

Fly Beyond
To work from 150Km
Range max. 200Km



GCS D4R

Radio Control
Data Link
Mavlink Telemetry
PC Windows 10
Maps, navigation

Video

Monitor IPS LED 10" FULL HD

Analog Receiver 5.8Ghz

Digital Input HDMI

SMBTS

Vehicles

DRONES, UAV, MULTIROTORS, RPAS, VANT, UAV,
AIRCRAFT, HELICOPTERS, UUV, UGV, ROV, USV, ASV,
CARS, BOATS, ROBOTS...

XLRS
EXTENDED

www.xlrs.eu

Manufactured by DMD. Digital Micro Devices. ©2019

Embedded PC**Features**

Windows 10.
 Processor: Intel Quad Core of 1.8GHz.
 4GB RAM and 64GB flash.
 1 Touch screen 7".
 1 Keyboard.
 1 USB 3.0.
 1 USB 2.0.
 1 Wifi.
 1 Bluetooth.

Software included:

DMDStudio, XLRs devices configurator.

Mission Planner, Ground control station
 for Plane, Copter and Rover.

Aerosim, FPV simulator (Demo).

*You can add Others softwares.

Mini Keyboard behind the screen**Tilt Control of the PC Screen from Button**

XLRs
 EXTENDED

www.xlrs.eu

FPV Video Screen

Size 10,1"

High Brightness

Visible with
sunlight

RX 5.8Ghz

HDMI Input for
digital video RX



OSD Shows instrumental with Mavlink and XLRs Telemetry

Features

Receiver 5.8Ghz integrated.

Resolution: 1920 x 1080.

Aspect ratio: 16: 10

Brightness: 600cd / m2

Contrast: 1000: 1.

Controlled temperature.

Speakers.

1 Audio/Video input with jack connector.

1 RCBus Connector to update and configure
5.8Ghz receiver.

1 HDMI input to directly connect a digital video
or PC of GCSD4V2.



SPECIFICATIONS VIDEO RECEIVER

Frequency 5.8Ghz.

Channels 8.
5705Mhz, 5685Mhz, 5665Mhz,
5645Mhz, 5885Mhz, 5905Mhz,
5925Mhz, 5945Mhz.

Sensitivity -85dBm.

Antenna Internal.

GCSD4V2 Ready for analog and digital video
Systems.

IPS LED video screen 10.1" Full HD,
high brightness, high contrast and
anti-glare, makes it an excellent
screen to see on indoors and outdoors.

XLRs
EXTENDED

www.xlrs.eu

Total Control**Features**

- RC Control independent of the PC.*
- 3 Processors: RC Control and Joysticks.*
- 2 Joysticks RC: professional and sensitive.*
- 1 LCD screen easy-to-read, high contrast.*
- 2 OLED screen Black/White for viewing data.*
- 12 Configurable buttons.*
- 3 Encoders with push button.*
- 2 Micro Joysticks for trims and functions.*
- 2 Potentionmeters.*
- 2 Pushbuttons.*
- 4 Switches with 2 positions.*
- 2 Switches with 3 positions.*
- 1 Buzzer: Alarms, low battery, fail safe, etc.*
- 1 RCBUS: Connection to Video RX XLRS, second XLRS TX and future XLRS devices.*

*Start-up Key.**Digital Voltmeter.**Fuse 5A.**12V connector for Video Screen.**2 Safety Switch with protective cover for some specific safety functions.***XLRS**
EXTENDED

www.xlrs.eu

Battery

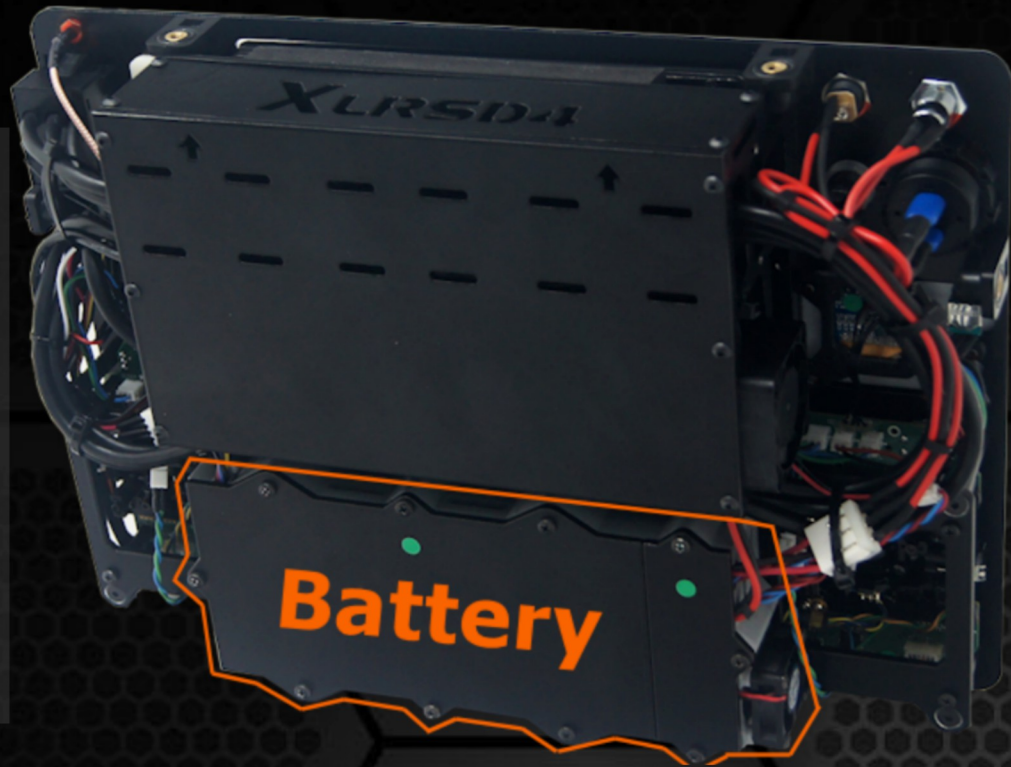
Features

Lipo 3S/11.1V/5Ah.

Duration approx: 2'5-3h.

Charger 1A.

Input 12-24V.



*Shows battery status from
digital voltmeter or central screen*



Charger included 110 / 220V AC 50Hz



It has a 5A fuse to protect the GCS

XLRS
EXTENDED

www.xlrs.eu

Suitcase

Robust

Dustproof

Water resistant

IP67 certified



Features

*Temperature controlled with fans.
Certified with STANAG 4280, DEF STAN 81-41
and ATA 300 standards.
Automatic air pressure compensation valve.
Temperature resistant from -30 ° to + 80 ° C.*

*Rubber handle for easy transport.
2 eyelets for padlocks (Ø 7.62 millimeters).
Optional accessories: transport belt.
Dimensions: 36.5 x 29.4 x 17 centimeters.
Total Weight: 9Kg.*

Software - Mission Planner



Plan, save and load autonomous missions into your autopilot with simple point-and-click way-point entry on Google or other maps.

Compatible with autopilots that use Mavlink Protocol: Pixhawk, APM, Pixhawk Cube, Pix32 and more.

Features

Connect the autopilot telemetry to the XLRs systems.

Setup, configure, and tune your vehicle for optimum performance.

Download and analyze mission logs created by your autopilot.

Monitor your vehicle's status while in operation.

Record telemetry logs which contain much more information than the on-board autopilot logs.

View and analyze the telemetry logs.



Software - AEROSIM

Training Simulator

Learn to fly with the navigation instrumentation of the XLRs system

Integrated Plugin OSD644DMD



Realistic Drone Simulator for the beginner pilot who needs to practise many hours before flying the real thing.

Features

Training Program for the beginner.

Flight Modes: Manual, Attitude, GPS.

On-board Camera.

Stabilized Camera Gimbal.

All common Aircraft types: Trainer, Sport, Aerobatic, Glider, Delta Wing.

Power: Glow, Gas, Electric, Jet.

Functions: Flaps, Brakes, Retractable Landing Gear.

and much more...



Software - DMDStudio

Compact, you can use multiple instances.

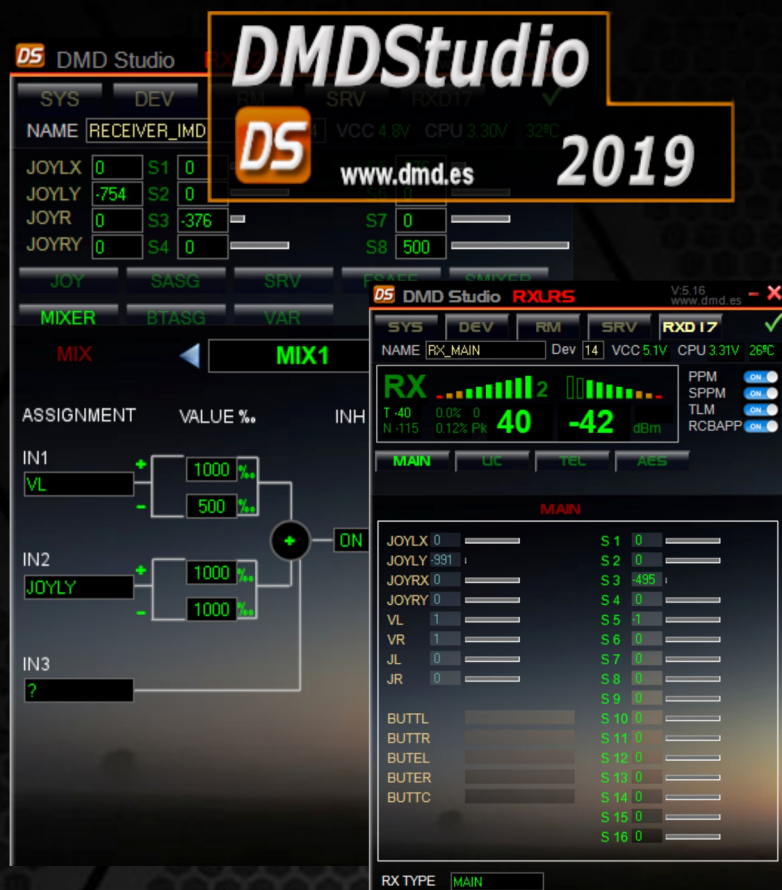
Multiple simultaneous DMD devices.

Auto adaptable to DMD devices.

DMD Alpha command language.

Graphics and text console.

Free for DMD systems users.



Configuration software and utilities for all DMD products manufactured since 2014.



Features

For Windows 7 or higher.

Device firmware update (BOOT).

Connectivity Prepared for IOT devices. (Internet of things).

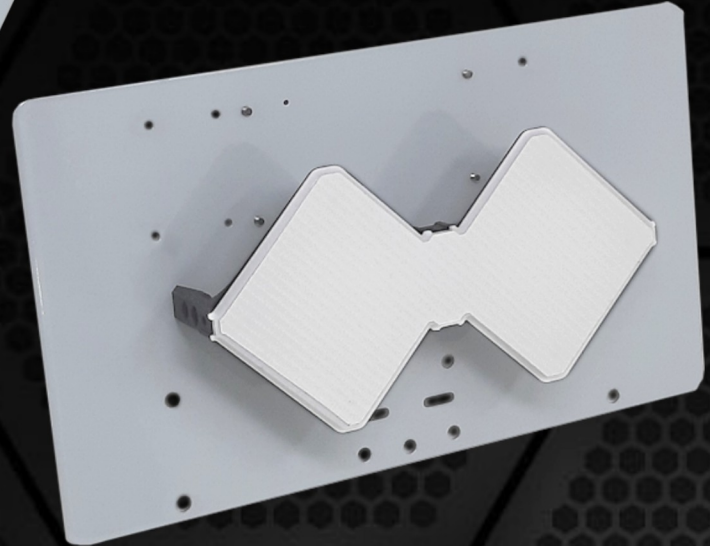
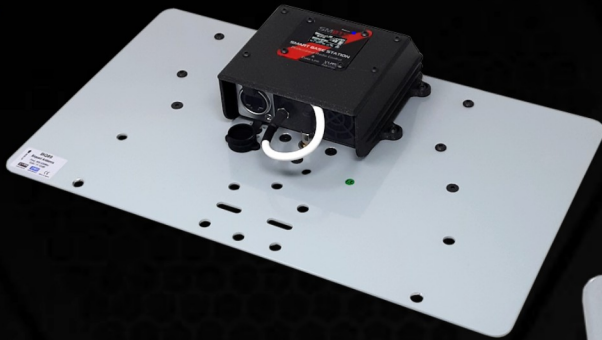
Multiple communications ports: COM, USB, UDP, TCP.

Several TCP and UDP servers depending on the device.

Connection to the DMD Cellular software.

Configuration of the specific characteristics of each device.

CE 869Mhz
FCC 902Mhz
Custom...



SMBTS-89. Smart Antenna

Is a transmitter of Radio Control and Telemetry mounted on a biquad antenna of 9dBi (BQ89) that significantly improves performance, safety and range in GCSD4RV2, so you can place the antenna further and without loss of RF.

To the whole (SMBTS + BQ89 Antenna) we call it Smart Antenna.

TECHNICAL SPECIFICATIONS XLRS RADIO

Range of Work	150Km.
Maximum Range	200Km.
Frequency	CE: 869,4-869,65Mhz. FCC: 902-927,5Mhz. CUSTOM: 433Mhz, others...
Multi Band	SMBTS-89: 866, 868, 902, 915, 950Mhz.
Max RF power	CE: +27dBm. FCC: +30dBm. CUSTOM: +30dBm.
Antenna	Biquad 9dBi 866-920Mhz.
Sensitivity max	-116dBm @50kb.
Modulation	50 or 100Kb. FHSS. 2-GFSK.
Stability	TXCO +-1ppm.
Antenna Connector	SMA-Female.
Encryption	AES 128 bits.
Connectivity	RJ45.
Upgradable & Configurable	DMDStudio Soft.

CONNECTION TO GCSD4RV2

The Smart Antenna SMBTS is connected with a CAT5E ethernet cable or higher to GCSD4RV2, the cable can measure from 3 to 10m or more allowing a more comfortable installation of the antennas, especially in vehicles or for another type of application that needs to have the antennas away from GCSD4RV2.

MAXIMUM RANGE IMPROVEMENT WITH SMBTS

We have avoided RF losses that had the previous GCSD4 V1, when the antenna was connected using the coaxial cable.

Now the SMBTS transmitter is close to the antenna without using extenders and we avoid RF losses.



SMBTS-43. Smart Antenna

Is a transmitter of Radio Control and Telemetry mounted on rectangle moxon of 5dBi (MX43) that significantly improves performance, safety and range in GCSD4RV2, so you can place the antenna further and without loss of RF.

To the whole (SMBTS + MX43 Antenna) we call it Smart Antenna.

TECHNICAL SPECIFICATIONS XLRS RADIO

Range of Work	150Km.
Maximum Range	200Km.
Frequency	433Mhz. CUSTOM: others...
Multi Band	SMBTS-43: 433Mhz.
Max RF power	+30dBm. CUSTOM: +30dBm.
Antenna	Moxon 5dBi 400-480Mhz.
Sensitivity max	-116dBm @50kb.
Modulation	50 or 100Kb. FHSS. 2-GFSK.
Stability	TXCO +-1ppm.
Antenna Connector	SMA-Female.
Encryption	AES 128 bits.
Connectivity	RJ45.
Upgradable & Configurable	DMDStudio Soft.

CONNECTION TO GCSD4RV2

The Smart Antenna SMBTS is connected with a CAT5E ethernet cable or higher to GCSD4RV2, the cable can measure from 3 to 10m or more allowing a more comfortable installation of the antennas, especially in vehicles or for another type of application that needs to have the antennas away from GCSD4RV2.

MAXIMUM RANGE IMPROVEMENT WITH SMBTS

We have avoided RF losses that had the previous GCSD4 V1, when the antenna was connected using the coaxial cable.

Now the SMBTS transmitter is close to the antenna without using extenders and we avoid RF losses.

Professional Receiver Ultra Long Range RC & Telemetry

CE 869Mhz
FCC 902Mhz
Custom...



Radio Control & Telemetry

Powerful and Safe with control

New Concept

Configuration of the mixes, button activation and assignment of encoders are performed in the RX and not in the TX XLRs as is usual in amateur RC systems.

TECHNICAL SPECIFICATIONS

Range of Work	150Km
Maximum Range	200Km
Frequency	CE: 869,4-869,65Mhz. FCC: 902-927,5Mhz. CUSTOM: 433Mhz, others...
Multi Band	RXLRs-89-200: 866, 868, 902, 915, 950Mhz. RXLRs-43-200: 433Mhz.
Max RF power	CE: +27dBm. FCC +30dBm. CUSTOM: +30dBm.
Sensitivity max	-116dBm @50kb.
Modulation	50 or 100Kb. FHSS. 2-GFSK.
Stability	TXCO +-1ppm.
Encryption	AES 128 bits.
Voltage	5V. Min 4.5V. Max 6Vcc.
Consumption	Standby 70mA. Max. TX(500mW) 540mA@12mS.
Connectivity:	RC, Telemetry, USB, RCBUS, SPPM, COM5, MODEM.
Dimension:	70,78 x 35,75 x 14,78mm.
Weight:	30g (Without ant.) 47g (With ant. 5dBi).

FEATURES

- Control max up to 16 CH RC.** Using the 7CH physical and the autopilot CH through SPPM in CH7.
- 8 Multifunction outputs** for RC servos.
- 1 SPPM / CPPM:** 12 RC channels in CH7.
- 1 Micro USB:** Update and configuration.
- 1 i2C:** To connect future devices, Oled display, sensors.
- 1 RCBUS:** Connect XOSD for serial communication.
- 1 MODEM port:** MAVLINK Telemetry and transparent radio modem.
- 1 Red Led:** TX RF or Transmit packets.
- 1 Blue Led:** Link RF or Received packets.
- 1 Connector antenna RC:** SMA-Female.

Compatible with XLRs devices:

TX: BTSD1, XPAD2-2017, XPAD2 V2, XPAD3, GCSD4, GCSD4V2...
OSD: XOSD, XOSDV2, XOSD3...

Hardware improvements:

Microcontroller with double memory FLASH, RAM and Eeprom.
Improved PCB, more protection in general.
Improved box, more robust, screws on inserts.
Internal protection against reverse polarity on + 5V servo connectors.
EDS protection and RF Filters in USB.
ESD protection (static) for all pins including servos.
Pins servos protection against short circuits and overloads.

MAVLINK protocol, compatible with autopilots:

APM, Pixhawk, PX4, etc.
No additional radiomodem is required.

Compatible with autopilots with S-BUS?

Yes, depending on the autopilot you can connect directly to CH7 (SPPM) or you can use a PPM to S-BUS converter.

**Some product features are optional.*

XLRs
EXTENDED

www.xlrs.eu

Manufactured by DMD. Digital Micro Devices. ©2019



CONTENT

- 1- GCSD4RV2, Portable Ground Control Station R V2.
- 1- SMBTS-89, Smart Antenna SMBTS + BQ89, Biquad antenna 866-920Mhz 9dBi.
- 1- RXLRS-89-200, Professional receiver RC and Telemetry.
- 1- DCDC38/5VRC. DCDC adjustable step down module, INP 4-38V, OUT 1.25-32V(Adjustable), Out current 5A.
- 1- ANTGSM900, Omnidirectional antenna 868-928Mhz 5dBi.

ACCESSORIES

- 1- Mini bluetooth keyboard.
- 1- LI-PO Battery Balance Charger, 40W 3S/4S.
- 1- LAT54_SMAH/SMAM. Cable SMA-Female to SMA-Male, 540mm.
- 1- CABLE_SERVO_HH. Cable Servo RC Female to Female.
- 1- CABLE_EXT_SERVO_MH. Extensor Cable Servo RC Male to Female.
- 1- CABLE_PX4_RX. Adapted Cable for Pixhawk-RX.
- 1- CABLE_MJJ. Cable Audio Stereo MiniJack 3.5M/M 1m.
- 1- CABLE_USB/MICROUSB. Cable USB-A Male to Micro USB-B Male, 2m.
- 1- LAT3_SMAH/SMAM. Pigtail Cable SMA-Female to SMA-Male, low loss, 3m.
- 1- CCAT5E. Ethernet CAT5e with RJ45, 3m.
- 1- Clamp U Bolt & U Block for BQ89 antenna tripod.





CONTENT

- 1- GCSD4RV2, Portable Ground Control Station R V2.
- 1- SMBTS-43, Smart Antenna SMBTS + MX43, Moxon Rectangle Antenna 400-480Mhz 5.5dBi.
- 1- RXLRS-43-200, Professional receiver RC and Telemetry.
- 1- DCDC38/5VRC. DCDC adjustable step down module, INP 4-38V, OUT 1.25-32V(Adjustable), Out current 5A.
- 1- ANTGSM43. Omnidirectional antenna 433Mhz 5dBi.

ACCESSORIES

- 1- Mini bluetooth keyboard.
- 1- LI-PO Battery Balance Charger, 40W 3S/4S.
- 1- LAT54_SMAH/SMAM. Cable SMA-Female to SMA-Male, 540mm.
- 1- CABLE_SERVO_HH. Cable Servo RC Female to Female.
- 1- CABLE_EXT_SERVO_MH. Extensor Cable Servo RC Male to Female.
- 1- CABLE_PX4_RX. Adapted Cable for Pixhawk-RX.
- 1- CABLE_MJJ. Cable Audio Stereo MiniJack 3.5M/M 1m.
- 1- CABLE_USB/MICROUSB. Cable USB-A Male to Micro USB-B Male, 2m.
- 1- LAT3_SMAH/SMAM. Pigtail Cable SMA-Female to SMA-Male, low loss, 3m.
- 1- CCAT5E. Ethernet CAT5e with RJ45, 3m.
- 1- Plastic piece to place MX433 on tripod.



GCSD4V2 Manual:

Manual GCSD4RV2.

Manual RXLRS.

Default configuration D4 System.

First steps (Quick guide).

XLRS connection diagrams.

DMDStudio Manual:



Learn more about:

Servos XLRS.

XLRS objects.

XLRS Radio Links and Radio Control. Basics notions.

Range, RSSI, Noise in environments UAV – Drones.

Range Test XLRS.

RF Band ISM-ICM.

* The information and images shown in this datasheet, are only referential and may differ from the final product.

* The ranges shown are estimates and in optimal conditions.

**Some product features
are optional.*

XLRS
EXTENDED

www.xlrs.eu