Airborne Laser Scanner System
Hardware 560

SYSTEM CONFIGURATIONS

− **Airborne Laser Scanner LMS-Q560**
   for Full Waveform Analysis
   Scanner Basic Configuration

− **Airborne Data Recorder DR560**
   for Full Waveform Analysis
   Data Recorder Package

− **Airborne Data Recorder DR560-RD**
   for Full Waveform Analysis
   Data Recorder Package

− **Accessories 560 / 680(i)**

Scanner Basic Configuration

Part-No. 13R09-00-300-00

Airborne Laser Scanner *RIEGL* LMS-Q560 for Full Waveform Analysis

Part-No. 13R09-00-003-00

- Laser transmitter & receiver front end
- Motorized mirror scanning mechanism
- Signal processing electronics
- Internal power supply electronics, input voltage 18-32 V DC

Detailed specifications and laser classification according to the latest datasheet LMS-Q560.

Interfaces, integrated

- TCP/IP Ethernet Interface, providing smooth integration of the LMS-Q560 data into a 10/100 MBit/sec, twisted-pair (TP) Local Area Network (LAN). The interface acts as a server allowing remote configuration, commanding, and online data acquisition of monitoring data via a platform-independent TCP/IP Ethernet Interface
- High speed interface to data recorder for acquisition of digitized waveform and scan data
- Synchronization input to GPS receiver, Serial interface RS232 and TTL input for PPS pulse
- Serial interface RS232, alternatively for configuration if no LAN is connected

Cables

- Part-No. 13R09-06-029-00 Power Supply Cable, 12 pole connector, 4 m
- Part-No. 02Z03-02-003-00 TCP/IP Cable M12-M12, 3 m
- Part-No. 02Z03-01-001-00 TCP/IP Cable M12-RJ45, 0.3 m
- Part-No. 02Z03-01-002-00 TCP/IP Cable M12-RJ45 cross over, 0.3 m
- Part-No. 02Z03-02-001-00 Serial Data Cable, RS232, 3 m
- Part-No. 02Z03-02-001-00 Serial Data Cable to GPS, RS232, 3 m
- Part-No. 02Z03-02-022-04 PPS Cable to GPS, BNC connector, 3 m

RiScanLib-2D Library   Part-No. 02Z06-02-012-00

For straightforward implementation of data acquisition in user applications, based on COM technology, including **demo program RiSCAN2D** for commanding and monitoring data acquisition and display with C++ source. 1 license bundled with serial number of scanner.

- Examples in Visual C++ and Delphi
- For operating systems WINDOWS XP Professional (recommended), WINDOWS 2000 SP2 or above

Software Maintenance for 12 months   Part-No. 02Z06-05-001-00

- Free software updates
- E-mail and telephone support

Firmware Maintenance for 12 months   Part-No. 02Z06-05-005-00

- Free firmware updates

User's Manual (in English language)

"Technical Documentation & Users Instructions"
including, between other things, instructions for: Safety, Installation, Operation, etc.

Scanner Hardware Option

SCAN SYNC Scanner Rotation Synchronization   Part-No. 02Z07-04-003-00

for synchronizing scan lines to external timing signal

- Synchronization of the data acquisition of a single laser scanner or several laser scanners to an external event pulse, typically the PPS-signal of a GPS receiver, whereas this event pulse can be fed to other units of a data acquisition system for synchronized operation (e.g. a camera is triggered with start of a scan line).

- Increasing the data acquisition speed by operating several laser scanners, as in some data acquisition systems the acquisition speed of a single laser scanner may be not sufficient. Operating several laser scanners scanning the same angular range requires the scanners to be synchronized to achieve a well-defined scan pattern and to avoid interference between the scanners.

Information contained herein is believed to be accurate and reliable.
However, no responsibility is assumed by *RIEGL* for its use.
Technical content subject to change.

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Airborne Data Recorder Package *RIEGL* DR560

Part-No. 13R09-06-100-00

Airborne Data Recorder *RIEGL* DR560 for Full Waveform Analysis

Part-No. 13R09-06-010-00

- Micro-controller based storage management
- Disk capacity 1000 GByte
- Internal power supply, input voltage 18-32 V DC
- Housing with integrated heater and air cooling
- Supports RAID 0 and RAID 1
- Integrated shock absorbers

Heavy-Duty Carrying Case CC-DR560

Part-No. 02Z05-01-018-00

- Dimensions 620 x 490 x 300 mm, with 4 hinged handgrips and wheels
- Splash-water proof
- Foam lined to fit shape of DR560, cables, etc.

Interfaces, integrated

- TCP/IP 100 Mbit Interface for data transfer over LAN
- USB 2.0 interface for data transfer to local PC
- High speed interface to LMS-Q560/LMS-Q680 for data transfer of digitized echo signals

Cables

- Part-No. 13R09-06-011-00 Power Supply Cable, 10 pole connector, 6 m
- Part-No. 02Z03-02-003-00 TCP/IP Cable M12-M12, 3 m
- Part-No. 02Z03-01-002-00 TCP/IP Cable M12-RJ45 cross over, 0.3 m
- Part-No. 02Z03-01-001-00 TCP/IP Cable M12-RJ45, 0.3 m
- Part-No. 02Z03-02-012-00 USB data cable, 3 m
- Part-No. 02Z03-02-023-00 High speed data link cable to LMS-Q560/LMS-Q680, 4.2 m

Power Supply Unit for Data Recorder   Part-No. 13R09-06-025-00

- For indoor use, input 110/220 V AC, output 24 V DC, 10 A max.

Firmware Maintenance for 12 months   Part-No. 02Z06-05-006-00

- Free firmware updates

User's Manual (in English language)

to be found in chapter "Accessories" of the manual "Technical Documentation & User's Instructions LMS-Q560/LMS-Q680", including, between other things, instructions for: Safety, Installation, Operation, etc.

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LASER MEASUREMENT SYSTEMS

Airborne Data Recorder Package *RIEGL* DR560-RD

Part-No. 13R09-06-200-00

Airborne Data Recorder *RIEGL* DR560-RD for Full Waveform Analysis

Part-No. 13R09-06-020-00

- Micro-controller based storage management
- Disk capacity 1000 GByte
  (2 integrated disc carriers each 500 Gbyte*))
- Internal power supply, input voltage 18-32 V DC
- Supports RAID 0 and RAID 1

*) Please note:
The disc carrier must always be used and/or replaced as a complete unit.
Arbitrary changing of the implemented hard discs absolves the manufacturer from
granting any guarantee or insurance whatsoever.

Heavy Duty Carrying Case CC-DR560-RD

Part-No. 02Z05-01-024-00

- Dimensions 525 x 437 x 217 mm
- Splash-water proof
- Foam lined to fit shape of DR560-RD, cables, etc.

Interfaces, integrated

- TCP/IP 100 Mbit Interface for device control
- High speed interface to LMS-Q560/LMS-Q680 for data transfer of digitized echo signals

Mounting Frames   Part-No. 13R09-06-022-00

- 2 mounting frames for installation into free PC bay

Cables

- Part-No. 13R09-06-016-00 Power Supply Cable, 10 pole connector, 5 m
- Part-No. 02Z03-02-003-00 TCP/IP Cable M12-M12, 3 m
- Part-No. 02Z03-01-002-00 TCP/IP Cable M12-RJ45 cross over, 0.3 m
- Part-No. 02Z03-01-001-00 TCP/IP Cable M12-RJ45, 0.3 m
- Part-No. 02Z03-02-023-00 High speed data link cable to LMS-Q560/LMS-Q680, 4.2 m

Power Supply Unit for Data Recorder   Part-No. 13R09-06-025-00

- For indoor use, input 110/220 V AC, output 24 V DC, 10 A max.

Firmware Maintenance for 12 months   Part-No. 02Z06-05-019-00

- Free firmware updates

User's Manual (in English language)

to be found in chapter "Accessories" of the manual "Technical Documentation & User's Instructions
LMS-Q560/LMS-Q680", including, between other things, instructions for: Safety, Installation,
Operation, etc.

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Further Accessories

Heavy-Duty Carrying Case CC-Q560   Part-No. 02Z05-01-019-00
Heavy-Duty Carrying Case CC-Q680(i)   Part-No. 02Z05-01-032-00

with 4 hinged handgrips and wheels, splash-water proof, foam lined to fit shape of laser scanner, cables etc., dimensions 820 x 520 x 290 mm

Heavy-Duty Carrying Case CC-DR560

Part-No. 02Z05-01-018-00
with 4 hinged handgrips and wheels, splash-water proof, foam lined to fit shape of DR560, cables, etc., dimensions 620 x 490 x 300 mm

Heavy-Duty Carrying Case CC-DR560-RD

Part-No. 02Z05-01-024-00
splash-water proof, foam lined to fit shape of DR560-RD, cables, etc.,
dimensions 525 x 437 x 217 mm

Power Supply Unit for Data Recorder

Part-No. 13R09-06-025-00
for indoor use, input 110/220 V AC, output 24 V DC, 10 A max.

Heavy-Duty Carrying Case for Transporting
the Removable Hard Disks of DR560-RD

Part-No. 02Z05-01-025-00
splash-water proof, foam lined to fit shape of two removable hard disks,
dimensions 270 x 246 x 175 mm

Additional Mounting Frame for DR560-RD

Part-No. 13R09-06-022-00
for PC installation

Additional Disk Carrier for DR560-RD

Part-No. 13R09-06-024-00
with integrated 500 GByte hard disk drive
Please note: The disc carrier must always be used and/or replaced as a complete unit.
Arbitrary changing of the implemented hard discs absolves the manufacturer from granting any guarantee or insurance whatsoever.

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