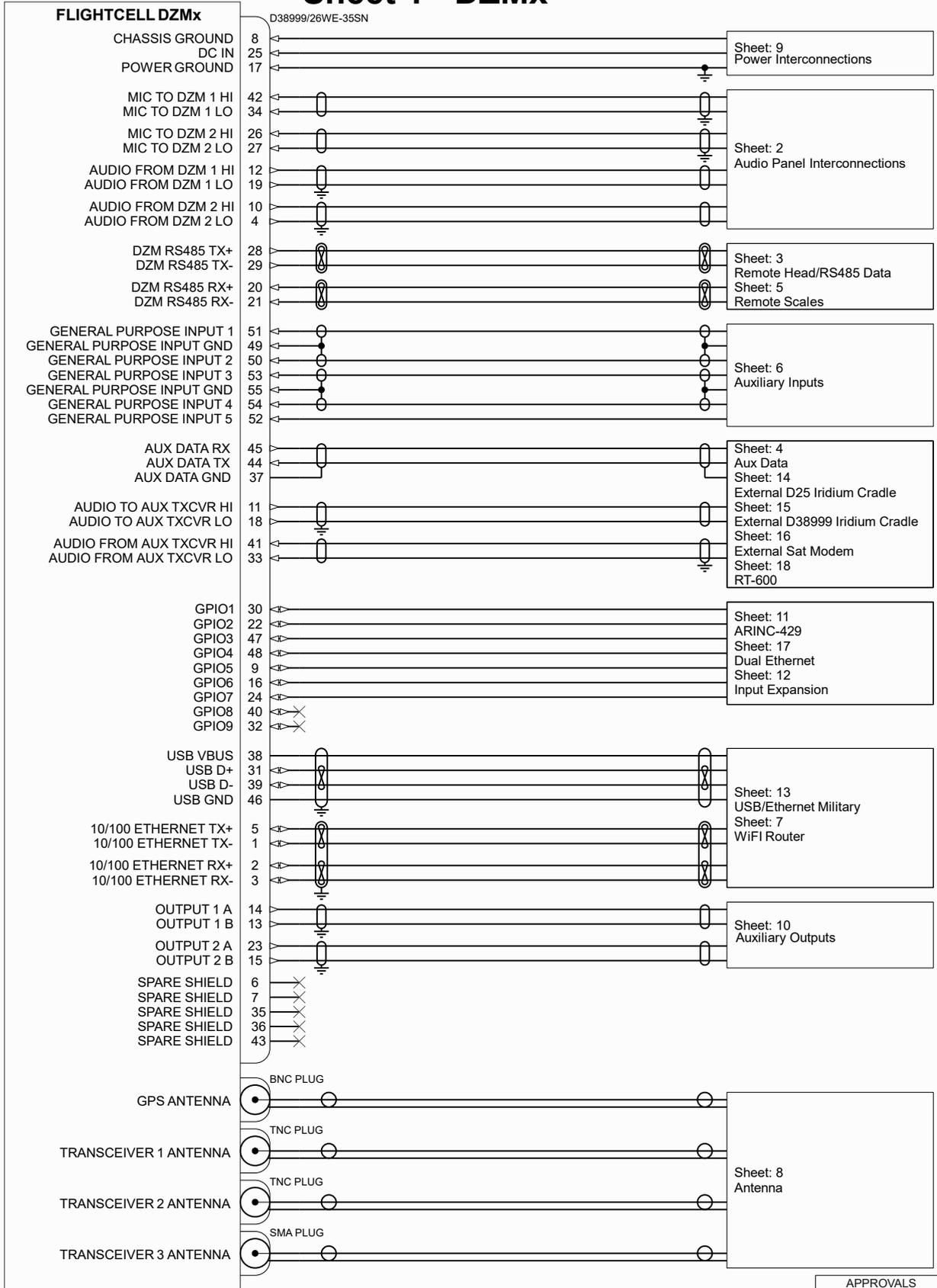


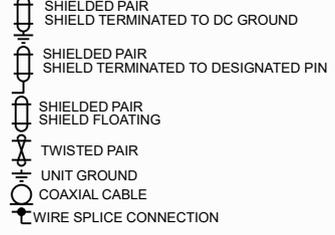
# DZMx Military Interconnect Drawings

## Sheet 1 - 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. UNIT GROUND IS INTERNALLY CONNECTED TO UNIT CHASSIS
3. SYMBOL DESIGNATIONS



APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20



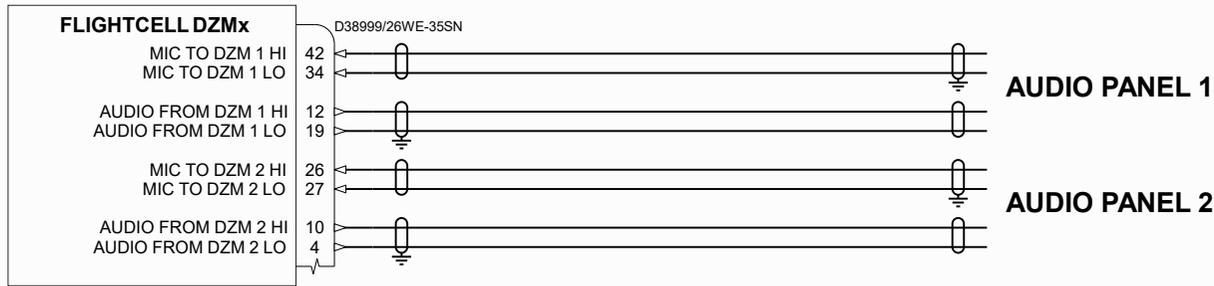
Flightcell International Limited  
PO Box 1481, Nelson, New Zealand  
Ph:+64 3 545 8652 www.flightcell.com

Product:	Flightcell DZMx	Sheet:	Interconnect Drawings	1 of 18
Issue:	8.0	Drawn By:	James Glasgow	
Filename:	Top_Level_SchDoc	Date:	12/06/2020	Drawing No: WRL_DZ4_002

REV	DESCRIPTION	DATE
8.0	Removed AC lighting reference. Updated antenna pin's (#HW-1064).	21/05/20
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18
6.0	Added WiFi Router drawing (FCN0683).	28/01/16
5.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14
4.0	Corrected 2nd Ethernet Pinout, added input expansion pinout (FCN0630).	29/08/14

# DZMx Military 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 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.

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

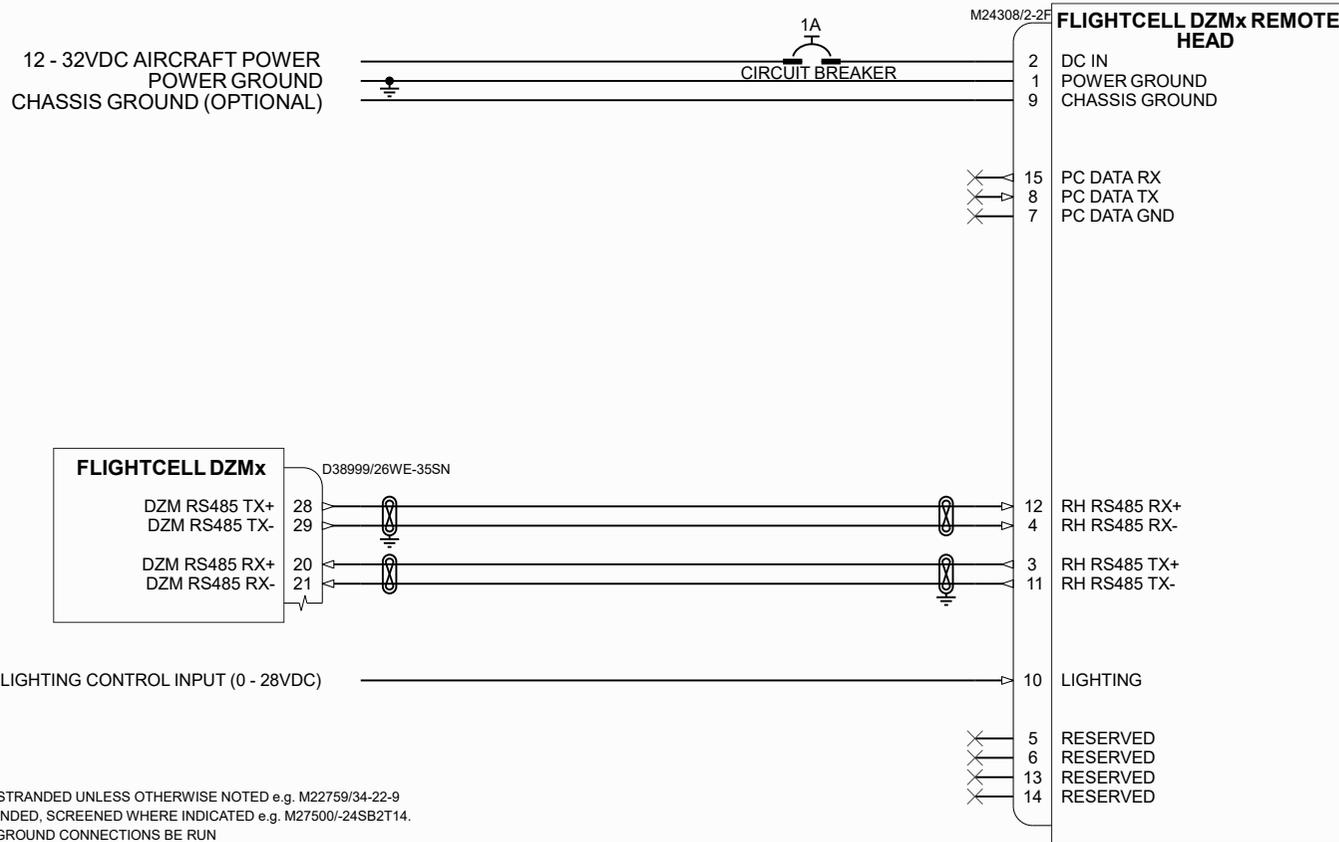
***Flightcell***  
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PO Box 1481, Nelson, New Zealand  
Ph: +64 3 545 8652 [www.flightcell.com](http://www.flightcell.com)

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: ICS Interconnections 2 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: ICS Interconnections.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military 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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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Ph: +64 3 545 8652 www.flightcell.com

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Remote Head/RS485 ICD 3 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Remote Head Interconnections_SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military 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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

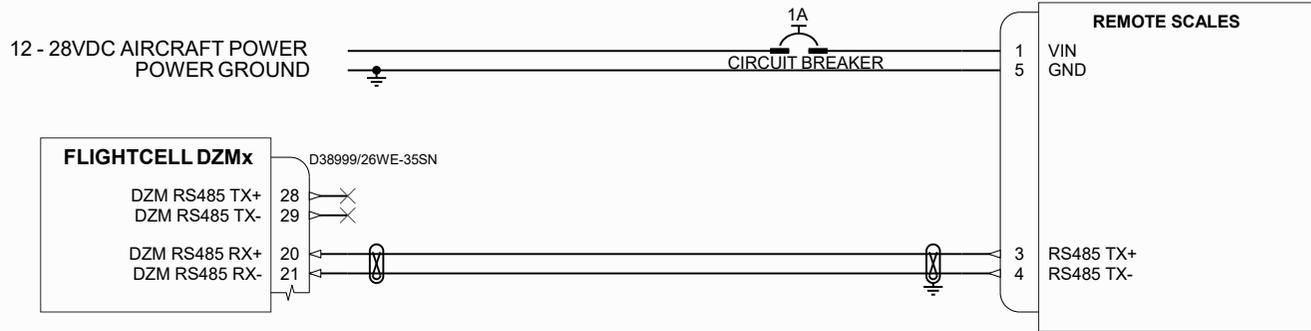
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Ph: +64 3 545 8652 [www.flightcell.com](http://www.flightcell.com)

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Aux Data Interconnections 4 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Aux Data Interconnections.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military 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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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Ph: +64 3 545 8652 [www.flightcell.com](http://www.flightcell.com)

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx Sheet: Remote Scales Interconnections5 of 18 Issue: 8.0
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	
6.0	Added SBD antenna connection (FCN0694).	09/05/16	
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow Filename: Remote Scales Interconnections.SchDoc
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	
3.0	Added input expansion pinout (FCN0630).	29/08/14	
REV	DESCRIPTION	DATE	Date: 12/06/2020 Drawing No: WRL_DZ4_002

# DZMx Military 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. Typically with a 0 - 28VDC range. The DZM lighting input can be calibrated to suit the particular input requirements of the installation.

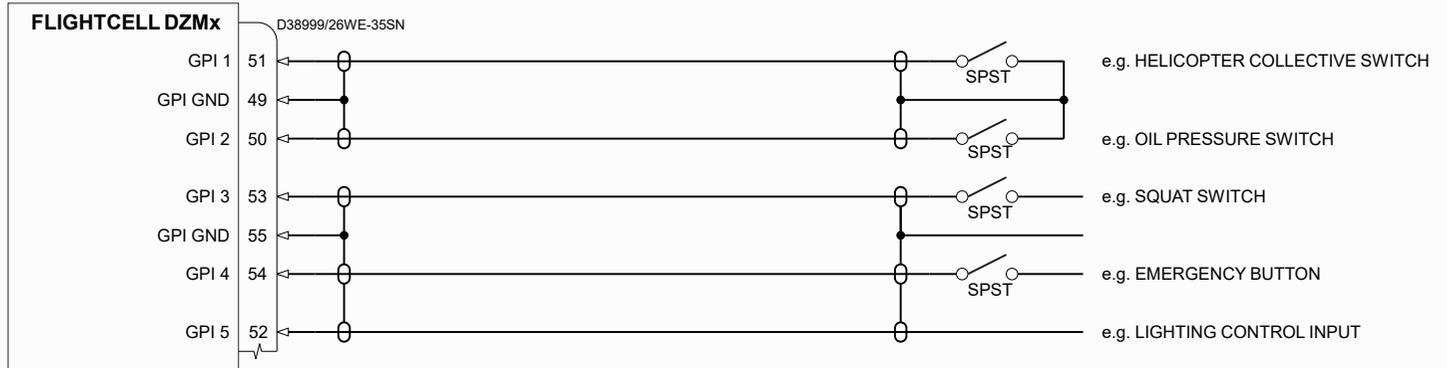
**Inputs:**  
The input's are all configurable as either variable or switched with adjustable thresholds.

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:**

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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

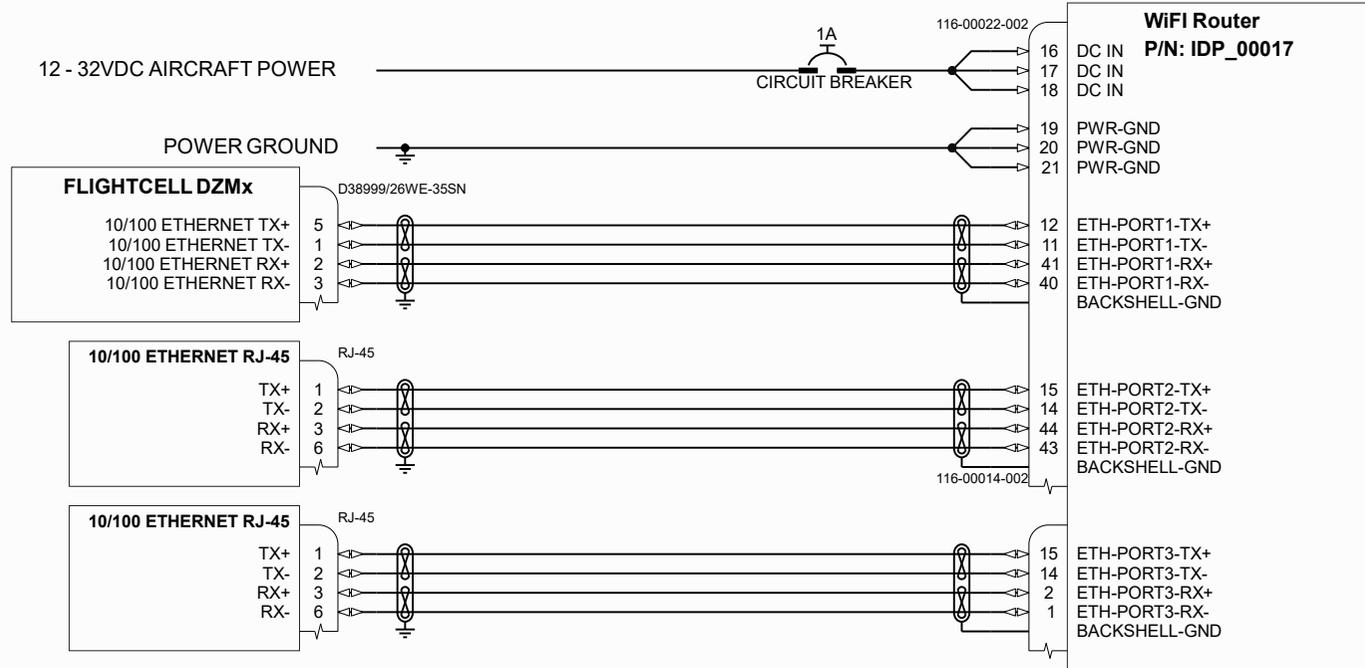
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Ph: +64 3 545 8652 [www.flightcell.com](http://www.flightcell.com)

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx Sheet: General Purpose Inputs 6 of 18 Issue: 8.0 Drawn By: James Glasgow Filename: Auxiliary Inputs.SchDoc Date: 12/06/2020 Drawing No: WRL_DZ4_002
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	
6.0	Added SBD antenna connection (FCN0694).	09/05/16	
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	
3.0	Added input expansion pinout (FCN0630).	29/08/14	
REV	DESCRIPTION	DATE	

# DZMx Military Interconnect Drawings

## Sheet 7 - 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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx Sheet: WiFi Router Interconnections 7 of 18 Issue: 8.0 Drawn By: James Glasgow Filename: WiFi Router.SchDoc
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	
6.0	Added SBD antenna connection (FCN0694).	09/05/16	
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	
3.0	Added input expansion pinout (FCN0630).	29/08/14	File Name: WiFi Router.SchDoc
REV	DESCRIPTION	DATE	Date: 12/06/2020 Drawing No: WRL_DZ4_002

# DZMx Military 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.

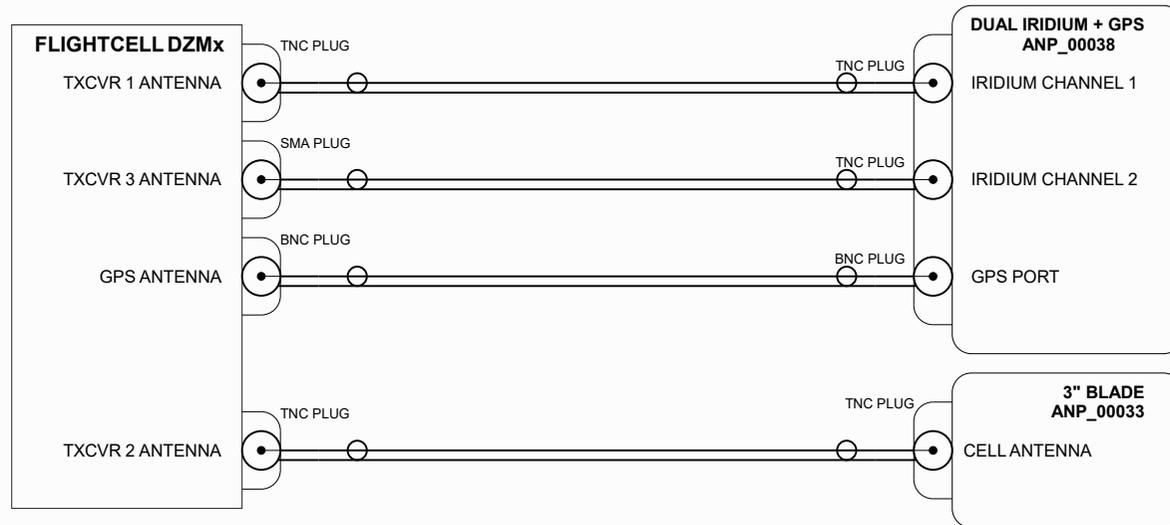
Selection of coax cable depends on the lengths of the cable runs. See the Installation and Configuration manual for cable recommendations.

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 a standard Iridium + GPS antenna is available (p/n ANP\_00043).



- 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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Antennas 8 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Antenna.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

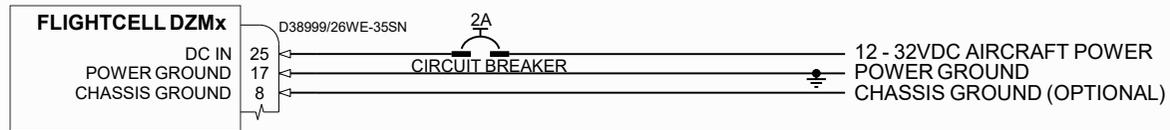
# DZMx Military Interconnect Drawings

## 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 separately 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



APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Power Interconnections 9 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Power Interconnections_SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military Interconnect Drawings

## Sheet 10 - Auxiliary Outputs

**NOTES:**

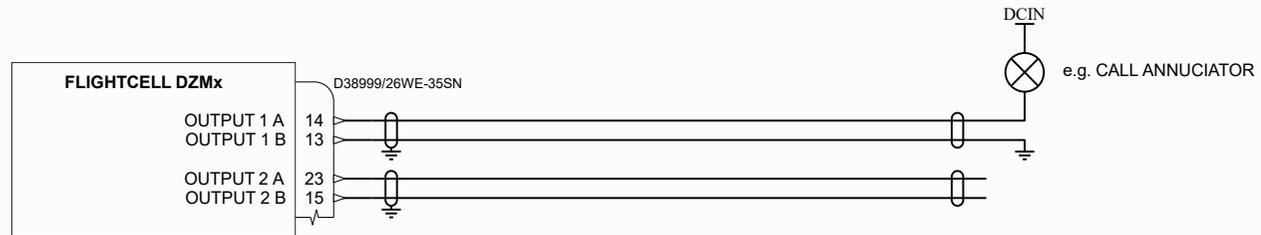
The auxiliary outputs can be used to switch external loads, e.g. annunciator panel indicator.

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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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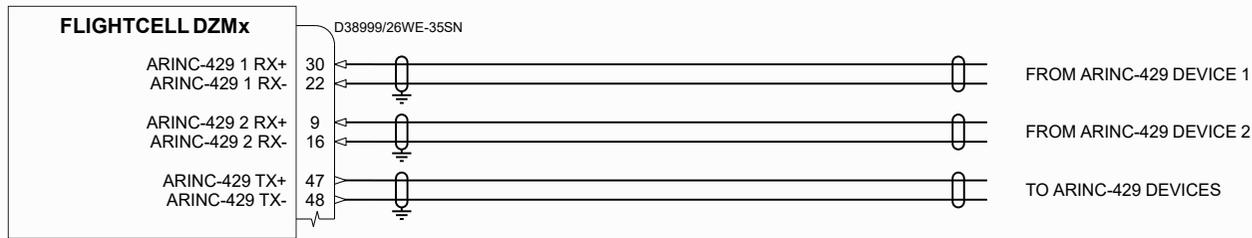
8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Auxiliary Outputs 10 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Auxiliary Outputs.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military 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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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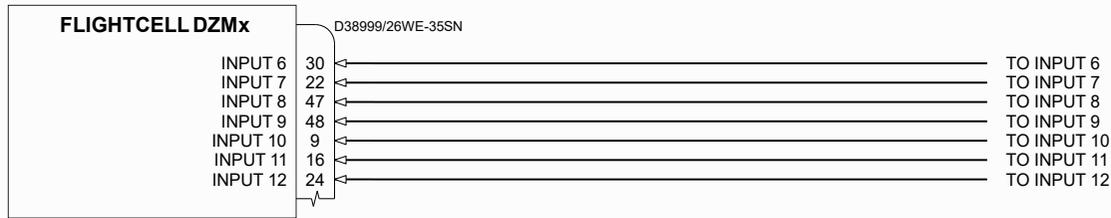
8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx Sheet: ARINC-429 Interconnections 11 of 18 Issue: 8.0 Drawn By: James Glasgow Filename: ARINC-429 Interconnections.SchDoc Date: 12/06/2020 Drawing No: WRL_DZ4_002
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	
6.0	Added SBD antenna connection (FCN0694).	09/05/16	
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	
3.0	Added input expansion pinout (FCN0630).	29/08/14	
REV	DESCRIPTION	DATE	

# DZMx Military Interconnect Drawings

## Sheet 12 - Input Expansion Interconnections

**NOTES:**

Extra inputs are only available if the input expansion card is installed in the 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.
- SYMBOL DESIGNATIONS

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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

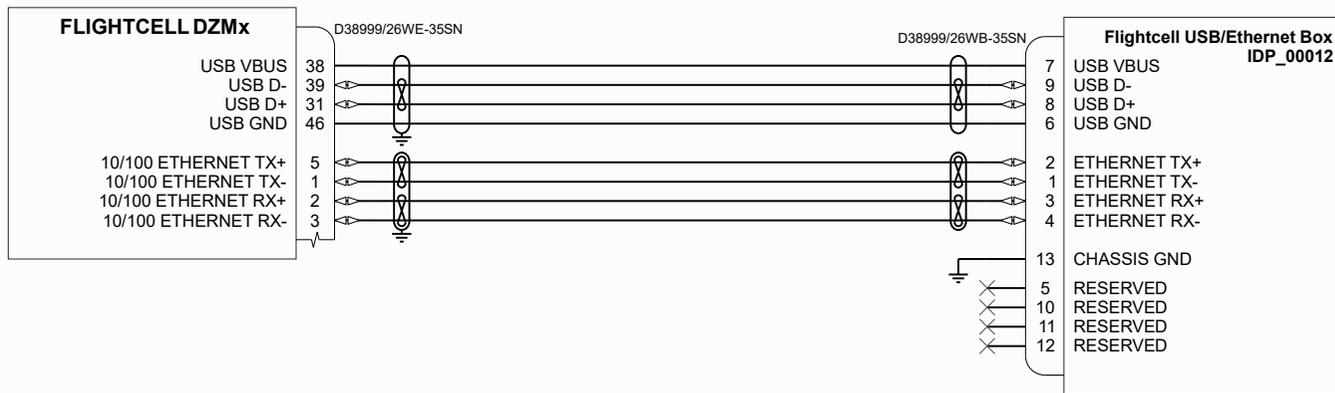
***Flightcell***  
ALWAYS CONNECTED

Flightcell International Limited  
PO Box 1481, Nelson, New Zealand  
Ph: +64 3 545 8652 [www.flightcell.com](http://www.flightcell.com)

REV	DESCRIPTION	DATE	Product: Flightcell DZMx
8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Sheet: Input Expansion Connections 12 of 18
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Issue: 8.0
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Drawn By: James Glasgow
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Filename: Input Expansion Interconnections.SchDoc
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Date: 12/06/2020
3.0	Added input expansion pinout (FCN0630).	29/08/14	Drawing No: WRL_DZ4_002

# DZMx Military Interconnect Drawings

## Sheet 13 - Military USB/Ethernet Connector Box Interconnections



**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.

**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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

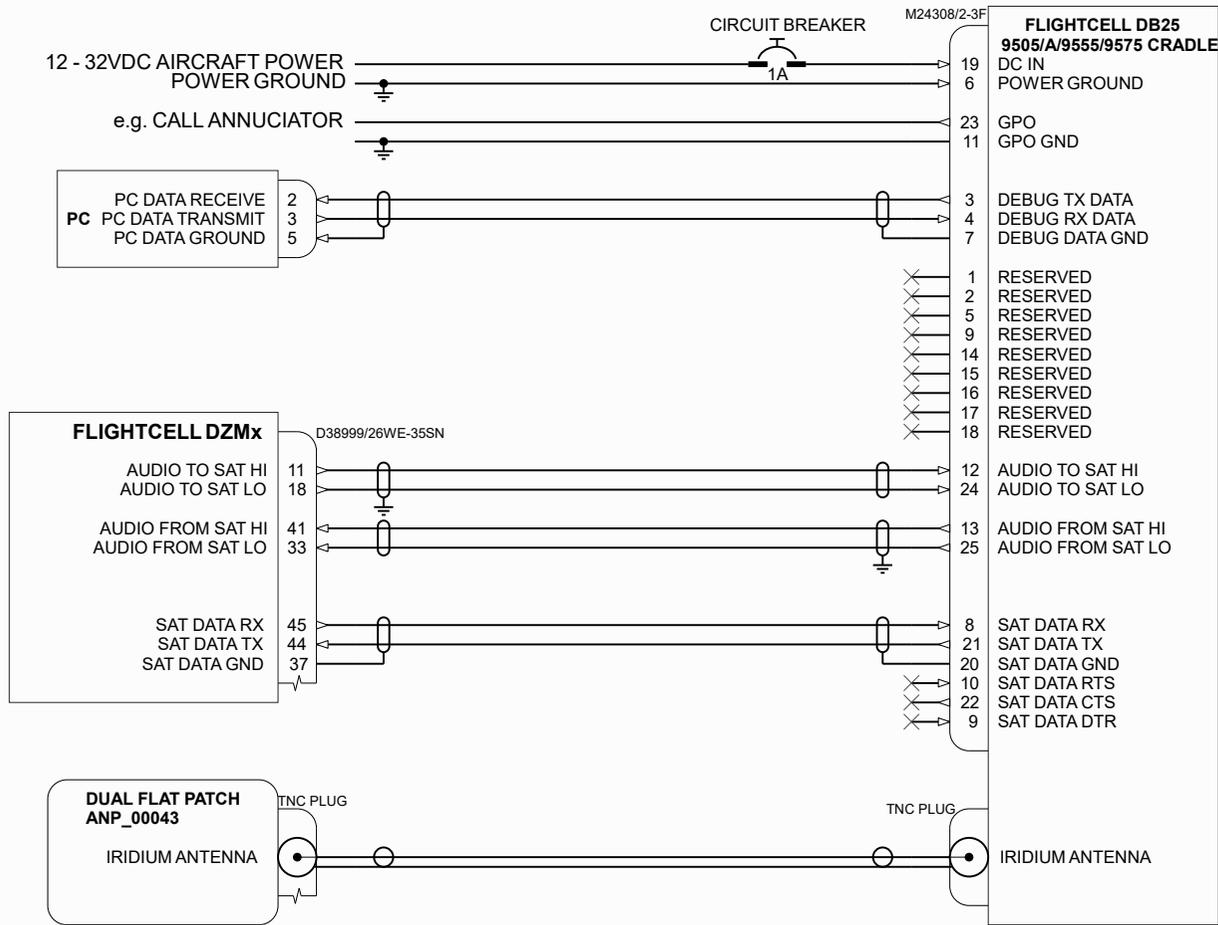
**Flightcell**  
ALWAYS CONNECTED

Flightcell International Limited  
PO Box 1481, Nelson, New Zealand  
Ph: +64 3 545 8652 www.flightcell.com

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Ethernet Interconnections 13 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: USB Ethernet Mil.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military Interconnect Drawings

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



**NOTES:**

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

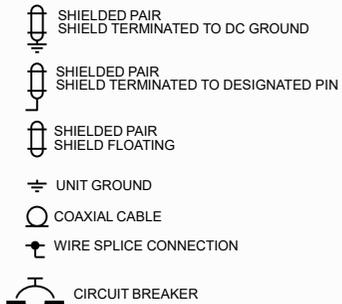
The output is capable of switching a 100mA load. The max applied voltage must not exceed 32VDC.

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



APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

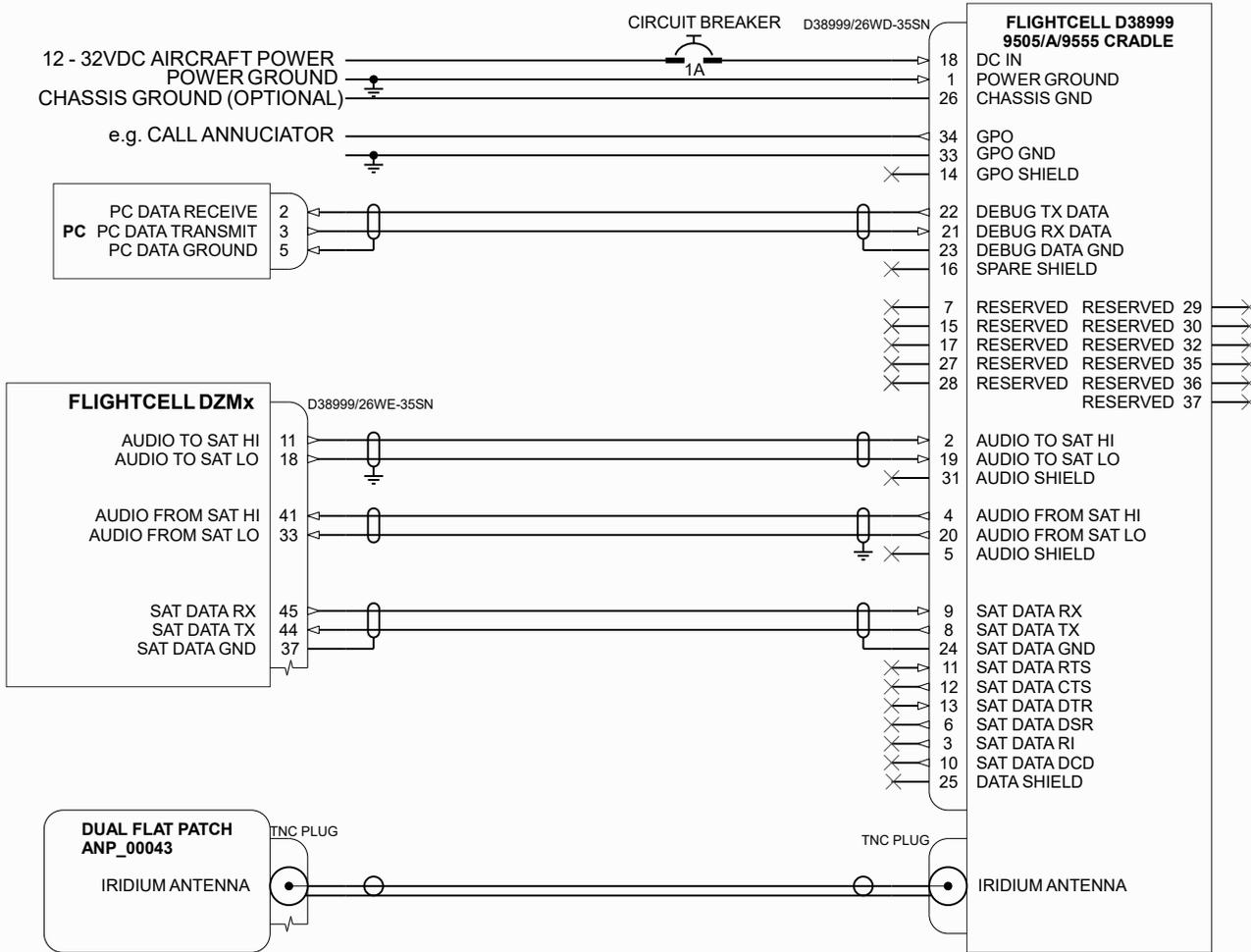


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8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Ext DB25 Iridium Cradle 14 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Aux DB25 Iridium Cradle.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military Interconnect Drawings

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



**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:**

- 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 TERMINATED TO DESIGNATED PIN

SHIELDED PAIR  
SHIELD FLOATING

UNIT GROUND

COAXIAL CABLE

WIRE SPLICE CONNECTION

CIRCUIT BREAKER

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20



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8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Ext D38999 Iridium Cradle 15 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Aux D38999 Iridium Cradle.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Military Interconnect Drawings

## Sheet 16 - Optional External Iridium Module Interconnections

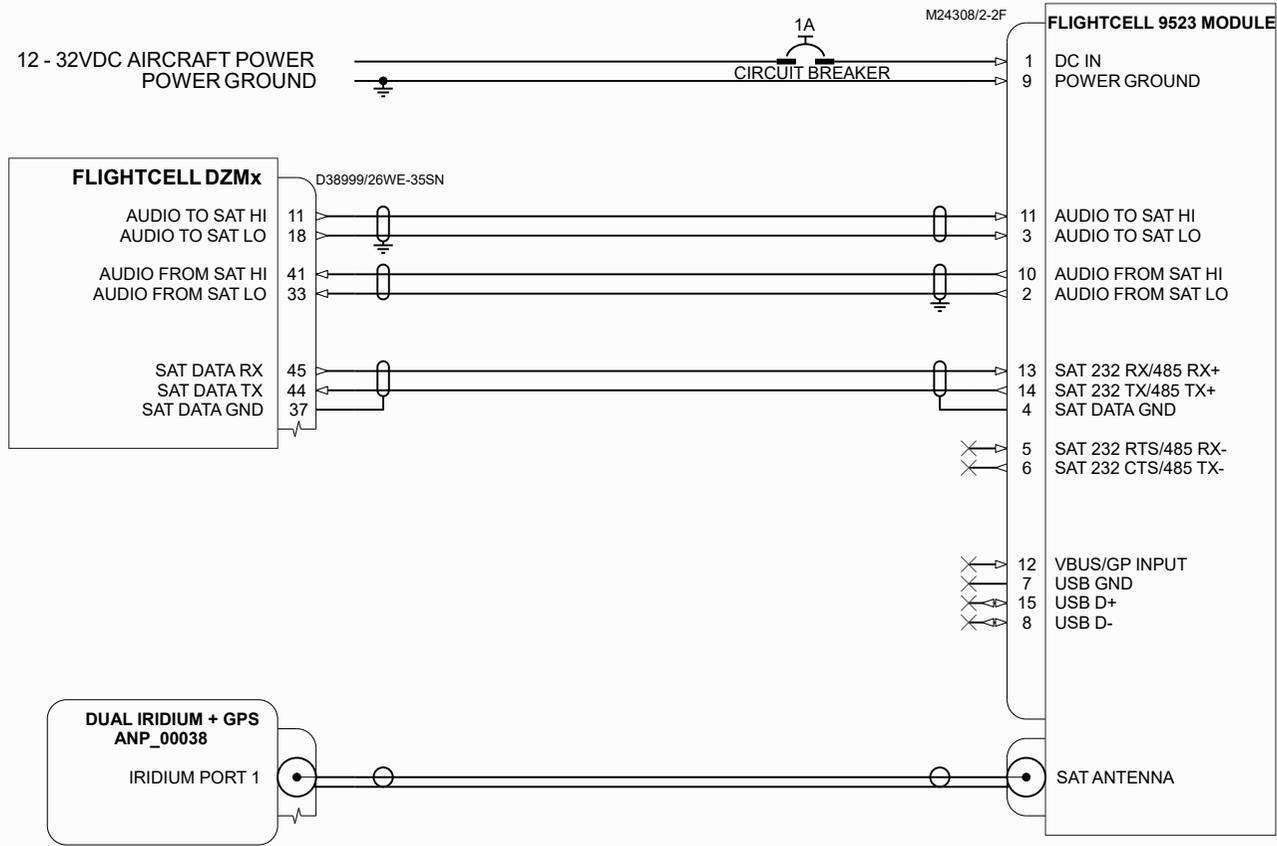
**NOTES:**  
 The Iridium/GPS antenna should be placed horizontally on the upper surface of the airframe such that it has an unobstructed view of the sky. The cell antenna should be placed on the underside of the aircraft; orientation is less critical.

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.



APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

**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
- WIRE SPLICE CONNECTION

REV	DESCRIPTION	DATE
8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18
6.0	Added SBD antenna connection (FCN0694).	09/05/16
5.0	Added WiFi Router drawing (FCN0683).	28/01/16
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14
3.0	Added input expansion pinout (FCN0630).	29/08/14

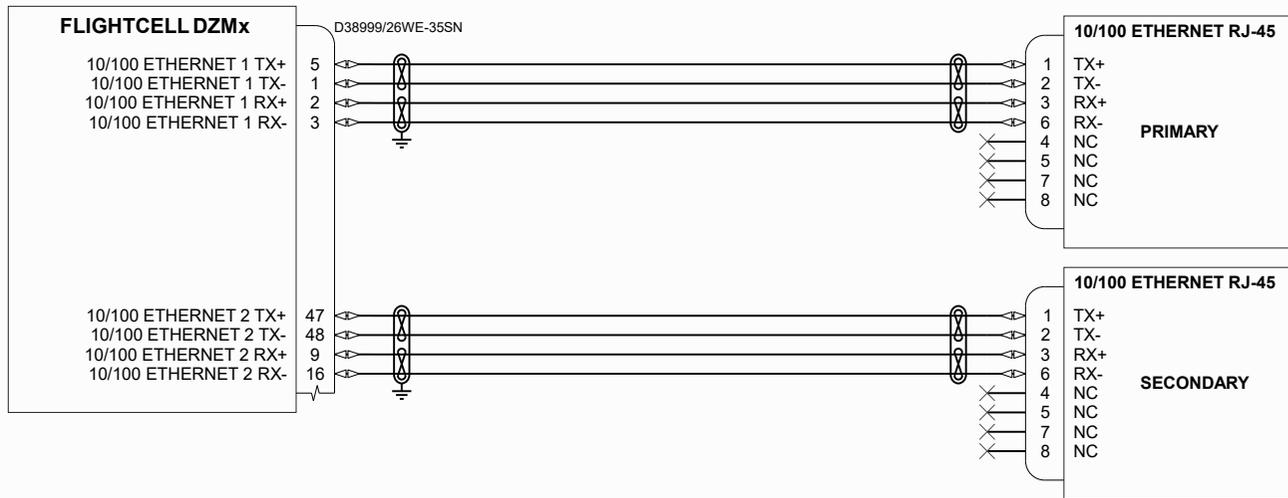
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Product: Flightcell DZMx	16 of 18
Sheet: External Iridium Module	Issue: 8.0
Drawn By: James Glasgow	
Filename: Aux Sat Modem Interconnections.SchDoc	
Date: 12/06/2020	Drawing No: WRL_DZ4_002

# DZMx Military 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:**
- 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.
  - ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
  - SYMBOL DESIGNATIONS

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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

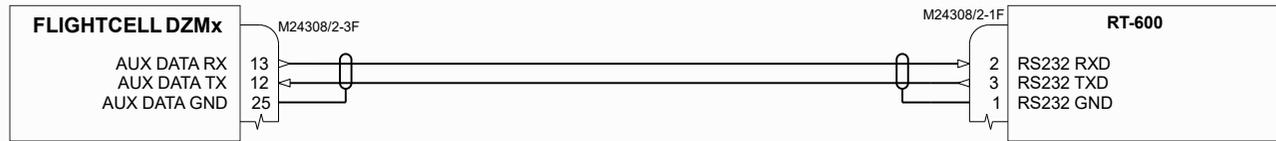
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 Ph: +64 3 545 8652 www.flightcell.com

8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: Dual Ethernet Interconnections 17 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: Dual Ethernet.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020 Drawing No: WRL_DZ4_002
REV	DESCRIPTION	DATE	

# DZMx Civilian Interconnect Drawings

## Sheet 18 - RT-600 Direction Finder



**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

APPROVALS		DATE
DESIGN	JG	21/05/20
CHK'D	HB	12/06/20
APP'D	JG	12/06/20

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8.0	Removed AC lighting reference. Updated antenna p/n's (#HW-1064).	21/05/20	Product: Flightcell DZMx
7.0	Added optional third TXCVR antenna port (#HW-186).	07/02/18	Sheet: RT-600 Direction Finder 18 of 18
6.0	Added SBD antenna connection (FCN0694).	09/05/16	Issue: 8.0
5.0	Added WiFi Router drawing (FCN0683).	28/01/16	Drawn By: James Glasgow
4.0	Changed Iridium modem data connection from RS485 to RS232 (FCN0633).	22/09/14	Filename: RT600 DF.SchDoc
3.0	Added input expansion pinout (FCN0630).	29/08/14	Date: 12/06/2020
REV	DESCRIPTION	DATE	Drawing No: WRL_DZ4_001