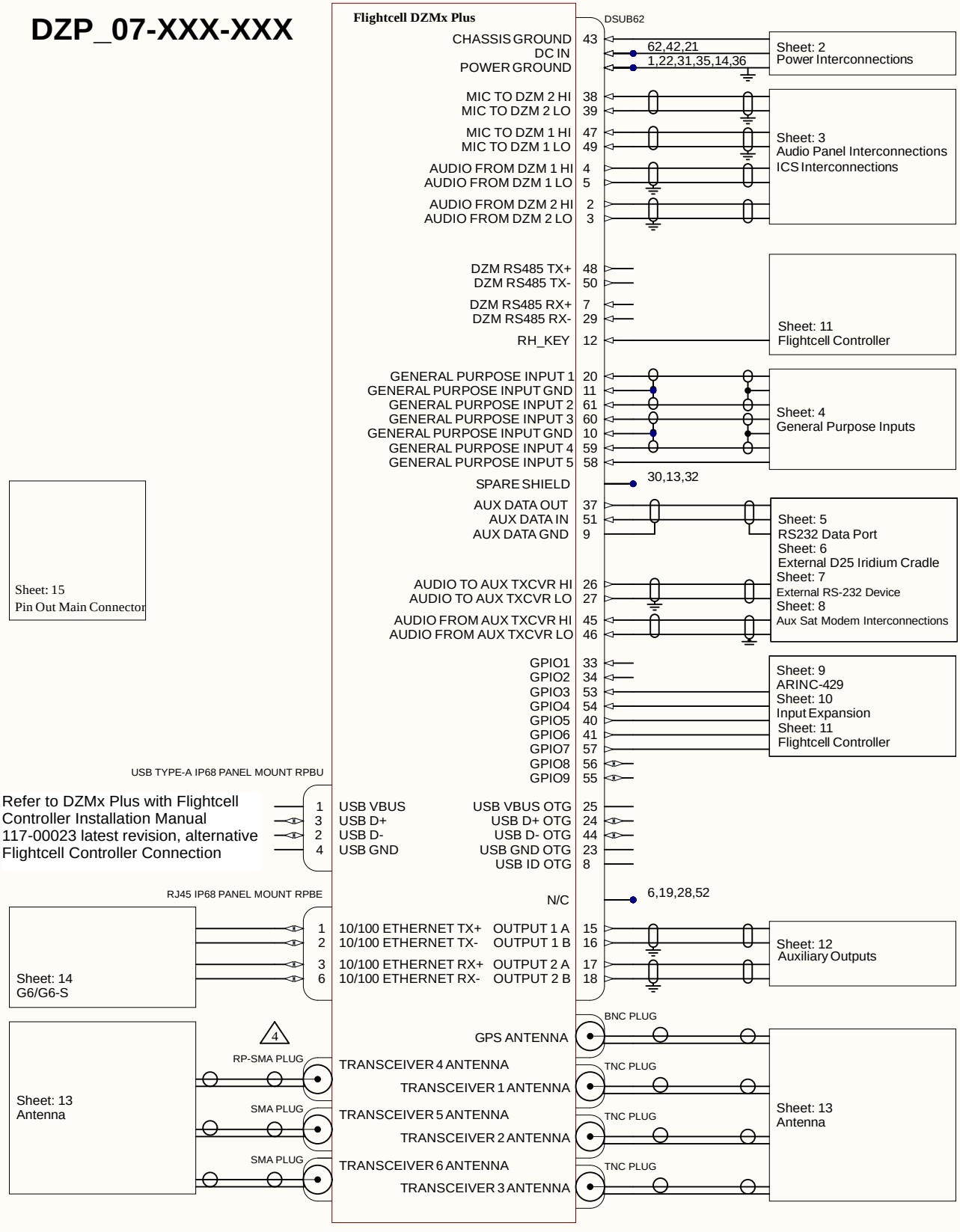
DZMx Plus With Flightcell Controller Interconnect Drawings
Sheet 1 - DZMx Plus

DZP_07-XXX-XXX



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/-22SB2T14.
2. UNIT GROUND IS INTERNALLY CONNECTED TO UNIT CHASSIS
3. SYMBOL DESIGNATIONS

- SHIELDED PAIR, SHIELD TERMINATED TO DC GROUND
- SHIELDED PAIR, SHIELD TERMINATED TO DESIGNATED PIN
- SHIELDED PAIR, SHIELD FLOATING
- TWISTED PAIR
- UNIT GROUND
- COAXIAL CABLE
- WIRE SPLICE CONNECTION

4 Revisions older than 4.0 - SMA PLUG

REV	DESCRIPTION	DATE
2.1	HWD-790	03.09.26
2.0	HWD-327	03.09.25
1.7	HWD-402	30.01.25
1.6	HWD-230	31.07.24
1.5	HWD-210	10.07.24
1.4	HWD-201	02.07.24
1.3	HWD-171	08.05.24
1.2	HW-2432	05.09.23
1.1	HW-2428	30.08.23
1.0	DNRH-24	13.06.23

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Top Level Interconnections 1 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Top Level.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus With Flightcell Controller Interconnect Drawings

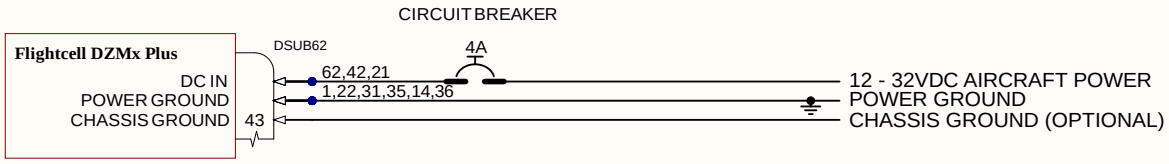
Sheet 2 - Power Interconnections

NOTES:

In order to minimise ground loops, it is recommended that the ground connections from the DZMx Plus, 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.

Not all ground connections are required on the POWER GROUND, a minimum of 3 connections must be made.



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/-22SB2T14.
2. SYMBOL DESIGNATIONS

UNIT GROUND

CIRCUIT BREAKER

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

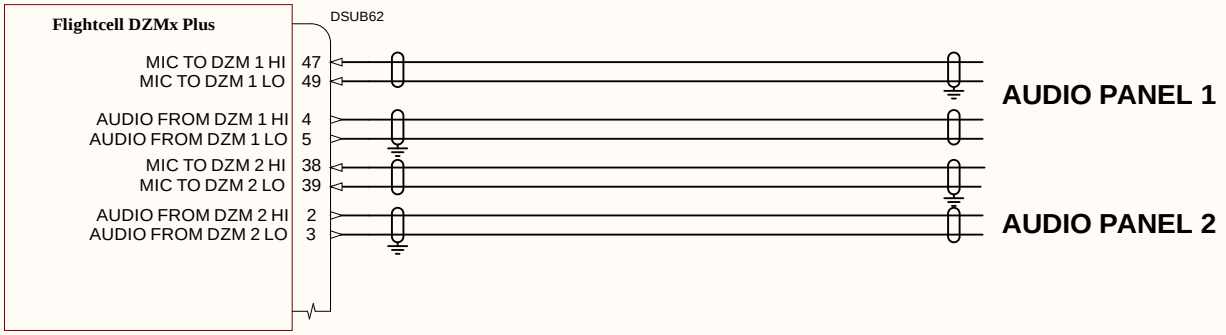
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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Power Interconnections 2 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Power Interconnections.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus With Flightcell Controller Interconnect Drawings

Sheet 3 - 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/-22SB2T14.
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 neccessary to use the biased voltage on the DZMx Plus input (if the system expects mic bias from the radio); otherwise the input should be configured as unbiased.

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

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Audio Panel Interconnections 3 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	ICS Interconnections.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus With Flightcell Controller Interconnect Drawings

Sheet 4 - General Purpose Inputs

Inputs:

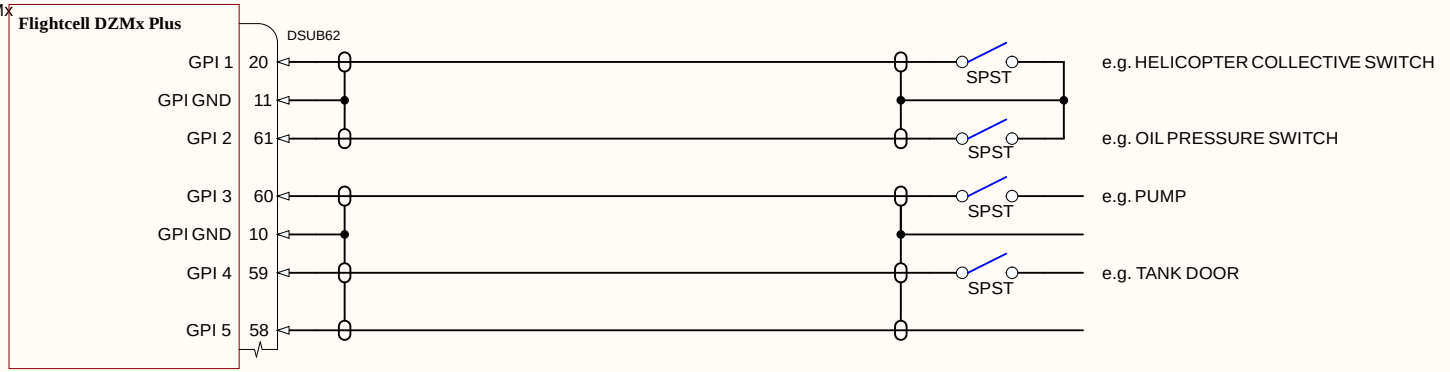
The input's are all configurable as either variable or switched with adjustable thresholds.

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 DZMx Plus.

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 Plus to Chassis ground. Therefore the aicraft 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/-22SB2T14.
2. SYMBOL DESIGNATIONS
   SHIELDED SINGLE CONDUCTOR
   SHIELD TERMINATED TO DESIGNATED PIN
   WIRE SPLICE CONNECTION

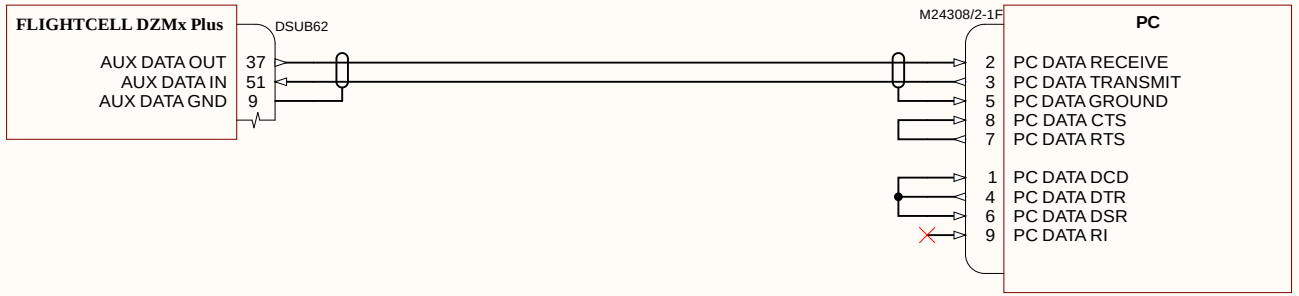
APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	General Purpose Inputs 4 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	General Purpose Inputs.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus With Flightcell Controller Interconnect Drawings

Sheet 5 - Aux Data Interconnections



Note: the RS232 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 conecting to a PC the loopback connections on RTS, CTS, DCD, DTR and DSR are made as shown.

This multipurpose port can be used for diagnostics, connection of an external transceiver, or connection of other serial devices such as a water tank controller.

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/-22SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

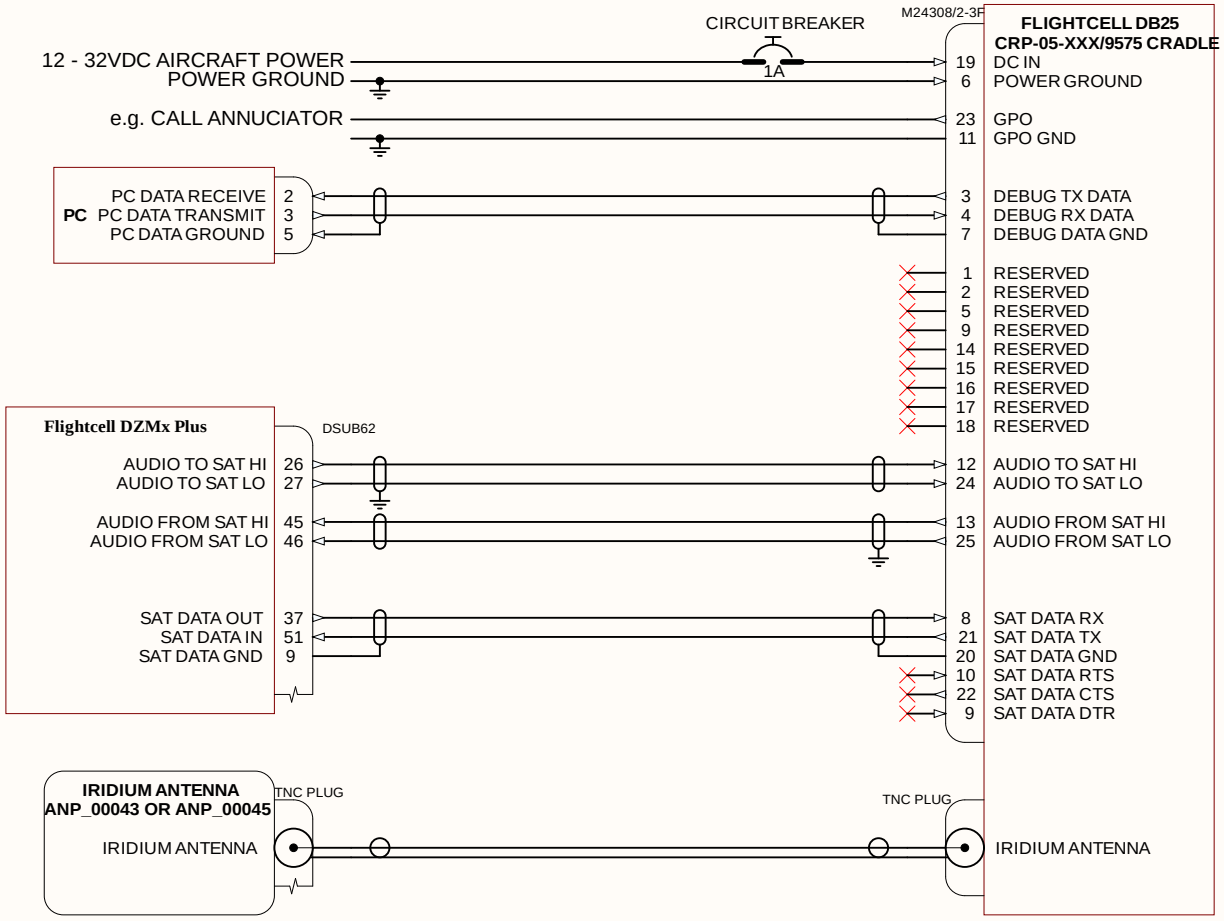
WIRE SPLICE CONNECTION

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Aux Data Interconnections 5 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Aux Data Interconnections.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus Interconnect Drawings
Sheet 6 - Optional External DB25 Iridium Cradle (CRP-05-XXX/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.

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/-22SB2T14.
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

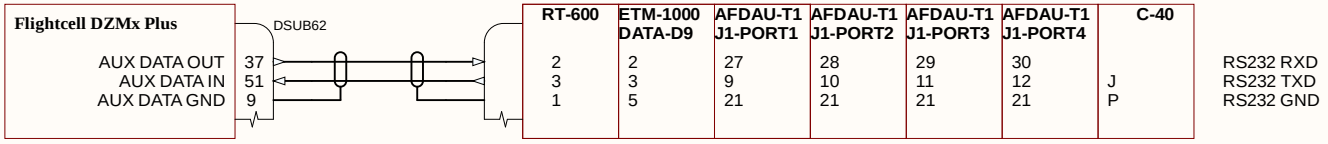
APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	External DB25 Iridium Cradle 6 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Aux DB25 Iridium Cradle.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus Interconnect Drawings

Sheet 7 - External RS-232 Device



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/-22SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

WIRE SPLICE CONNECTION

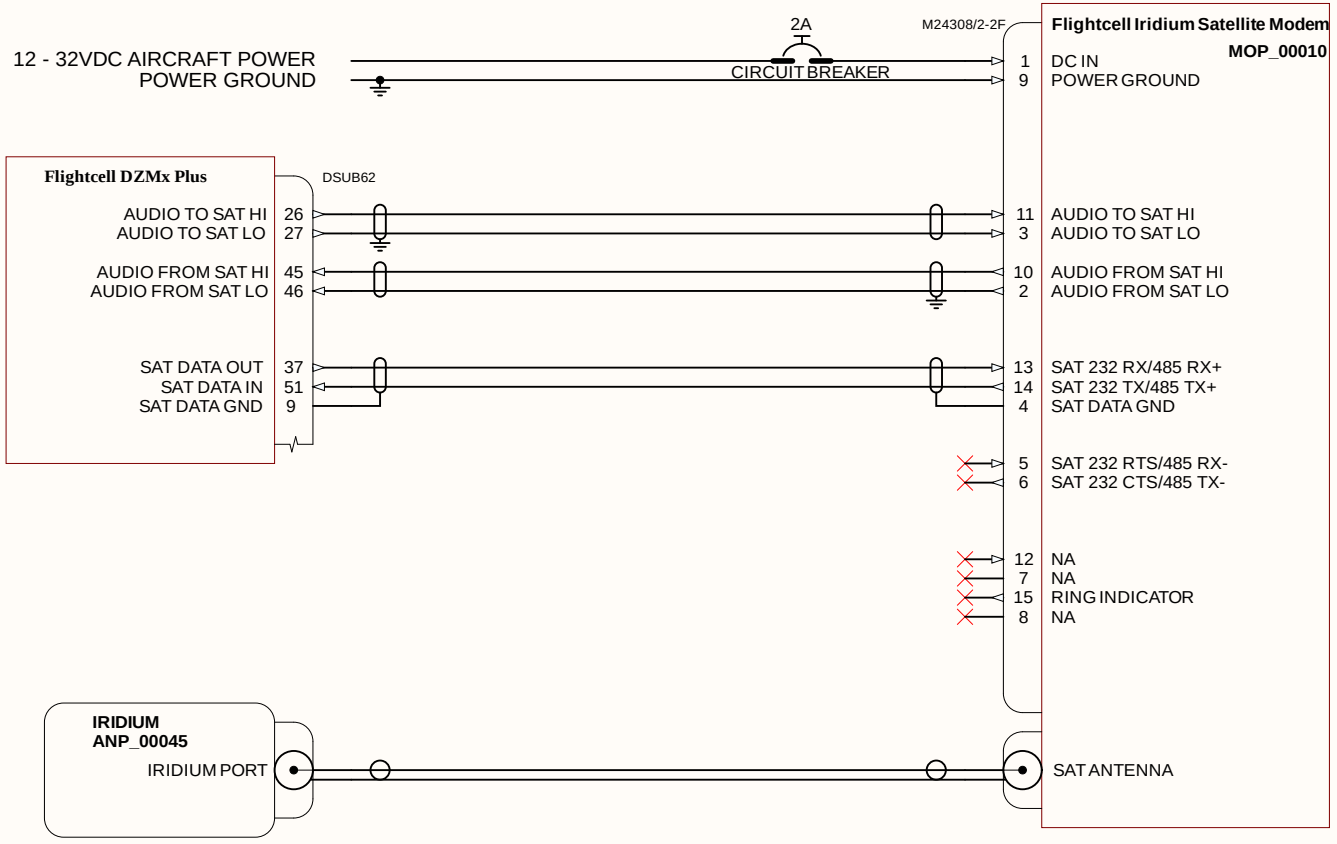
APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product: DZMx Plus With Flightcell Controller ICD
Sheet: EXTERNAL RS-232 DEVICE 7 of 15
Revision: 2.1
Drawn By: Richard Benfield
Filename: EXTERNAL RS-232 DEVICE.SchDoc
Date: 30/09/2026 Drawing No: 114-00026

DZMx Plus Interconnect Drawings
Sheet 8 - Optional External Iridium Module Interconnections



NOTES:
The Iridium 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.

Iridium specify that the maximum signal loss in the cable should be 3dB at 1645MHz, so maximum cable lengths are as follows:

RG174- 2M
RG400 - 3.86M
LMR200 - 6.5M
RG58-9006 cellfoil - 6.5M
RG213 - 8M
LMR400 - 17M
LMR600 - 26M

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 Single port Iridium antenna.

Contact Flightcell for details on other antenna options.

The RING INDICATOR is OPTO Isolated to GND.

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/-22SB2T14.
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

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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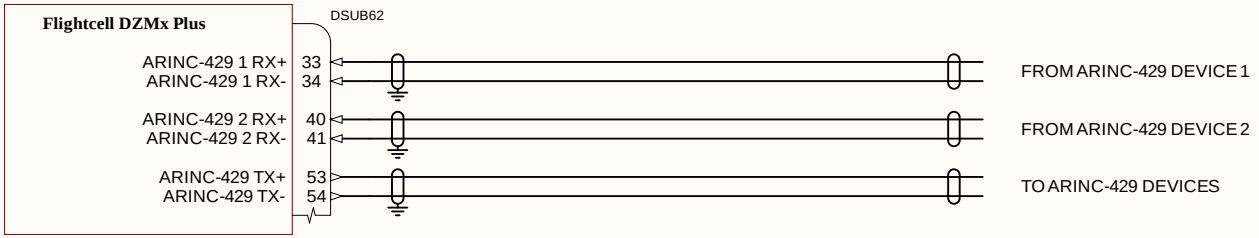
Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	External Iridium Module 8 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Aux Sat Modem Interconnections.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus Interconnect Drawings

Sheet 9 - ARINC-429 Data Interconnections

NOTES:

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



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/-22SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

WIRE SPLICE CONNECTION

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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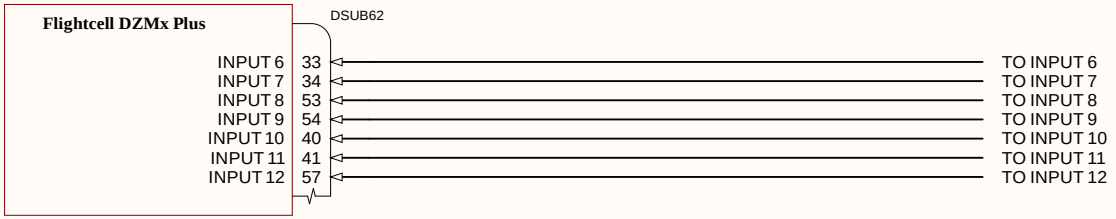
Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	ARINC-429 Interconnections 9 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	ARINC-429 Interconnections.SchDoc
Date:	30/09/2026
Drawing No:	114-00026

DZMx Plus Interconnect Drawings

Sheet 10 - Input Expansion Interconnections

NOTES:

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



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/-22SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD FLOATING

UNIT GROUND

WIRE SPLICE CONNECTION

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

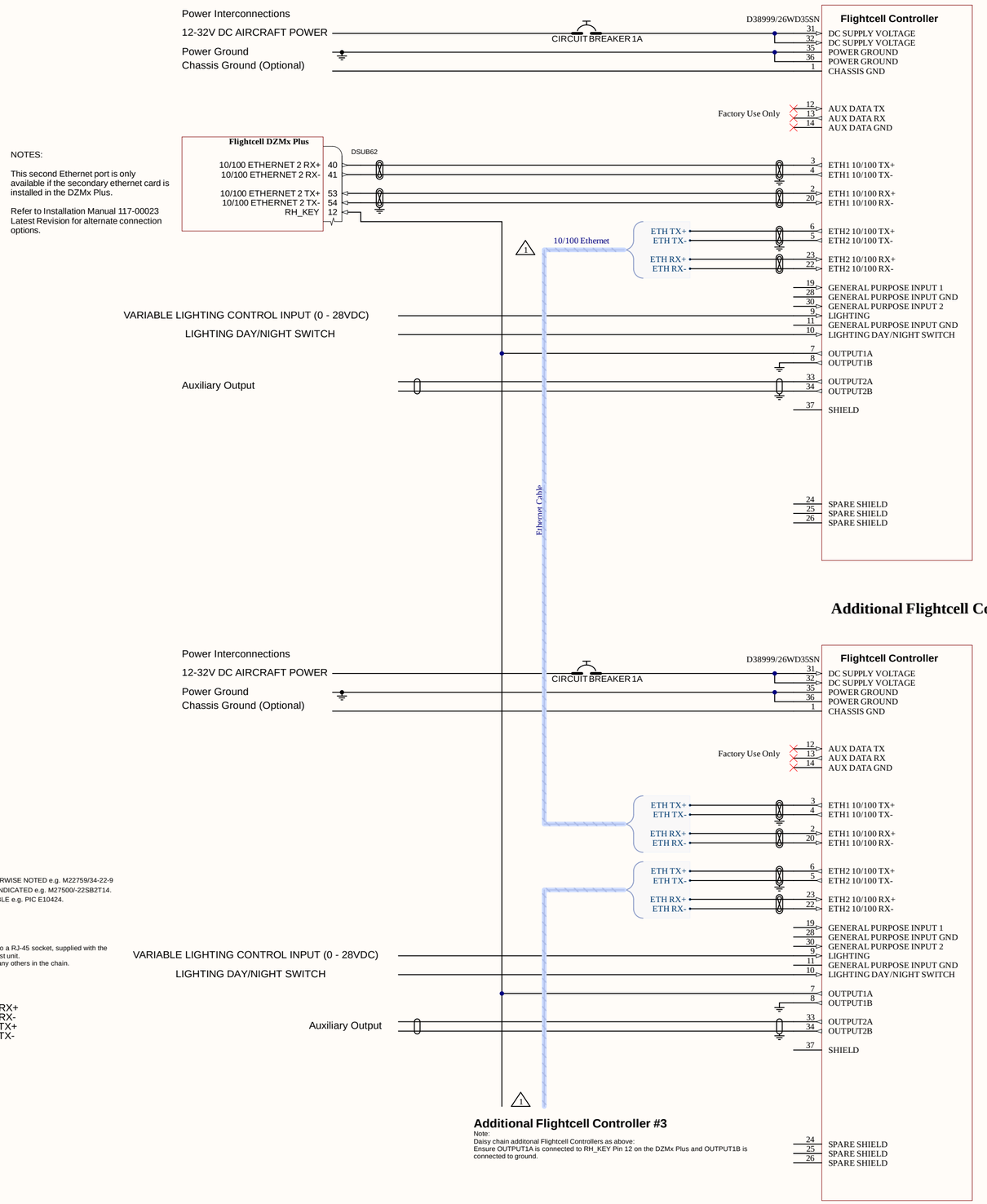
Flightcell International Limited
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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Input Expansion Connections 10 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Input Expansion Interconnections.SchDoc
Date:	30/09/2026
Drawing No:	114-00026

DZP_08-XXX

DZMx Plus With Flightcell Controller Interconnect Drawings
Sheet 11 - Flightcell Controller Interconnections

Primary Flightcell Controller #1



NOTES:

This second Ethernet port is only available if the secondary ethernet card is installed in the DZMx Plus.

Refer to Installation Manual 117-00023 Latest Revision for alternate connection options.

Additional Flightcell Controller #2

Additional Flightcell Controller #3

Note:
Daisy chain additonal Flightcell Controllers as above:
Ensure OUTPUT1A is connected to RH_KEY Pin 12 on the DZMx Plus and OUTPUT1B is connected to ground.

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/-22SB2T14.
2. ETHERNET CABLE SHOULD BE TWISTED PAIR CAT-5E OR COMPATIBLE e.g. PIC E10424.
3. SYMBOL DESIGNATIONS
4. UNIT GROUND IS INTERNALLY CONNECTED TO UNIT CHASSIS

IMPORTANT:
The last Flightcell Controller in the network chain needs to break out to a RJ-45 socket, supplied with the connector kit. If only one unit is installed, then it is considered as the last unit.
This is to allow for firmware upgrades to the Flightcell Controller and any others in the chain.

Connection pin out as per RJ-45 Socket.

RJ-45 Socket

Pin 1	Orange/White	ETH RX+
Pin 2	Orange	ETH RX-
Pin 3	Green/White	ETH TX+
Pin 6	Green	ETH TX-

T568A

SHIELDED PAIR
SHIELD TERMINATED TO DC GROUND

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

SHIELDED PAIR
SHIELD FLOATING

TWISTED PAIR

UNIT GROUND

WIRE SPLICE CONNECTION

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Flightcell Control Head 11 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Flightcell Controller.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus With Flightcell Controller Interconnect Drawings

Sheet 12: Auxiliary Outputs

NOTES:

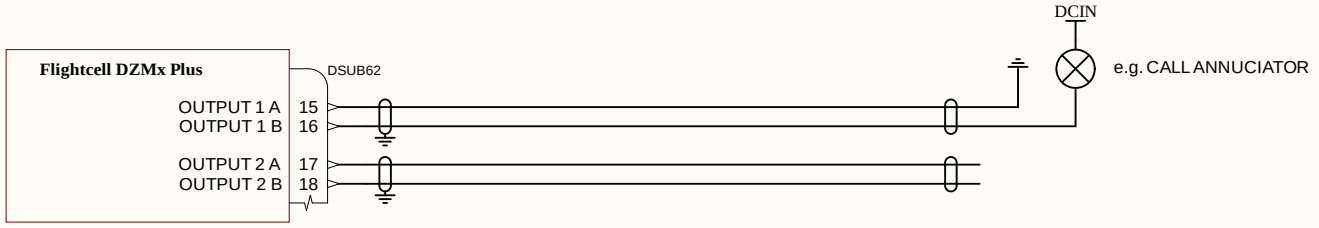
The auxiliary outputs can be used to switch external loads, e.g. annunciator panel indicator.

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 DZMx Plus internal circuitry.

Each Relay output is across terminals A and 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/-22SB2T14.
2. SYMBOL DESIGNATIONS

SHIELDED PAIR
SHIELD TERMINATED TO DESIGNATED PIN

UNIT GROUND

WIRE SPLICE CONNECTION

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Auxiliary Outputs 12 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Auxiliary Outputs.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus With Flightcell Controller Interconnect Drawings

Sheet 13 - Antennas

IMPORTANT:
Minimising signal loss is critical to maintaining reliable connectivity.

Refer to document 117-00023 DZMx Plus with Flightcell Controller DZP_08 Installation Manual for detailed guidance on coaxial cable selection and maximum run lengths.

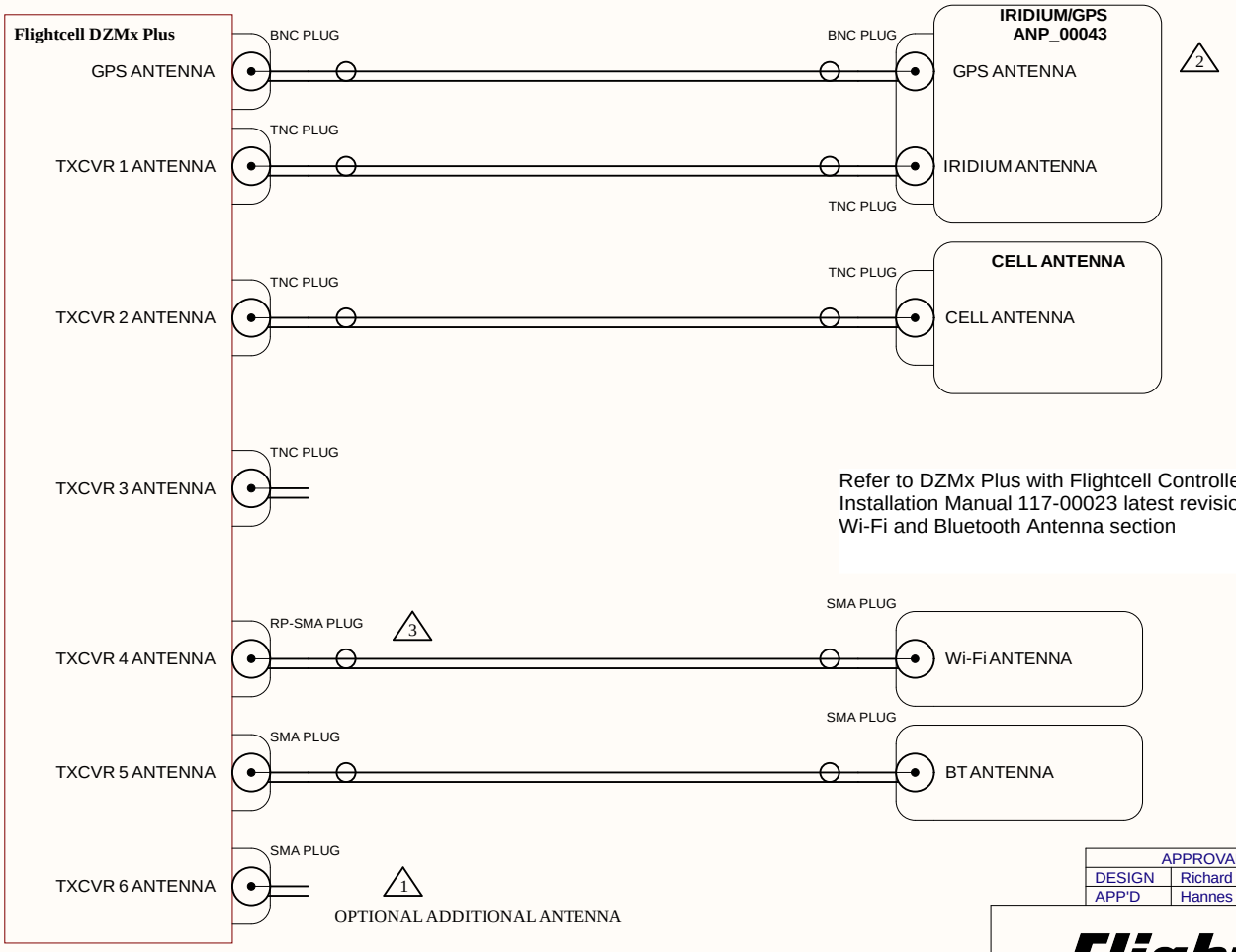
Low Loss Cable is required for cellular RF connections

NOTES:
Antennas should be mounted away from rotating components (rotor blades, tail rotor).
The setup shown is an installation with one Iridium transceivers and one Cellular transceiver, for other options refer to installation manual.

Standard DZMx Plus units are equipped with two transceivers (SAT/CELL
combination). An optional third transceiver can be added, which is typically either an Iridium 9603 satellite module or an SDR (Software Defined Receiver) module, providing additional satellite communication capability or specialized AIS, ADSB, FM radio functions. Contact Flightcell for more information.

For standard installations with one Iridium transceiver and one cellular transceiver, a standard Iridium + GPS antenna is available (p/n ANP_00043).

Please contact Flightcell for additional Antenna options.



Refer to DZMx Plus with Flightcell Controller Installation Manual 117-00023 latest revision, Wi-Fi and Bluetooth Antenna section

1. Antenna 6 is currently used for SDR variants
2. RF configuration shown is indicative of a standard installation, for other options refer to installation manual.
3. Revisions older than 4.0 - SMA PLUG

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/-22SB2T14.
2. SYMBOL DESIGNATIONS
   COAXIAL CABLE

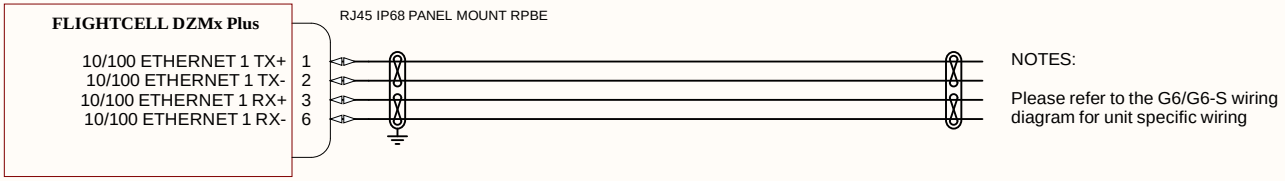
APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Antennas 13 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Antenna.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus Interconnect Drawings
Sheet 14 - G6/G6-S



NOTES:

Please refer to the G6/G6-S wiring diagram for unit specific wiring

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/-22SB2T14.
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

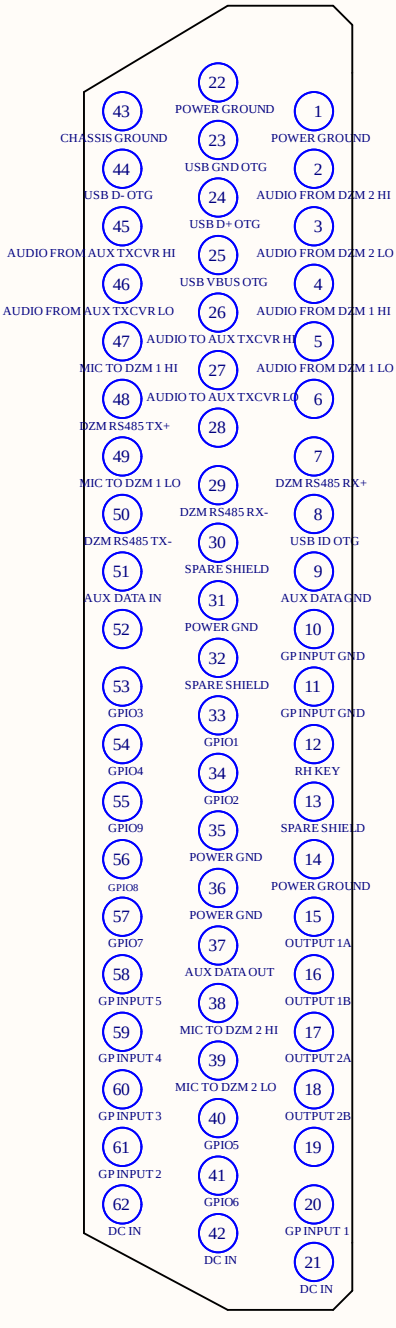
WIRE SPLICE CONNECTION

APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

Flightcell International Limited
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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	G6/G6-S 14 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	G6.SchDoc
Date:	30/09/2026 Drawing No: 114-00026

DZMx Plus Main Connector Pin out - Rear View HD SUB 62 F Connector
Sheet 15 - DZMx Plus



APPROVALS		DATE
DESIGN	Richard Benfield	30/09/2026
APP'D	Hannes Booyse	30/09/2026

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Product:	DZMx Plus With Flightcell Controller ICD
Sheet:	Main Connector Pin Out 15 of 15
Revision:	2.1
Drawn By:	Richard Benfield
Filename:	Pin Out Main Connector.SchDoc
Date:	30/09/2026 Drawing No: 114-00026