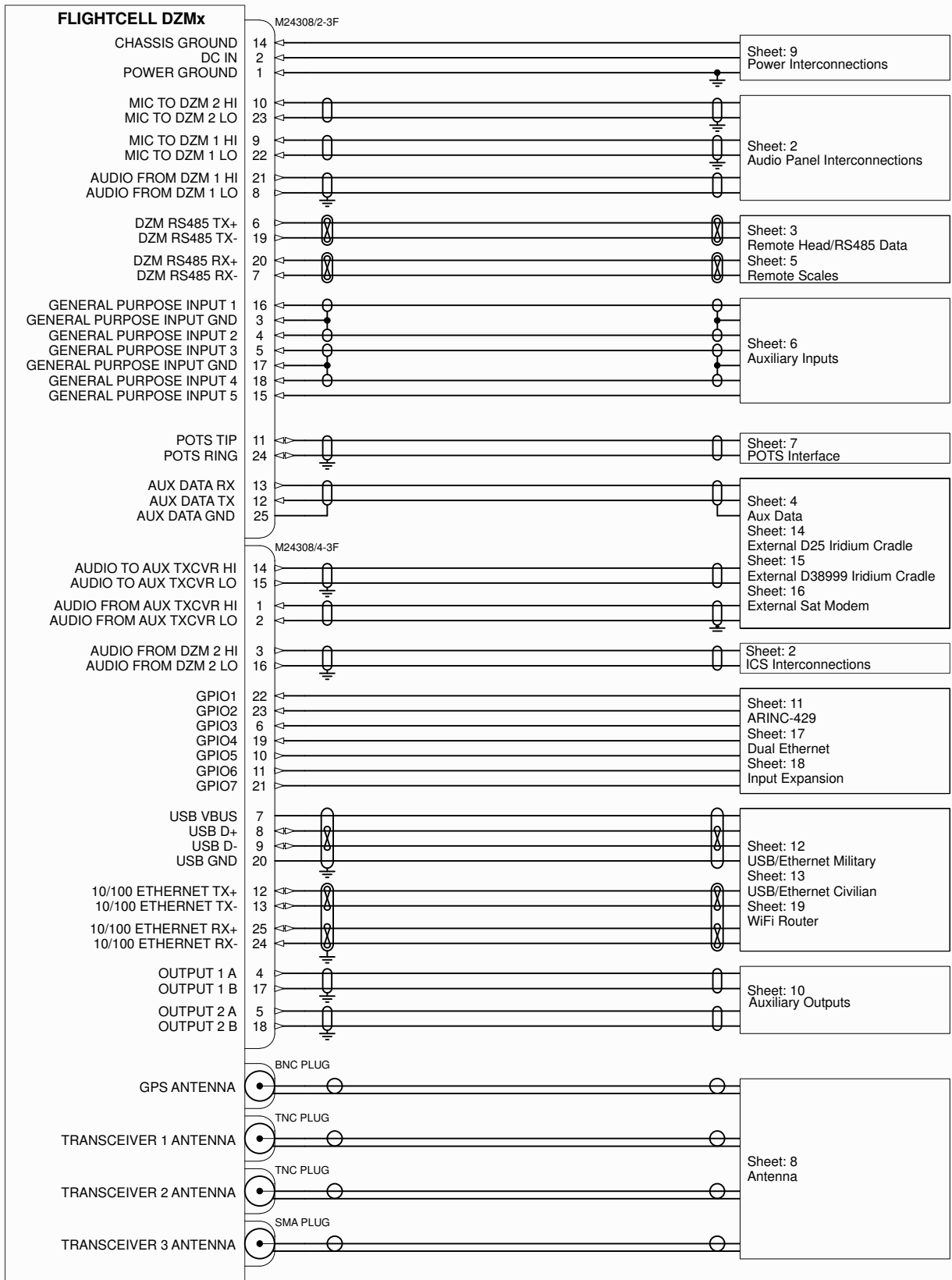
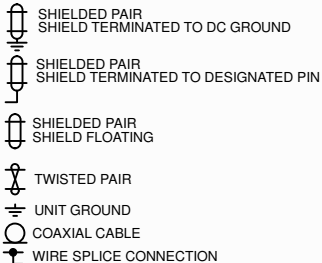


DZMx Civilian Interconnect Drawings

Sheet 1 - DZMx



- NOTES:**
- ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
 - UNIT GROUND IS INTERNALLY CONNECTED TO UNIT CHASSIS
 - SYMBOL DESIGNATIONS

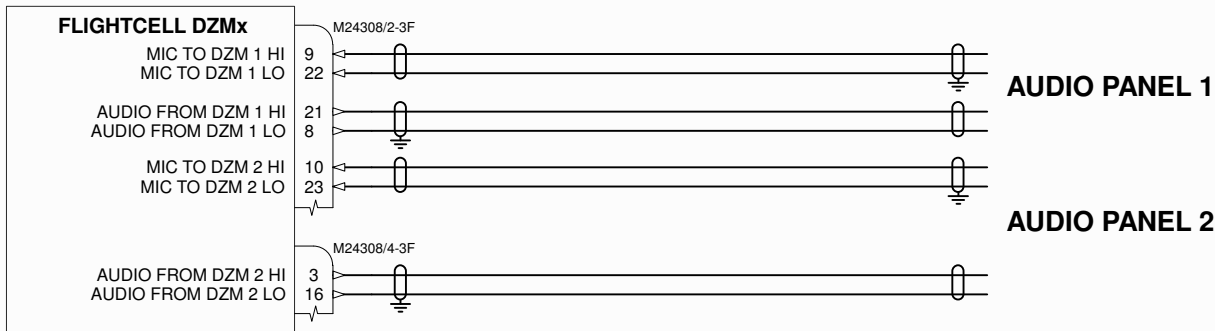


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Interconnect Drawings 1 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Top Level_SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL_DZ4_001

DZMx Civilian Interconnect Drawings

Sheet 2 - Audio Panel Interconnections



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- UNIT GROUND

Notes on connection to Aircraft Audio System:

The preferred method of connection is where the Aircraft Audio System provides a Cellphone port or similar. In this case the audio input should be configured as unbiased.

Alternatively, connection may be made to an unused radio port. For some systems it may be necessary to use the biased voltage on the DZM input (if the system expects mic bias from the radio); otherwise the input should be configured as unbiased.

The DZM may otherwise be connected to a headset port - in this case the input bias voltage should be enabled.

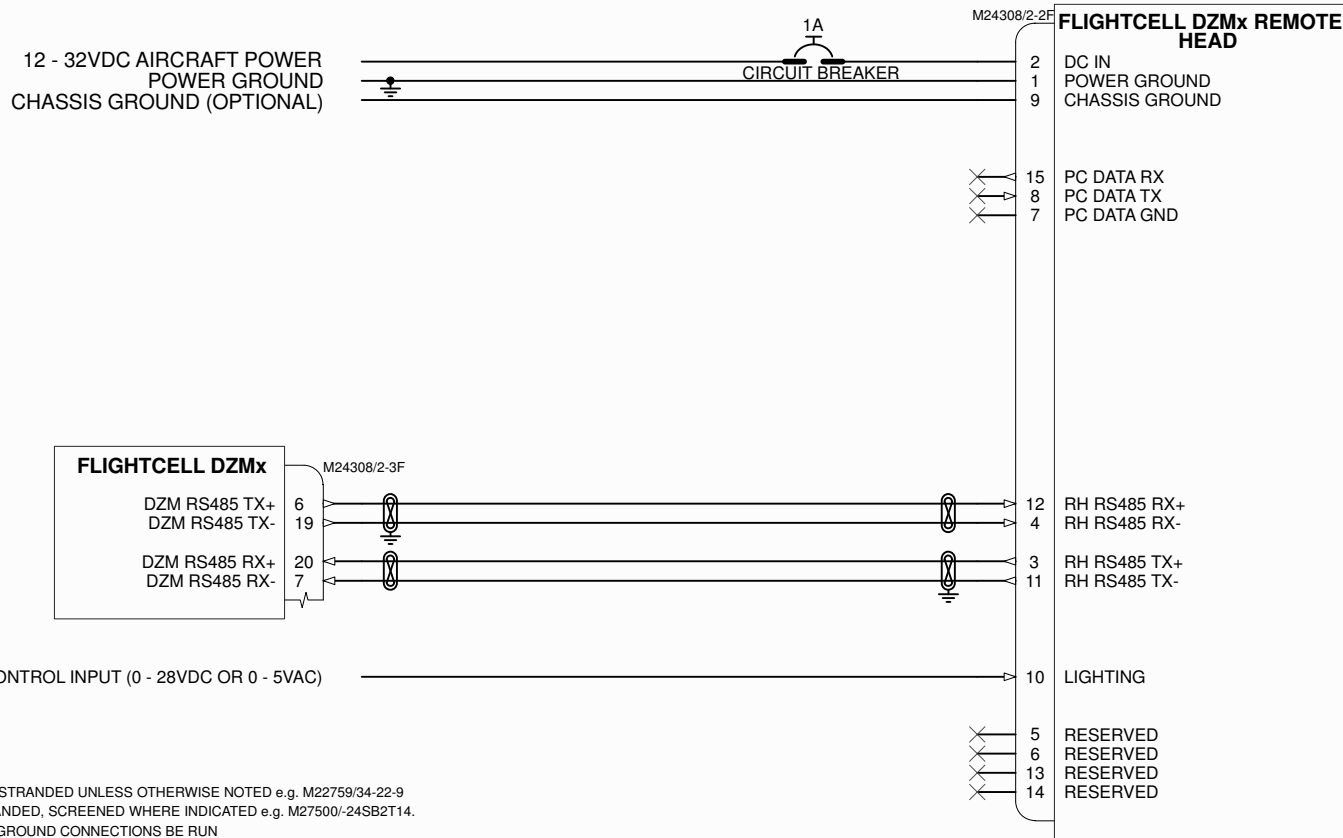


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Audio Panel Interconnections 2 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: ICS Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 3: Remote Head/RS485 Interconnections



NOTE:

The Remote Head requires only the connections shown in this drawing.

The secondary lighting input need be fitted only if the display backlight brightness needs to be controlled externally. Otherwise the brightness can be set to a fixed level via the menus.

This drawing shows the DZMx connected to a Flightcell Remote Head. The RS485 can also be used for other applications, contact Flightcell for details.

NOTES:

- ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
- IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
- SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- TWISTED PAIR
- UNIT GROUND
- WIRE SPLICE CONNECTION



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REV	DESCRIPTION	DATE	APPD	Date:	8/03/2018	Drawing No:	WRL DZ4 001
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product:	Flightcell DZMx		
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet:	Remote Head/RS485 Interconnections 19		
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue:	7.0		
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By:	James Glasgow		
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename:	Remote Head Interconnections.SchDoc		

DZMx Civilian Interconnect Drawings

Sheet 4 - Aux Data Interconnections



Note: the diagnostic port can be fitted for in-situ maintenance purposes. If fitted it is highly advisable to locate this connector such that it is readily accessible.

It is recommended that when connecting to a PC the loopback connections on RTS, CTS, DCD, DTR and DSR are made as shown.

This port can also be used to connect to an external Transceiver.

NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

WIRE SPLICE CONNECTION

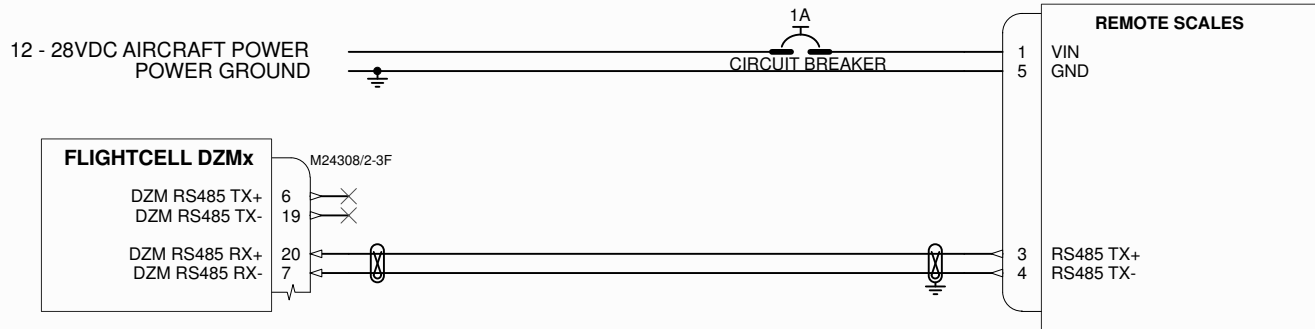


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Aux Data Interconnections 4 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Aux Data Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 5: Remote Scales Interconnections



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION



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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Remote Scales Interconnections5 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Remote Scales Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 6 - General Purpose Inputs

Lighting input:
 If there is a requirement to dim the DZM display backlight along with other cockpit lighting, a reference voltage may be fed into this input. Different aircraft typically use either a 0-28VDC range. The DZM lighting input can be calibrated to suit the particular input requirements of the installation.

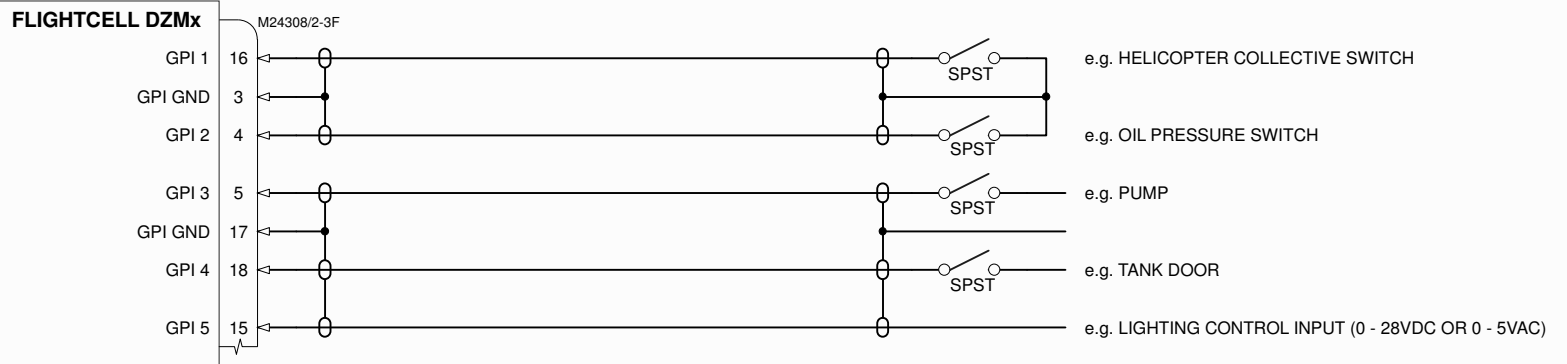
Inputs:
 The input's are all configurable as either variable or switched with adjustable thresholds.

The inputs nominal operating range is 0-28VDC, but they will tolerate an input range of -32 to +32VDC.

If these inputs are used, they need to be enabled on the DZM.

The inputs can be used for other purposes depending on the firmware configuration; contact Flightcell for advice on any specific applications.




All inputs are referenced to a common ground which is connected internally to the DZMx to Chassis ground. Therefore the aircraft chassis ground can be used for the input return signal if required.



NOTES:

- ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
 OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.

2. SYMBOL DESIGNATIONS

-  SHIELDED SINGLE CONDUCTOR
-  SHIELD TERMINATED TO DESIGNATED PIN
-  WIRE SPLICE CONNECTION



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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: General Purpose Inputs 6 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Auxiliary Inputs.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 7 - POTS Interface

POTS Interface:

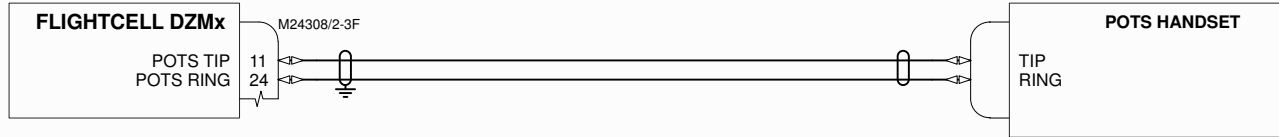
The POTS interface is designed so that a standard 2-wire telephone handset can be wired into the DZMx and used to make calls via the DZMx transceivers (if fitted).

It can also be used to communicate with the aircraft's flight crew.

Note:

It is important that the DZM is set to the appropriate 2-wire impedance setting for the phone handset that is connected. The DZM has several different impedance settings, designed to work with the impedance of most countries telephone handsets.

Failure to correctly set the 2-wire impedance can cause echo to be heard by the person at the remote end of the call from the DZM.



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- UNIT GROUND



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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: POTS Interface 7 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: POTS Interface.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 8 - Antennas

NOTES:

The Iridium/GPS antenna should be placed horizontally on the upper surface of the airframe such that it has an unobstructed view of the sky. The cell antenna should be placed on the underside of the aircraft; orientation is less critical.

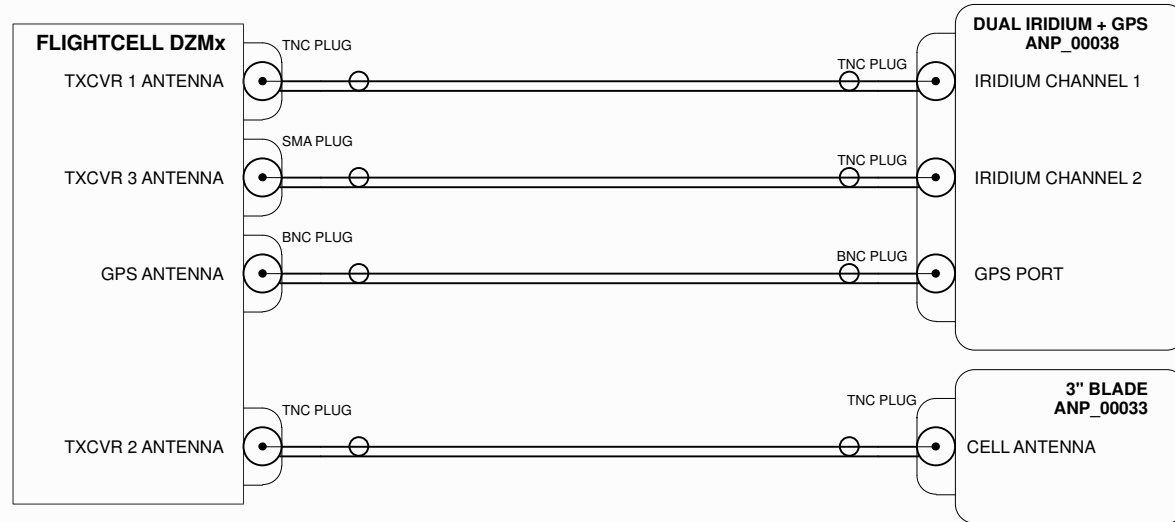
Selection of coax cable depends on the lengths of the cable runs. See the Installation and Configuration manual for cable recommendations.

Where practicable the antenna should be placed well clear (at least 500mm and preferably 1000mm) from any other antenna operating at similar frequencies.

The setup shown is an installation with two Iridium transceivers and one Cellular transceiver.

The third transceiver is optional, standard DZMx's only have two transceivers.

For standard installations with one Iridium transceiver and one cellular transceiver, a standard Iridium + GPS antenna is available (p/n ANP_00012).



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

○ COAXIAL CABLE



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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Antennas 8 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Antenna.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

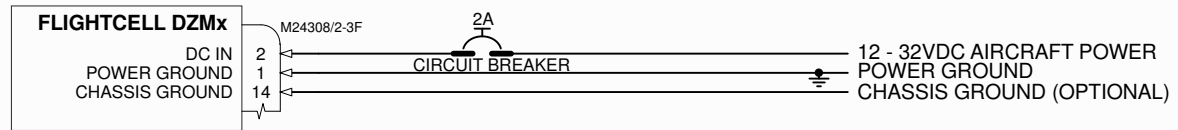
DZMx Civilian Interconnect Drawings

Sheet 9 - Power Interconnections

NOTES:

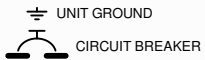
In order to minimise ground loops, it is recommended that the ground connections from the DZM, external satphone or cell modem (if fitted) are run seperately to a single grounding point, ideally the same point as used by the ICS.

It is recommended that DC power be taken from the emergency (primary) power bus, particularly if engine stop/start events need to be captured.



NOTES:

1. POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
- OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/24SB2T14.
2. SYMBOL DESIGNATIONS



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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Power Interconnections 9 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Power Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 10 - Auxiliary Outputs

NOTES:

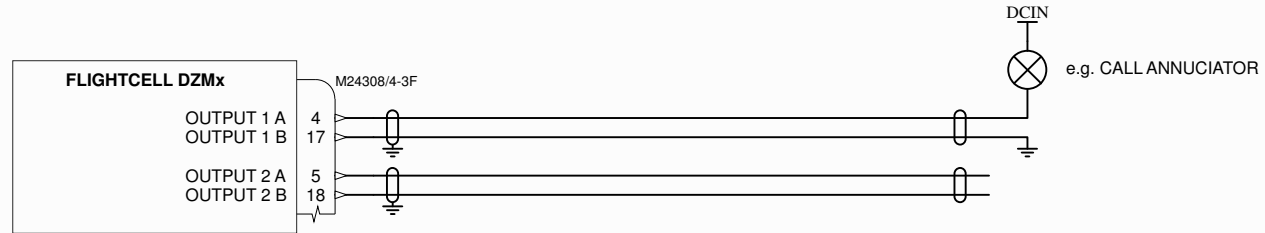
The auxiliary outputs can be used to switch external loads, e.g. annunciator panel indicator.

Each output is capable of switching a 500mA load. The voltage applied to either terminal must not exceed 60VDC.

Each output provides 1500Vrms isolation between the output terminals and the DZM internal circuitry.

When the output is on Terminal A is connected to Terminal B.




The outputs can be configured for a variety of purposes e.g. a call annunciator.



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
- OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.

2. SYMBOL DESIGNATIONS

-  SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN
-  UNIT GROUND
-  WIRE SPLICE CONNECTION

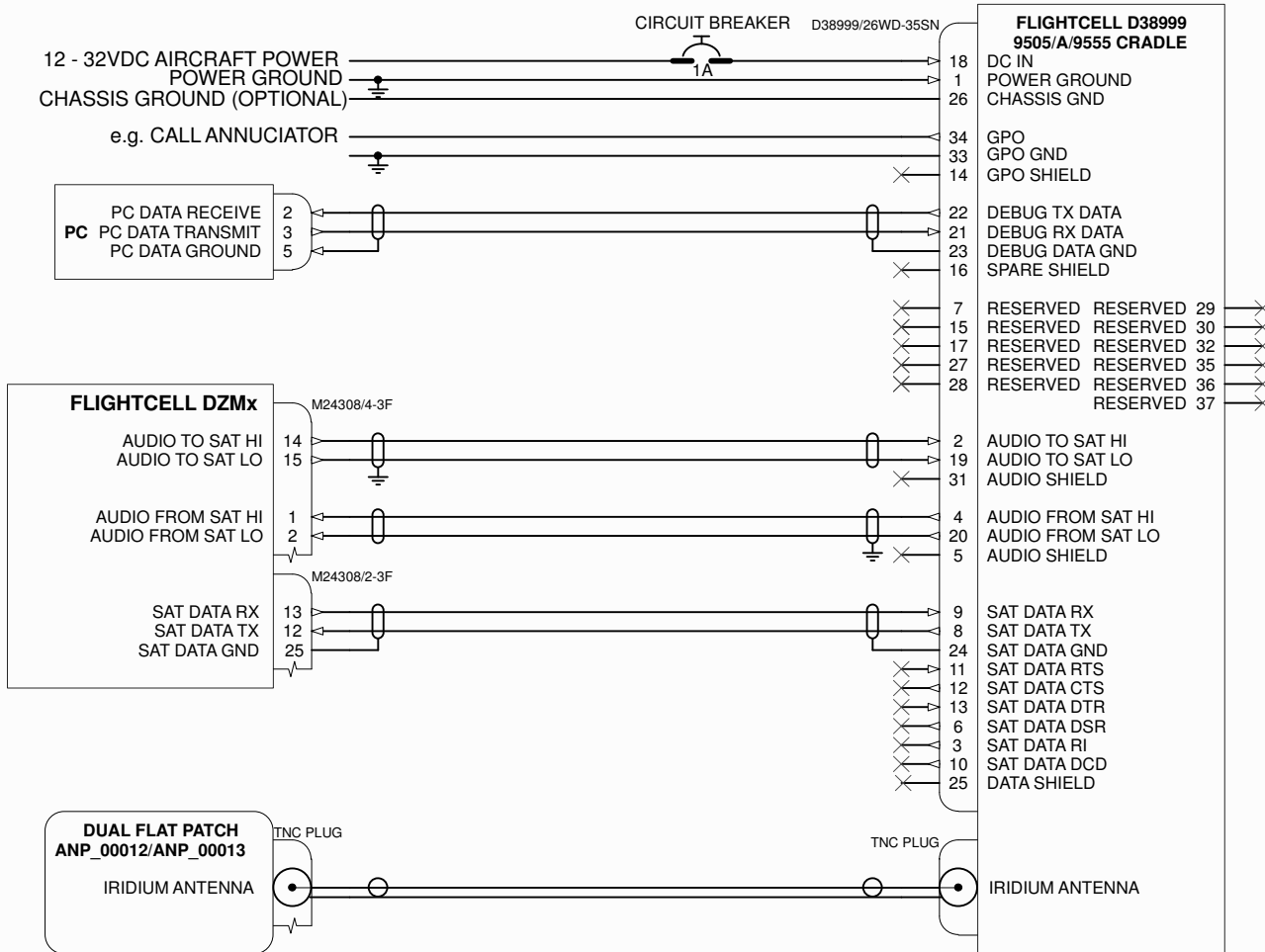


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Auxiliary Outputs 10 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Auxiliary Outputs.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 15 - Optional External D38999 Iridium Cradle (9505/A) Interconnections



NOTES:

The GPO can be used to switch external loads, e.g. annunciator panel indicator.

The output is capable of switching a 100mA load. The max applied voltage must not exceed 32VDC.

The output can be configured via the DZM Manager PC software.

The Debug port is not required for normal use, it can be used for firmware upgrades if required.

The additional shield connections may be used to terminate shields rather than using the common power ground point if desired.

NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9. OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
3. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

COAXIAL CABLE

WIRE SPLICE CONNECTION

CIRCUIT BREAKER



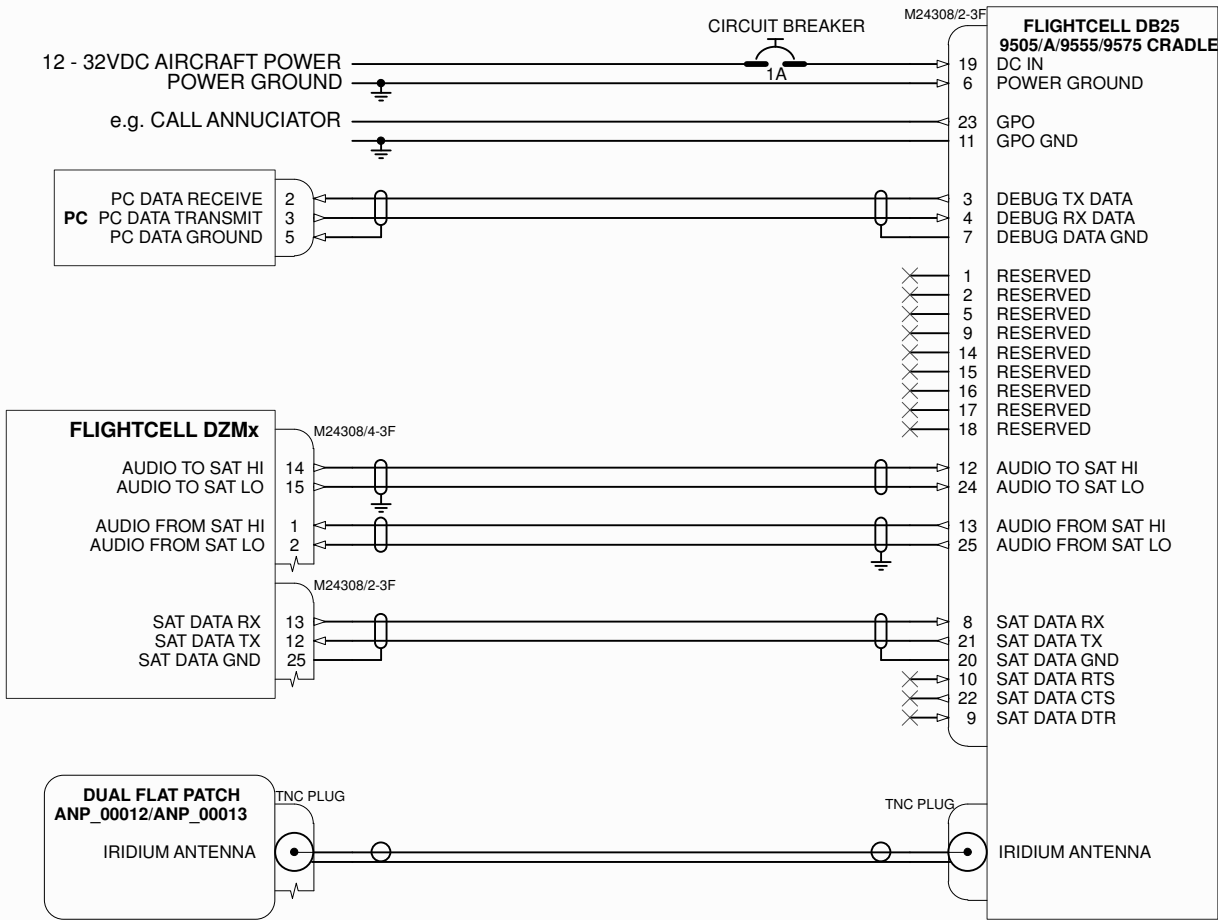
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REV	DESCRIPTION	DATE	APPD	Date:
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	8/03/2018
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	

Product: Flightcell DZMx
Sheet: External D38999 Iridium Txcvr IOB of 19
Issue: 7.0
Drawn By: James Glasgow
Filename: Aux D38999 Iridium Transceiver Interconnections.SchDoc
Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 14 - Optional External DB25 Iridium Cradle (9505/A/9555/9575) Interconnections



NOTES:

The cradle GPO can be used to switch external loads, e.g. annunciator panel indicator.

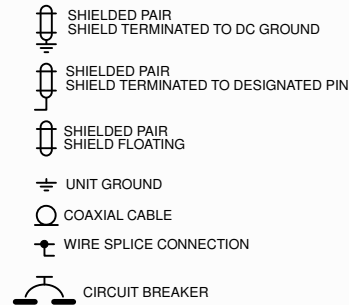
The output is capable of switching a 100mA load. The max applied voltage must not exceed 32VDC.

The output can be configured via the DZM Manager PC software.

The Debug port is not required for normal use, it can be used for firmware upgrades if required.

NOTES:

- ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
- IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
- SYMBOL DESIGNATIONS



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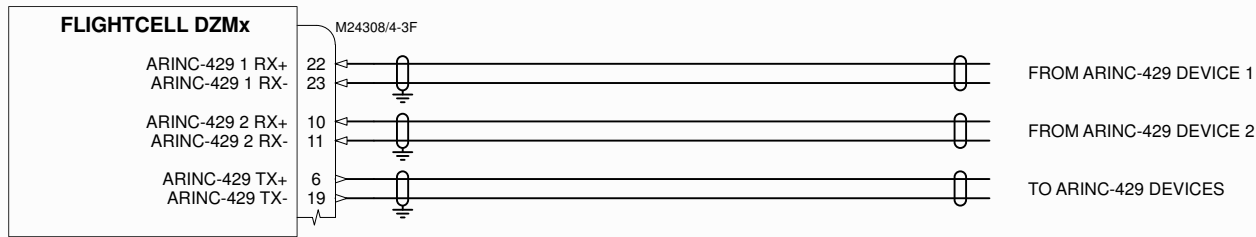
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: External DB25 Iridium Cradle IC02 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Aux DB25 Iridium Transceiver Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 11 - ARINC-429 Data Interconnections


NOTES:

ARINC-429 functionality is only available if the ARINC-429 card is installed in the DZMx.




NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

 SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

 SHIELDED PAIR
SHIELD FLOATING

 UNIT GROUND

 WIRE SPLICE CONNECTION



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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: ARINC-429 Interconnections 13 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: ARINC-429 Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 16 - Optional External Iridium Module Interconnections

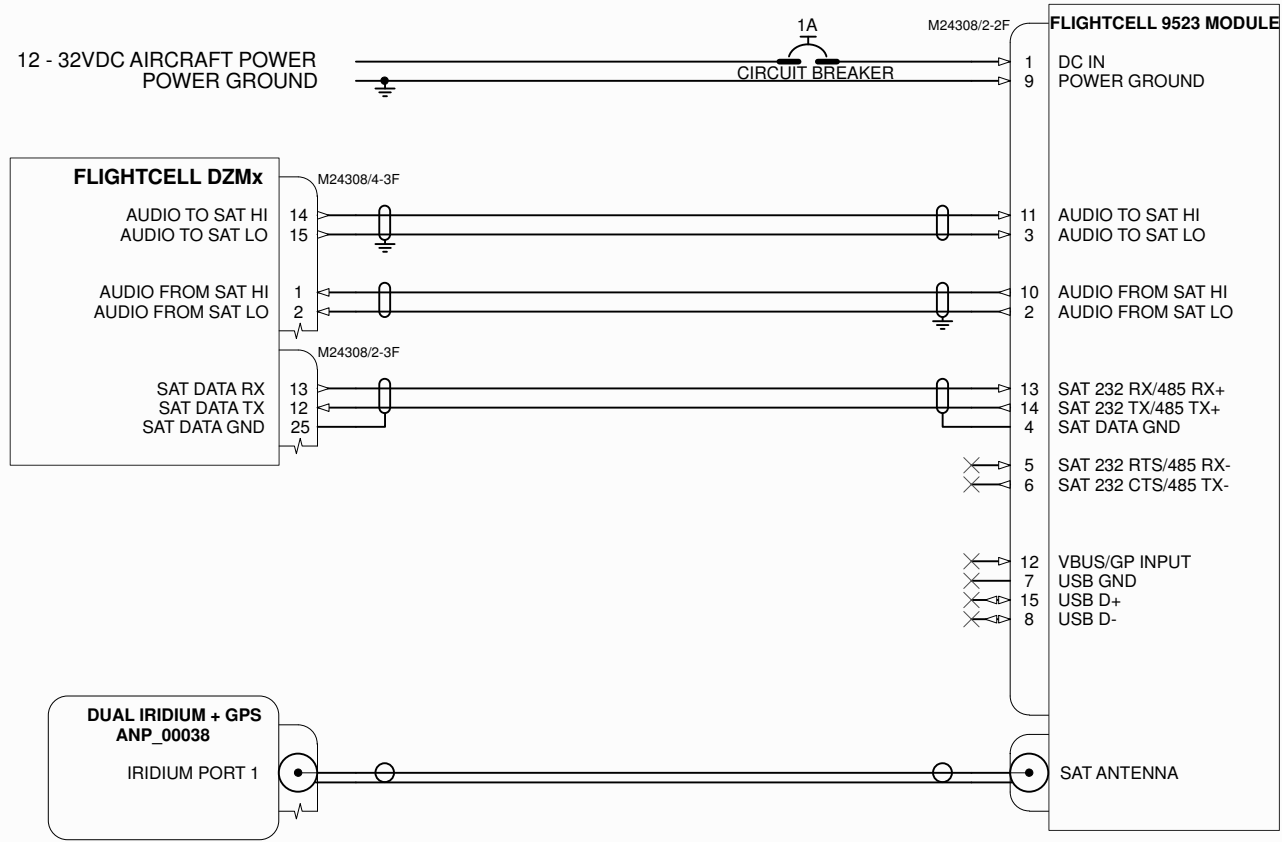
NOTES:
 The Iridium/GPS antenna should be placed horizontally on the upper surface of the airframe such that it has an unobstructed view of the sky. The cell antenna should be placed on the underside of the aircraft; orientation is less critical.

Selection of coax cable depends on the lengths of the cable runs. See the Installation and Configuration manual for cable recommendations.

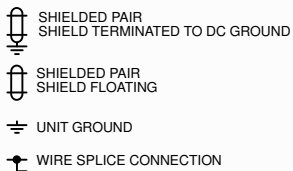
Where practicable the antenna should be placed well clear (at least 500mm and preferably 1000mm) from any other antenna operating at similar frequencies.

The antenna shown is a Dual Iridium + GPS antenna, for use in installations with internal SAT/CELL and the external Sat modem.

Single port Iridium antennas are available, contact Flightcell for details.



- NOTES:**
- ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
 OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
 - IT IS RECOMMENDED THAT THE POWER GROUND CONNECTIONS BE RUN SEPARATELY TO A SINGLE EARTHING POINT, SO AS TO MINIMISE GROUND LOOPS
 - SYMBOL DESIGNATIONS

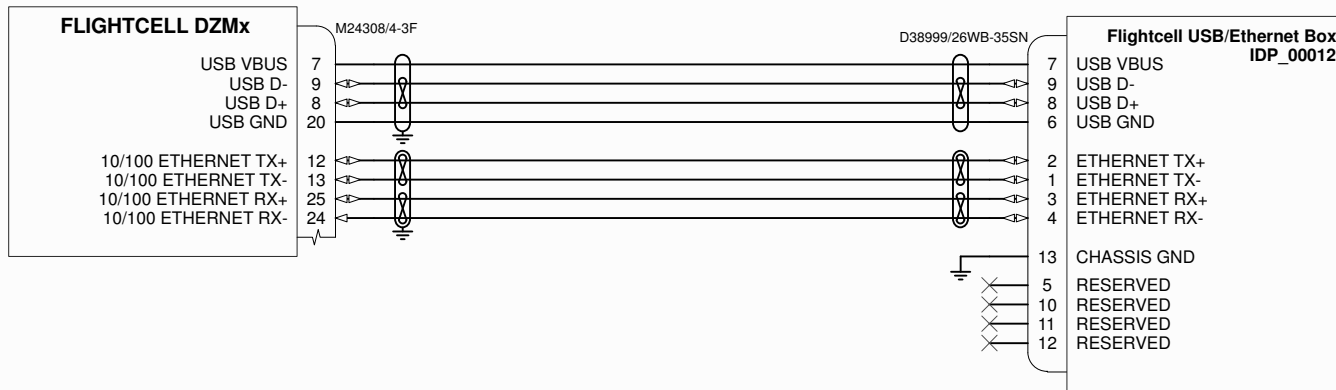


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REV	DESCRIPTION	DATE	APPD	Date:	8/03/2018	Drawing No:	WRL DZ4 001
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product:	Flightcell DZMx		
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet:	External Iridium Module	14 of 19	
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue:	7.0		
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By:	James Glasgow		
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename:	Aux Sat Modem Interconnections.SchDoc		

DZMx Civilian Interconnect Drawings

Sheet 12 - Military USB/Ethernet Connector Box Interconnections



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. USB CABLE MUST BE COMPATIBLE WITH THE USB 2.0 SPECIFICATION e.g. PIC USB2422.
3. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
4. SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- TWISTED PAIR
- UNIT GROUND
- WIRE SPLICE CONNECTION

NOTES:

The DZMx contains a single Ethernet port, if multiple devices are required an external Ethernet switch will be required.

Contact Flightcell for recommended Ethernet switches.

TX+/- and RX+/- should be run as twisted pairs using CAT-5e or equivalent.

The USB/Ethernet box must be installed as without it the DZMx cannot have its firmware upgraded.

USB 2.0 compliant cable must be used and cable run length must be kept to less than 5m.

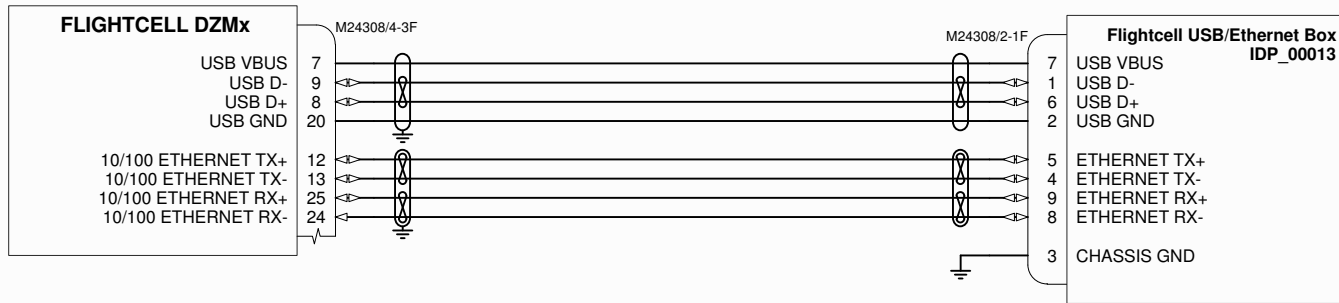


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: USB/Ethernet Interconnections 15 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: USB Ethernet Mil.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 13 - Civilian USB/Ethernet Connector Box Interconnections



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. USB CABLE MUST BE COMPATIBLE WITH THE USB 2.0 SPECIFICATION e.g. PIC USB2422.
3. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
4. SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- TWISTED PAIR
- UNIT GROUND
- WIRE SPLICE CONNECTION

NOTES:

The DZMx contains a single Ethernet port, if multiple devices are required an external Ethernet switch will be required.

Contact Flightcell for recommended Ethernet switches.

TX+/- and RX+/- should be run as twisted pairs using CAT-5e or equivalent.

The USB/Ethernet box must be installed as without it the DZMx cannot have its firmware upgraded.

USB 2.0 compliant cable must be used and cable run length must be kept to less than 5m.

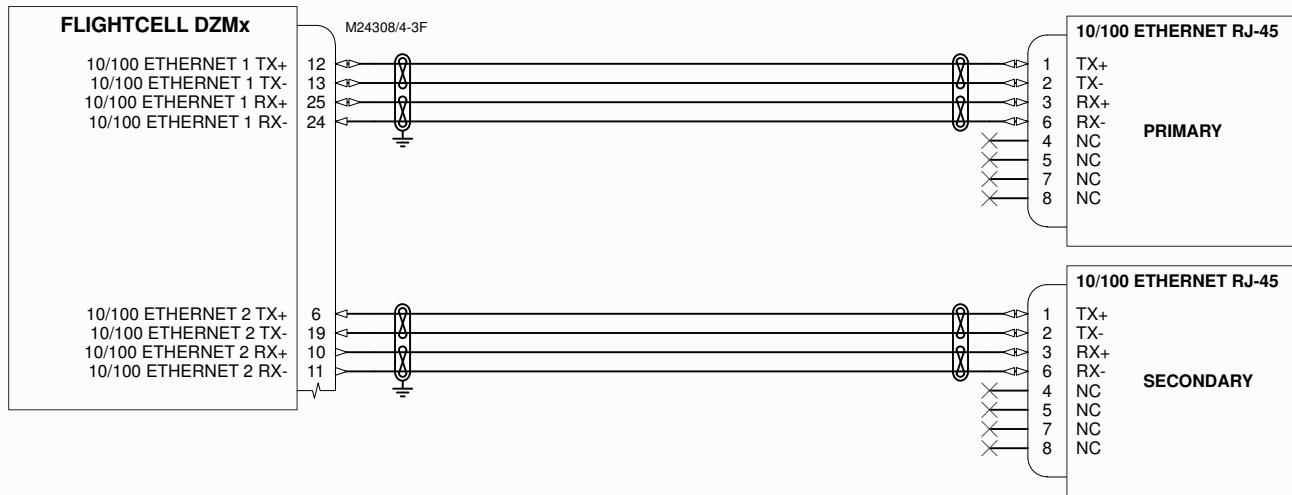


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: USB/Ethernet Interconnections 16 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: USB Ethernet Civ.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 17 - Dual Ethernet Interconnections



NOTES:
The second Ethernet port is only available if the secondary ethernet card is installed in the DZMx.

- NOTES:**
 1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
 OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
 2. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
 3. SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- TWISTED PAIR
- UNIT GROUND
- WIRE SPLICE CONNECTION



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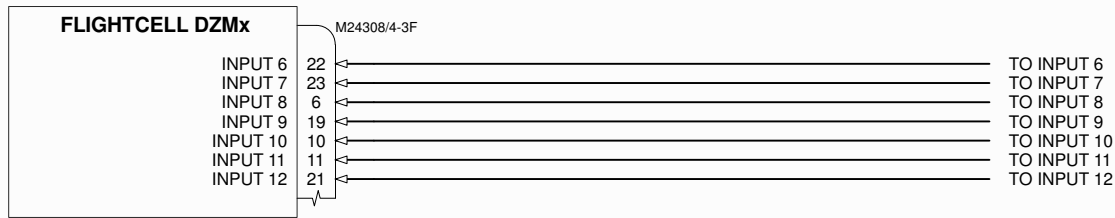
REV	DESCRIPTION	DATE	APPD	Date:
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Dual Ethernet Interconnections 17 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Dual Ethernet.SchDoc
				Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 18 - Input Expansion Interconnections


NOTES:

Extra inputs are only available if the input expansion card is installed in the DZMx.



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. SYMBOL DESIGNATIONS

 SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

 SHIELDED PAIR
SHIELD FLOATING

 UNIT GROUND

 WIRE SPLICE CONNECTION

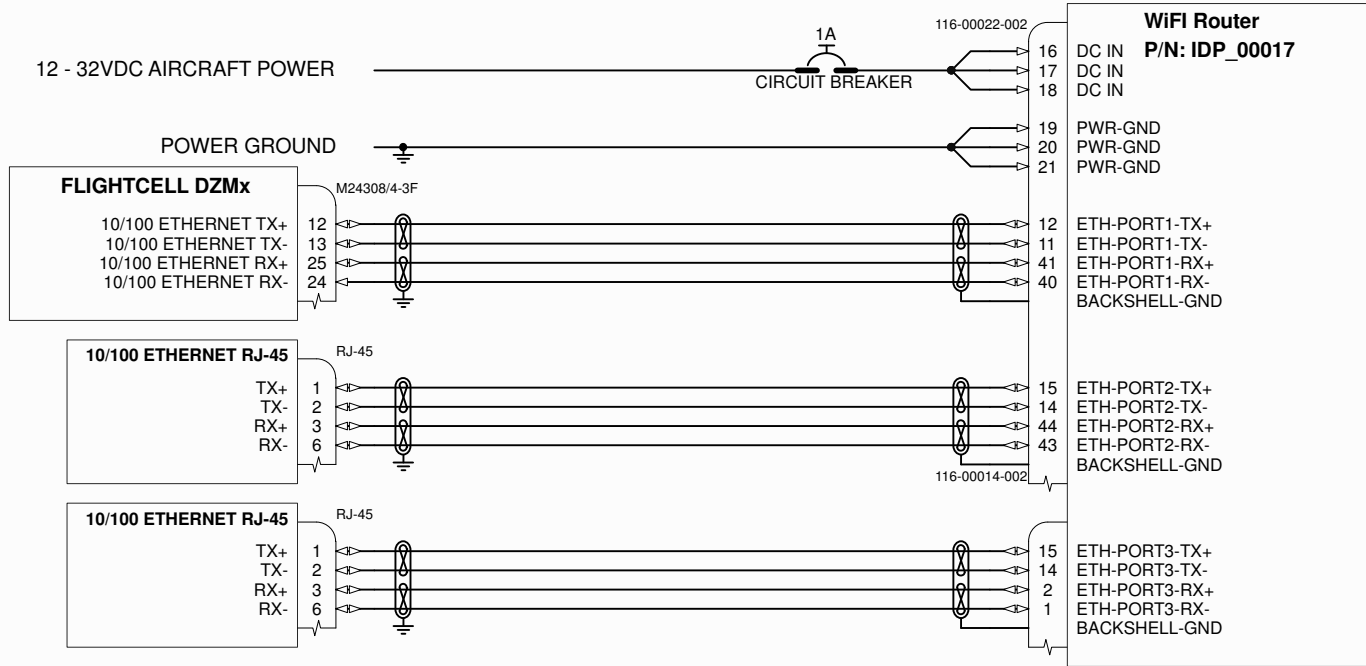


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7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	Product: Flightcell DZMx
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG	Sheet: Input Expansion Connections 18 of 19
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG	Issue: 7.0
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG	Drawn By: James Glasgow
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG	Filename: Input Expansion Interconnections.SchDoc
REV	DESCRIPTION	DATE	APPD	Date: 8/03/2018 Drawing No: WRL DZ4 001

DZMx Civilian Interconnect Drawings

Sheet 19 - WiFi Router Interconnections



NOTES:

1. ALL POWER CABLES SHOULD BE 22AWG STRANDED UNLESS OTHERWISE NOTED e.g. M22759/34-22-9
OTHER CABLES SHOULD BE 22AWG STRANDED, SCREENED WHERE INDICATED e.g. M27500/-24SB2T14.
2. USB CABLE SHOULD BE TWISTED PAIR COMPATIBLE WITH THE USB 2.0 SPECIFICATION e.g. PIC USB2422.
3. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
4. SYMBOL DESIGNATIONS

- SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR
SHIELD FLOATING
- TWISTED PAIR
- UNIT GROUND
- WIRE SPLICE CONNECTION



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REV	DESCRIPTION	DATE	APPD	Date:	Filename:
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	JG	8/03/2018	WiFi Router.SchDoc
6.0	Added WiFi Router drawing (FCN0683).	28/01/16	JG		
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	JG		
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14	JG		
3.0	Corrected ARINC-429 Pinout (FCN0552).	11/11/13	JG		

Product: Flightcell DZMx
Sheet: WiFi Router Interconnections 19 of 19
Issue: 7.0
Drawn By: James Glasgow
Date: 8/03/2018 Drawing No: WRL DZ4 001