P. 65
Relative humidity	90%, without condensation
Power supply	12 ~ 24 VDC - 18 W
Frequency band	2.45 GHz
Data Rate (Between Tag&Reader)	30000 bauds
Number of reading channels	31
Fault reading protocol	HDLC
Modulation type	BPSK
Rate of (Fault reading/Failure reading*)	1E-7/1E-4*
Radiated power (LMB 6033/34/35)	75mW/200mW/350mW
Nominal Reading distances* (LMB 6033/34/35)	4m/6m/8m
Maximum Reading distances (LMB 6033/34/35)	6m/10m/12m
Speed	100Km/h
Reading adjustment	20cm; 50%; 75%; 100%
Approvals	EN 60950, EN 300 489 1&3, ETS 300 440
	CE 0682

(*) Normal conditions of use
(**) Specifications do not form part of any contract and may be changed without notice

CAUTION

- Metallic surfaces or persons coming between tags and the reading antennas create shadow zones in the identification area.
- The proximity of a tag and a metallic surface or a person (<5mm) reduces the reading distance.

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