60 Watt DualUSB

Amphenol Pcd

Overview

APCD's USB power technology can be integrated into any IFE system and customized to fit anywhere in the aircraft interior. Our dualUSB devices can be configured with any combination of USB-A and USB-C to meet new and legacy PED charging requirements. Safety is a top priority when it comes to the aircraft which is why our devices use auto load balancing for safe power distribution when charging multiple devices. The 60 watt dualUSB, like all other configurations, provides overcurrent and over temperature protection and leverages the technology of the latest USB charging protocols to effectively charge PED's.

FEATURES

Lightweight and robust thermoplastic housing
Configurable ports and current ratings
Overcurrent and over temperature protection
Thermal management and auto load balancing
Run standalone or configured by upstream host
Light pipe charging indicator
DO-160 compliant

TECHNICAL SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	
Input Voltage	28VDC ± 10%
USB-A Output Voltage	5VDC
USB-A Output Current	2.1A Max
USB-C Output Voltage (configurable per USB PD)	5VDC, 9VDC, 15VDC, 20VDC
USB-C Output Current	3A Max
USB Charging Schemes	USB BC 1.2 (DCP, CDP, SDP), Apple Charging, USB PD 3.0
USB Data	USB 2.0
PHYSICAL	
*Approximate Weight (grams)	4.0 oz. (113)
*Approximate Dimensions H"xW"xD" (mm)	3" X 2" X 2" (76 X 51 X 51)
Mating Cycles	30,000 each port
OPERATING TEMPERATURE	
Upper Limit	+55C
Lower Limit	-15C

*60-Watt device is max, other single and dual configurations will be smaller and lighter

IN-SEAT | SEATBACK | CABIN | COCKPIT | GALLEY | MONUMENTS

Contact **ife_systems@amphenolpcd.com**
POC **lreyes@amphenolpcd.com**

Amphenol Pcd

TRIANGLE MAGNETIC JACK UNIT™ (MJU™)

Magnetic Active Noise-Cancellation Jack

The magnetic MJU™ is the world's longest-lasting aviation jack, capable of 10x more connection cycles compared with standard aircraft audio jacks. This jack is compatible with all existing headphone types including all active noise-cancelling headphones. The MJU™ eliminates pin breakage by passengers and related operational IFE loss at the seat. When used with Phitek's MJ-Plug™, this unique magnetic jack guards against the most common passenger damage to headphone cables, by automatically releasing the headphone plug when a tugging force of more than 7N is applied in any direction.

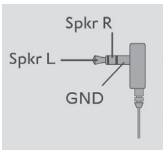
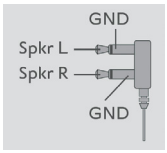
Features

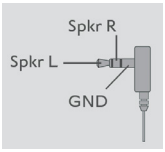
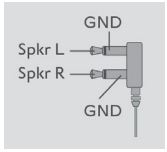
Rated to 250,000 connection cycles
Fits in standard audio jack panel cut-outs.
Additional integrated short circuit protection.
Automatic A1 switching.

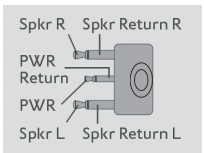
Specifications

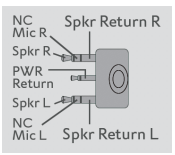
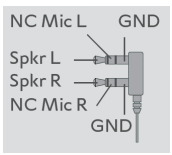
IDENTIFICATION	
Part number	2VF11B-XXXXX
POWER	
Power consumption	<600mW (incl. Phitek jack powered headphone)
PHYSICAL	
Total unit weight	<40g (1.41oz)
Unit dimensions	26.3mm x 23mm x 24mm (1.04" x 0.91" x 0.94")
Seat cut-out compatibility	Drop-in replacement for RD-NA1010-XX and other triangular shaped audio connectors
COMPATIBILITY	
ARINC connector options	ARINC A1, A2, B1, B2, C2, C2 Modified, D2, MJ-Plug™

Headphone Compatibility

AUDIO ONLY HEADPHONES	A1 SINGLE PIN	A2 DUAL PIN	Different terminals are activated depending on headphone type.
High impedance >100 ohm.			 A1 / A2 equivalent

AUDIO ONLY HEADPHONES	B1 SINGLE PIN	B2 DUAL PIN	Different terminals are activated depending on headphone type.
Low impedance <100 ohm.			 B1 / B2 equivalent

JACK POWERED NOISE-CANCELLATION HEADPHONES	C2 TRIPLE PIN	Different terminals are activated depending on headphone type.
Headphones that have active noise cancellation powered by a 12V aircraftjack.		 C1 / C2 equivalent

JACK ENABLED NOISE-CANCELLATION HEADPHONES	C2MOD TRIPLE PIN	D2 DUAL PIN	Different terminals are activated depending on headphone type.
Headphones that utilise the noise cancellation electronics, integrated in the aircraft jack.			 C2 MOD / D2 equivalent

OBROUND MAGNETIC JACK UNIT™ (MJU™)

Amphenol Pcd

Scalable Connector For All Cabin Classes

The Obround Magnetic Jack replaces two-pin economy connectors as either a retrofit or line-fit solution. The jack connects to a wide range of headphone types including legacy ARINC standard plugs, as well as headphones using Phitek's MJ-Plugs™.

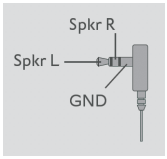
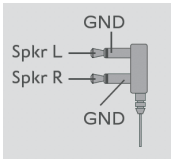
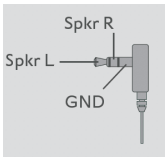
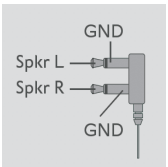
Features

Rated to 250,000 connection cycles.
Automatic A1 switching.
Compatible with passenger devices.

Specifications

IDENTIFICATION	
Part number	2VF18A-XXXXX
PHYSICAL	
Total unit weight	<28g (1.00oz)
Unit dimensions	26.9mm x 30.9mm x 30.0mm (1.06" x 1.22" x 1.18")
Seat cut-out compatibility	Drop-in replacement for obround shaped pass-through audio connectors.

Headphone Compatibility

AUDIO ONLY HEADPHONES	A1 SINGLE PIN	A2 DUAL PIN	Different terminals are activated depending on headphone type.	
High impedance >100 ohm.				
AUDIO ONLY HEADPHONES	**B1 SINGLE PIN**	**B2 DUAL PIN**	**Different terminals are activated depending on headphone type.**	
Low impedance <100 ohm.				

SQUARE MAGNETIC JACK UNIT™ (MJU™)

Amphenol Pcd

Scalable Connector For All Cabin Classes

The Square Magnetic Jack Unit is a drop-in replacement for existing audio remote jack units, integrating the world's longest-lasting aviation audio jacks with all IFE systems. The jack contains Phitek's patented plug-type detection and switching technology. This enables connection to a wide range of headphone types including most traditional ARINC standard plugs, as well as any headphone type using Phitek's MJ-Plugs™.

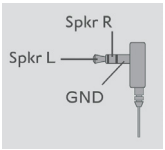
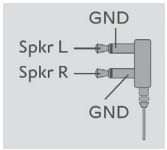
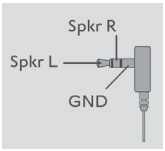
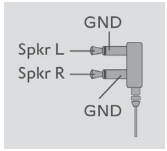
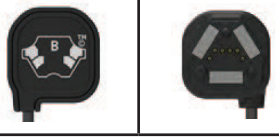
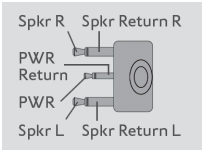
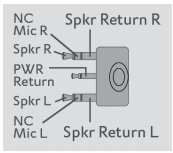
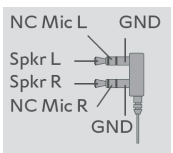
Features

Rated to 250,000 connection cycles.
Drop-in replacement for Panasonic eX series jacks.
Noise cancellation technology incorporated in the jack allows for significantly reduced headphone cost.

Specifications

IDENTIFICATION	
Part number	2VF31A-XXXXX
POWER	
Power consumption	<600mW (incl. Phitek jack powered headphone)
PHYSICAL	
Total unit weight	<28g (1.00oz)
Unit dimensions	38.50mm x 31.50mm x 30.40mm (1.52" x 1.24" x 1.20")
Seat cut-out compatibility	Drop-in replacement for RD-FA6293-XX & RD-FA6283-XX

Headphone Compatibility

AUDIO ONLY HEADPHONES	A1 SINGLE PIN	A2 DUAL PIN	Different terminals are activated depending on headphone type.
High impedance >100 ohm.			 A1 / A2 equivalent
AUDIO ONLY HEADPHONES	**B1 SINGLE PIN**	**B2 DUAL PIN**	**Different terminals are activated depending on headphone type.**
Low impedance <100 ohm.			 B1 / B2 equivalent
JACK POWERED NOISE-CANCELLATION HEADPHONES	**C2 TRIPLE PIN**		**Different terminals are activated depending on headphone type.**
Headphones that have active noise cancellation powered by a 12V aircraftjack.			 C1 / C2 equivalent
JACK ENABLED NOISE-CANCELLATION HEADPHONES	**C2MOD TRIPLE PIN**	**D2 DUAL PIN**	**Different terminals are activated depending on headphone type.**
Headphones that utilise the noise cancellation electronics, integrated in the aircraft jack.			 C2 MOD / D2 equivalent

SMARTJACK™

Amphenol Pcd

Active Noise-Cancellation Jack

The SmartJack™ is a cost-effective way to provide passengers with Phitek active noise cancellation without requiring the more expensive investment in headphones with integrated noise-cancellation electronics. Simply plug compatible headphones into the SmartJack™ and it will do all the hard work.

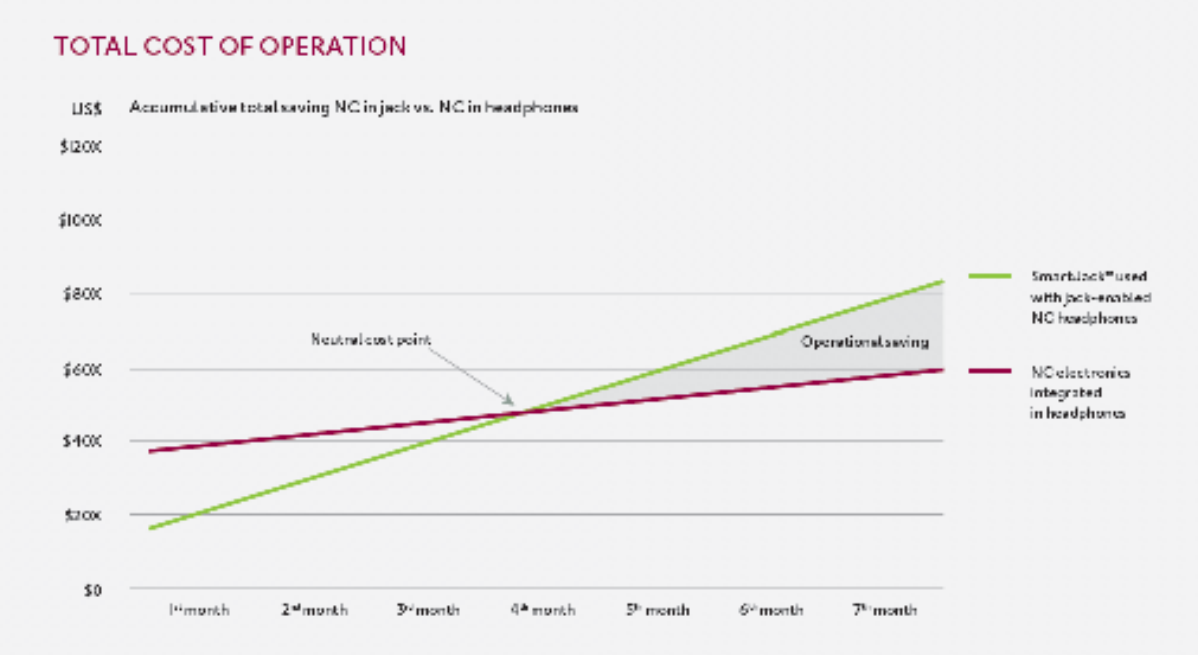
Features

Easy installation and maintenance.
Multiple ARINC compatibility in a single jack for flexibility of use with legacy aircraft headphones.
ARINC A1 compatibility enables passengers to use their own personal audio headphones.

Specifications

Smartjack™ Triangle	
POWER	
Power consumption	<200mW
PHYSICAL	
Total unit weight	28g (0.99oz)
Unit dimensions	23mm x 22.4mm x 23.8mm (0.91" x 0.88" x 0.94")
COMPATIBILITY	
Headphones types	Low impedance stereo (30-100 ohm), high impedance stereo (100-330 ohm), jack-enabled and jack-powered active noise cancellation. If used with PAC Eco or PAC Elite monitors then compatible with low impedance only.
ARINC connector options	ARINC A2, B2, C2, C2 Modified, D2

Smartjack™ Square	
POWER	
Power consumption	<400mW
PHYSICAL	
Total unit weight	28.5g (1oz)
Unit dimensions	38mm x 31mm x 23.4mm (1.50" x 1.22" x 0.92")
COMPATIBILITY	
Headphones types	Low impedance stereo (30-100 ohm), high impedance stereo (100- 330 ohm), jack-enabled and jack-powered active noise cancellation. If used with PAC Eco or PAC Elite monitors then compatible with low impedance only.
ARINC connector options	ARINC A2, B2, C2, C2 Modified, D2



DUAL PORT MAGJACK™

Amphenol Pcd

Overview

Phitek's Dual Port MagJack™ contains a multitude of safety and backup features into a form smaller than a business card.

Features

3 different power supplies including high-current USB
A USB hub
Integrated active noise cancellation
Plug type detection
Plug type switching
Temperature monitoring
Current limiting
PA system override

Specifications

POWER	
Power consumption	<13W
PHYSICAL	
Total unit weight	60g (2.12oz)
Unit dimensions	61.95mm x 38.35mm x 24.55mm ((2.4" x 1.5" x 0.97")
COMPATIBILITY	
Headphone types	Audio only headphones: Low impedance <100 ohm Audio only headphones: High impedance >100 ohm Jack powered noise cancellation headphones Jack enabled noise cancellation headphones
ARINC connector options	ARINC A1, A2, B1, B2, C2, C2 Modified, D2
USB	Standard BC1.2 Charging Downstream Port (CDP) power draw requirements up to 7.5W (1.5A @ 5.0V)

MJ-Plug™	
	
A1 / A2 equivalent	C1 / C2 equivalent
	
B1 / B2 equivalent	C2 MOD / D2 equivalent

SMARTPIM™

Amphenol Pcd

Overview

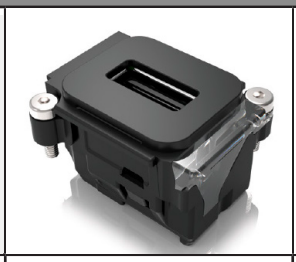
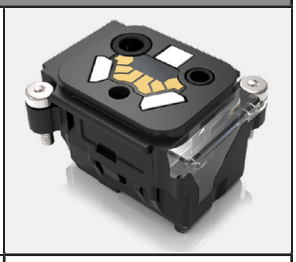
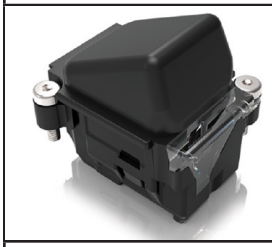
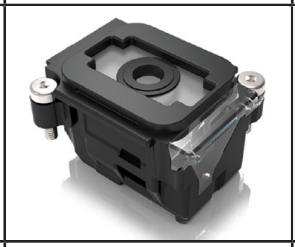
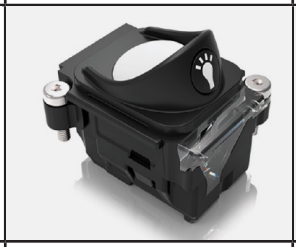
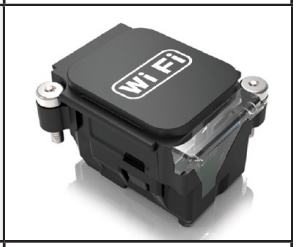
Smart Passenger Interface Module – In-Arm And Remote Chassis. Designed by Phitek, the SmartPIM™ exchangeable module chassis provides operational flexibility and future-proofing capability for IFE systems and passenger audio devices. The SmartPIM™ provides airlines with the same functions as individual remote jack configurations.

Features

Airline self-upgradable connection options (differentiated service offering by cabin/seat).
Elimination of cabin noise with integrated Phitek active noise cancellation.
Cost-effective method to offer new and evolving IFE features to passengers through easily replaceable modules.
Accommodates evolving passenger device connection require-ments.
Rapid airline serviceable connector replacement.
Dozens of different connector configurations.

Specifications

IDENTIFICATION – CHASSIS PART NO.	
In-arm	254548-XX
Remote	254525-XX
Seat back	183657-XXXXX
POWER	
Operating voltage	18V – 34V
PHYSICAL-WEIGHT	
In-arm	84g (2.96oz)
Remote	99g (3.49oz)
Seat back	82g (2.89oz)

SMARTPIM™				
				
A1 / B1	C2 MODIFIED	USB	D2	MAJI(MAGNETIC JACK)
				
IR WIRELESS AUDIO	BARCODE SCANNER	TRAY TABLE LIGHT	BLUETOOTH	WI-FI

BLUETOOTH JACK

Amphenol Pcd

Overview

The Amphenol PCD Bluetooth Jack provides a Bluetooth® connectivity to add to or extend the wireless connectivity of Inflight Entertainment (IFE) and media systems. It allows data and audio streaming to passenger headphones, headsets and game controllers via Bluetooth 5.0. The Amphenol PCD Bluetooth Jack can simultaneously connect headphones and game controllers for a true inflight wireless gameplay experience. The Bluetooth Jack comes in a range of formfactors and is small, light-weight and low power. The Amphenol Bluetooth Jack connects to the Inflight Entertainment System or media system with a simple USB 2.0 interface. This will provide seamless integration to new and existing IFE systems.

Features

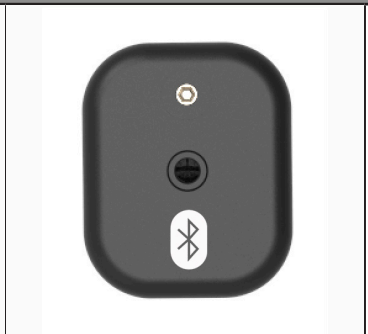
Add Bluetooth® connectivity to extend the wireless capability of IFE and other media systems
Simultaneously connect passenger Bluetooth headphones and game controllers for a true inflight wireless experience
Supports Bluetooth wireless headsets for two-way communication
Drop in replacement for traditional audio jacks
Optional 3.5mm audio pass through for backwards compatibility with wired headphones
Small formfactors and light-weight for easy integration
Simple USB interface for easy configuration to new or existing IFE systems

Specifications

Application	Headphones, headsets and game controllers
Bluetooth® version	5.0
Modes	Classic and Bluetooth Low Energy (BLE)
Bluetooth® Profiles	A2DP, HID, AVRCP, HFP, HSP
Audio CODECs	SBC, ACC, AptX™ (License fee)
Input Power	5V @ 60mA or 28V±10% @ 10mA
Comms	USB 2.0 (Android HCI compatible) or Analog audio
3.5mm Audio Output	Optional
Power Consumption	< 0.3W
Dimensions (Square) BT Only #1	38.5mm x 31.5mm x 30.4mm (1.52” x 1.24” x 1.2”)
Dimensions (Square) BT + 3.5mm #2	38.5mm x 31.5mm x 30.4mm (1.52” x 1.24” x 1.2”)
Dimensions (Hidden) #3	52.2mm x 38.4mm x 13mm (2.06” x 1.51” x 0.51”) (Including side mounts)
Weight	< 50g
Qualification	Designed for DO160, FCC

FORM FACTORS

#1: Seat/Arm Cutout



#2: Seat/Arm Cutout w/ Audio Pass-Through

#3: Internal Seat Mount

CIRCULAR MAGNETIC JACK UNITS

Amphenol Pcd

Overview

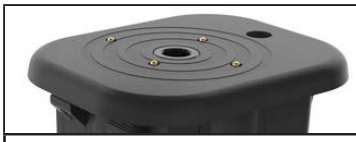
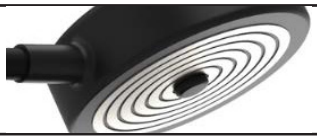
The next generation Phitek Magnetic Jack Units are deliver a fully rotational magnetic interface between the circular jack and plug surface. The unique self-aligning design provides an easy way for passengers to connect to audio and/or power source regardless of the plug direction and lighting conditions. By using patented magnetic technology, rated to 250,000 connection cycles, airlines eliminate expensive audio pin and USB plug breakage. The Circular Magnetic Jack Unit range comes in several different versions for flexible integration in various seat and class configurations. These include basic audio, noise cancellation, future proof digital connectivity and combinations of audio and USB power.

Audio Connectors

- A magnetic connection between the jack and plug surface provides a stable and reliable audio connection for uninterrupted passenger entertainment.
- Self-aligning and fully rotational design makes this the simplest to use audio connector in aviation.
- Connector is backward compatible with personal headphones for in-flight flexibility.
- 10x longer life span compared to standard aircraft audio jacks allows significantly reduced replacement and maintenance downtime costs.
- Lower cost compared to MJU v1 achieved by clever design and reduced parts.
- Cost of magnetic plug is equivalent to standard pin plug, eliminating any headset price increase.

Audio and Noise Cancelling

- Noise cancellation built into the jack allows for significantly reduced
- headphone cost and is compatible with jack enabled headsets such as the Phitek Stratus.
- Backward compatibility with D2 plugs allows an easy transition for airlines with existing NC headsets.
- Phitek-patented A1 switching technology allows passengers to use personal headphones without the need for an adapter.
- Possible to embed digital technology for increased sound fidelity and new innovations such as immersive 3D surround sound, biometric wellness sensing and intuitive IFE gesture control.

			
Fully rotational design without impacting the signal makes this the simplest passenger connection system yet	Sockets can be eliminated for minimized possibility of passenger abuse	Simple magnetic plugs are cost equivalent to standard pin plugs	Flexible design for basic audio, noise cancellation, future proof digital connectivity and combinations of audio and USB power to suit all cabin classes

Hybrid Audio and USB Power

- By using an airline provided adapter there is only one jack required for audio and USB charging.
- USB power and IFE audio are delivered through the same magnetic interface. Adapter provides compatibility for passenger carried headphones and adds potential for airline ancillary revenue by selling access to audio and power to passenger.
- No socket on the jack minimizes the possibility of passenger abuse, protecting circuitry and prolonging jack usable life.
- USB Type-A: 10.5W for charging the latest tablets and phones.
- USB Type-C: potential to add USB PD for future charging requirements.

USB Power

- USB charging jack without any audio provides a scaled down power RJU for Economy Class.
- Ancillary revenue from passengers for the adapter provides the airline with a unique way to charge passengers for PED charging.
- Potential to brand the adapter as a passenger souvenir.
- Passenger reuse of adapter becomes an incentive to choose same airline again next time.