AEM

P139-HD
DIGITAL AUDIO SYSTEM

CUSTOMIZE YOUR COMMUNICATION SYSTEM

TRUSTED & VERSATILE

P139-HD DIGITAL AUDIO SYSTEM

The P139-HD Digital Audio System is the industry's most adaptable and efficient communication solution. Trusted by top law enforcement and mission/utility operators worldwide.

P139-HD Digital Audio System

CONFIGUREDTOYOURUNIQUEMISSIONREQUIREMENTS

Multicast and Simulcast
Retransmitincomingaudioonanymission radio. Select any radio combination.

Bi-Directional Radio Relay
With no additional components.

Easy Programming of Levels, Priorities, or Alert tones
Using built-in web-based configuration interface.

Bluetooth® audio (for select models)
ConnectaBluetoothcompatibledevicefor call and audio streaming.

Multiple ICS Zones
Isolate, call and private ICS functions in a single router.

Isolation Relays
Internal emergency Com 1 and Com 2 isolationrelayswithICSbetweenPilotand Co-Pilot in emergency mode.

CustomFunctionalityProgramming
Customer specific configurations can be installedforspecificmissionrequirements.

Custom Engraving
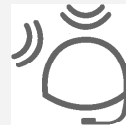Controlpanelscanbecustomengravedat no additional charge.

Multi-Axis Mounting
Audio Router has multi-axis mounting points for any application.
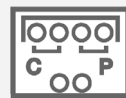
Pilot and Co-Pilot Control Panel
Allows for a single control panel in the cockpit.

Excellent Sound Quality
Full48KHzsamplingforhighqualityaudio.

Selected Positional Audio (SPA)
Select and position priority audio to increase operator focus.

NVIS-Compatible Lighting
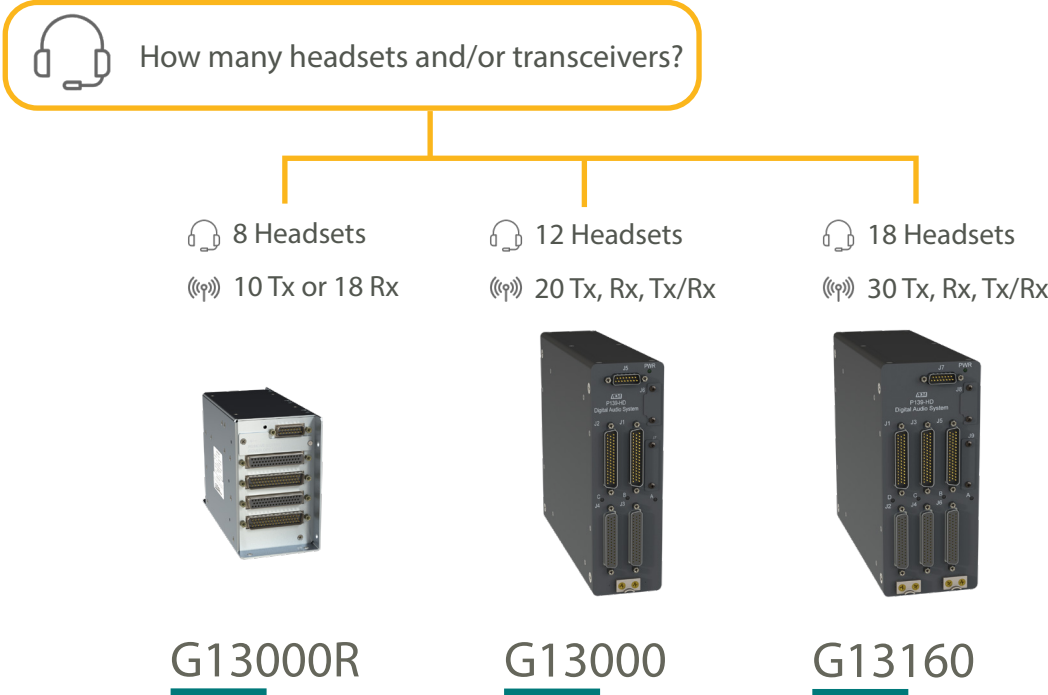Included at no additional charge.

Removable Memory Card
For easy system and firmware updates.

Configure Your System

The P139-HD Digital Audio System is a modular and scalable audio platform which provides centralized control and routing for all aircraft audio signals. The platform architecture provides a single integrated solution for all audio to or from transceivers, receivers, headsets, recorders, and other audio sources including intercom audio routing and talk groups.

Audio Router Options

The Audio Router routes and mixes all aircraft audio from all sources controlled by the attached Control Panels and dictated by the installed configuration.

How many headsets and/or transceivers?

	8 Headsets	12 Headsets	18 Headsets
	10 Tx or 18 Rx	20 Tx, Rx, Tx/Rx	30 Tx, Rx, Tx/Rx

	G13000R	**G13000**	**G13160**
Headset Ports	8	12	18
Radio Ports (Any audio device that may be connected)	10 Tx / 18 Rx	20	30
Extra keylines for special functions or operation of other equipment	12	10	15
Internal 25W speaker driver for cabin briefings	✓		
Eight programmable alert tone generators with priority	✓	✓	✓
Selected Positional Audio (SPA)	✓	✓	✓
Dimensions (H x L x W)	4.96 x 6.50 x 3.19 in [126 x 165.1 x 81 mm]	8.5 x 10.00 x 2.63 in [215.9 x 254 x 66.7 mm]	8.5 x 10.00 x 3.56 in [215.9 x 254 x 90.5 mm]
Weight	3.0 lb [1.40 kg]	5.0 lb [2.27 kg]	5.3 lb [2.40 kg]

Control Panel Options

The Audio System may be configured to use any number of different control panel types, each specifically configured for a customer's needs.

((•)) How many transceivers does each station need?

((•)) up to 8 transceiver control panel   ((•)) up to 16 transceiver control panel
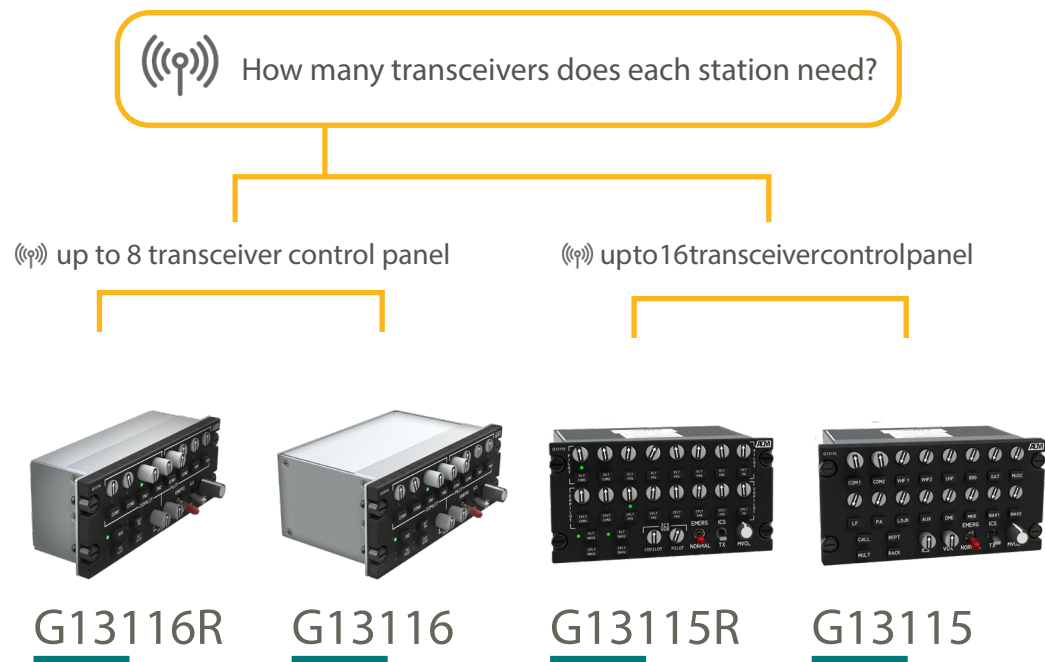
	G13116R	G13116	G13115R	G13115
Transceivers (Tx) or Receivers (Rx) volume	8	8	16	16
Bluetooth® Audio	✓		✓	
Reduced depth for shallow panel installation	✓		✓	
Full Multicast/Simulcast	✓	✓	✓	✓
Bi-Directional Radio Relay	✓	✓	✓	✓
Custom engraved buttons	✓	✓	✓	✓
Programmable Special Function Buttons	4	4	4	4
Dimensions (H x D* X W†)	2.24 x 1.60 x 5.75 in [56.9 x 40.5 x 146.1 mm]	2.23 x 2.995 x 5.74 in [56.64 x 76.1 x 145.8 mm]	2.97 x 1.86 x 5.75 in [75.4 x 47.2 x 146.1 mm] ‡	2.96 x 2.995 x 5.74 in [75.18 x 76.1 x 145.8 mm]
Weight	0.92 lb [0.42 kg]	1.25 lb [0.57 kg]	1.17 lb [0.53 kg]‡	1.5 lb [0.68 kg]

*Depth behind panel
†Width of front panel
‡Preliminary dimensions

Example Configurations

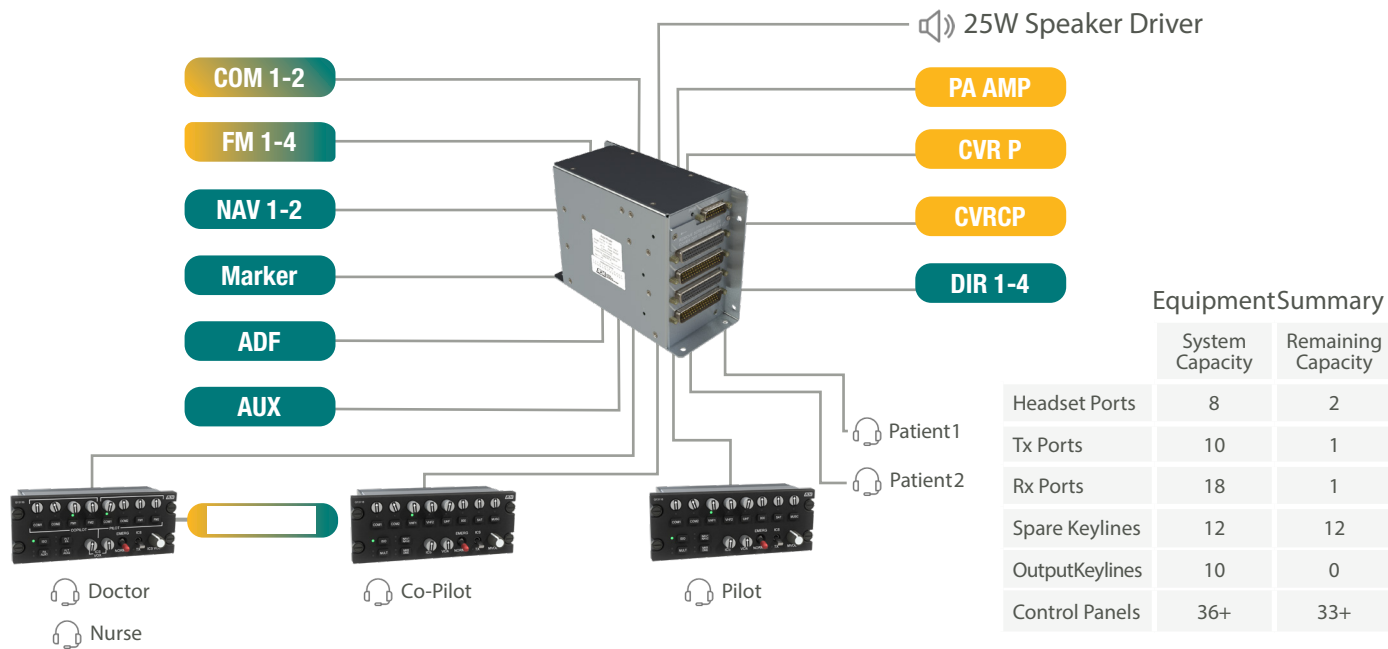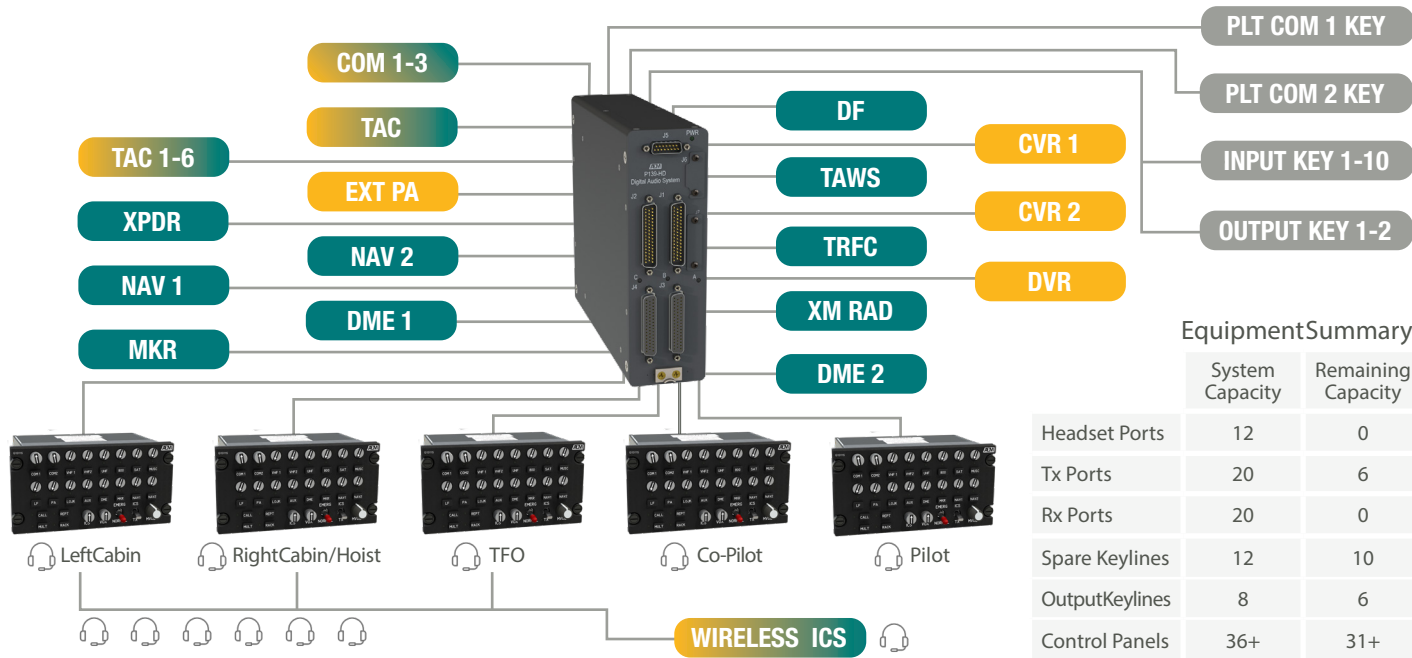Customer specific configurations can be installed for specific mission requirements.

Tx **Rx** **Rx/Tx**

Aerial Emergency Medical Services

Aircraft: Medium Helicopter   AudioRouter: G13000R   Control Panels: 3 - G13116R with Bluetooth®

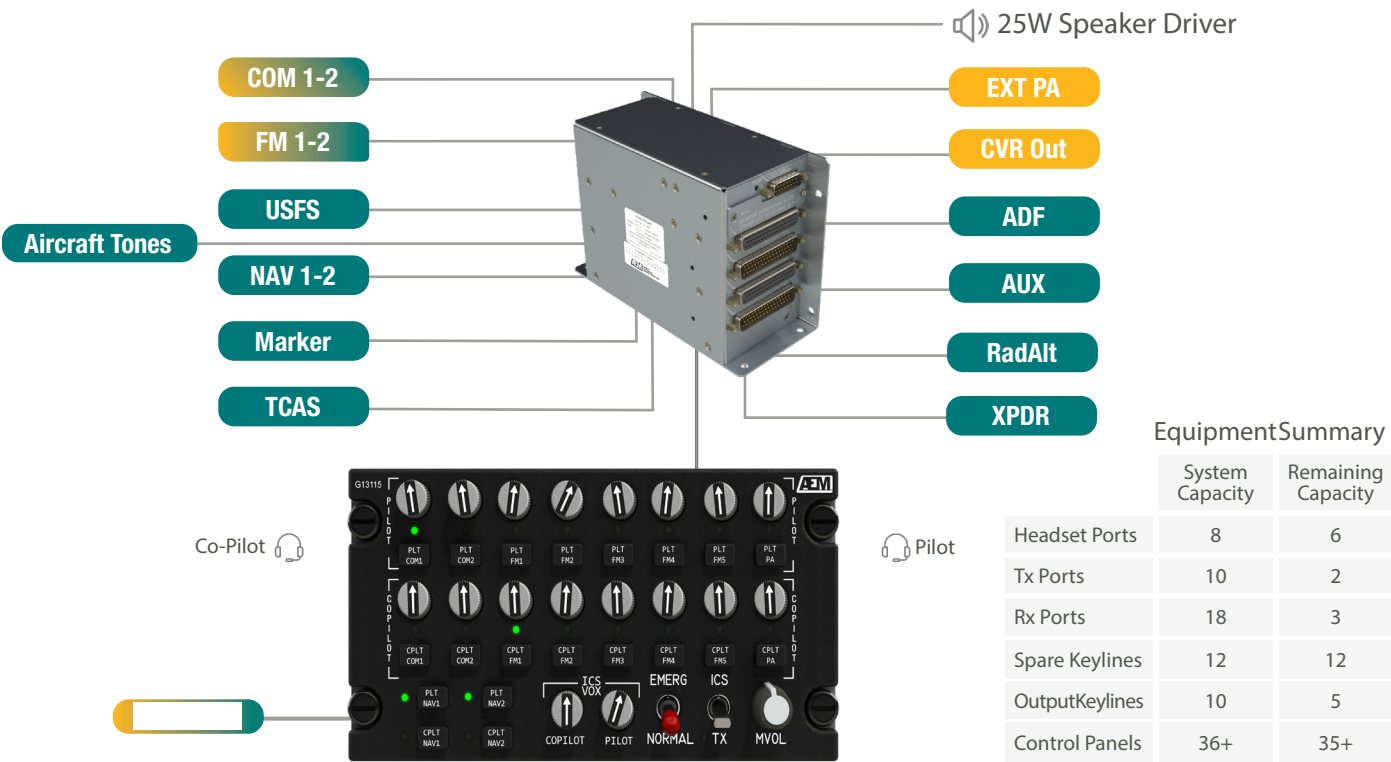🔊 25W Speaker Driver

COM 1-2 — FM 1-4 — NAV 1-2 — Marker — ADF — AUX

PA AMP — CVR P — CVRCP — DIR 1-4

🎧 Patient 1
🎧 Patient 2

🎧 Doctor
🎧 Nurse

🎧 Co-Pilot

🎧 Pilot

Equipment Summary

	System Capacity	Remaining Capacity
Headset Ports	8	2
Tx Ports	10	1
Rx Ports	18	1
Spare Keylines	12	12
Output Keylines	10	0
Control Panels	36+	33+

Aerial Law Enforcement

Aircraft: Medium Utility Helicopter   AudioRouter: G13000   Control Panels: 5 - G13115

PLT COM 1 KEY

COM 1-3 — TAC — DF
TAC 1-6 — EXT PA — TAWS
XPDR — NAV 2 — TRFC
NAV 1 — DME 1 — XM RAD
MKR — DME 2

CVR 1 — CVR 2 — DVR

PLT COM 2 KEY
INPUT KEY 1-10
OUTPUT KEY 1-2

🎧 LeftCabin
🎧 RightCabin/Hoist
🎧 TFO
🎧 Co-Pilot
🎧 Pilot

WIRELESS ICS 🎧

Equipment Summary

	System Capacity	Remaining Capacity
Headset Ports	12	0
Tx Ports	20	6
Rx Ports	20	0
Spare Keylines	12	10
Output Keylines	8	6
Control Panels	36+	31+

Aerial Firefighting (Small/Medium)

Aircraft: Light/Medium Helicopter   Audio Router: G13000R   Control Panels: 1-G13115R with Bluetooth®

🔊 25W Speaker Driver

COM 1-2

FM 1-2

USFS

Aircraft Tones

NAV 1-2

Marker

TCAS

EXT PA

CVR Out

ADF

AUX

RadAlt

XPDR

Co-Pilot 🎧   🎧 Pilot

Equipment Summary

	System Capacity	Remaining Capacity
Headset Ports	8	6
Tx Ports	10	2
Rx Ports	18	3
Spare Keylines	12	12
Output Keylines	10	5
Control Panels	36+	35+

System Setup and Configuration

Built-in web-based interface allows user configuration of each enabled radio and headset port.

✓ **Plug and Play**
No custom cable, no custom software

✓ **Fine Tune Settings**
Audio volume levels, alert tones and panel dimmers

✓ **Save and Restore**
Settings can be saved with comments and restored
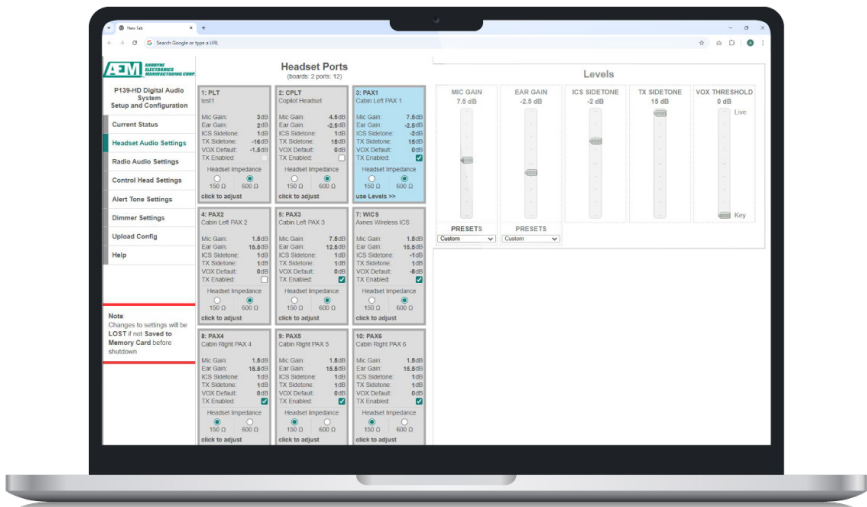
Environmental Qualifications

DO-160FENVIRONMENTALCAT.D1C4XXBAAU2(F)(F1)XXXXXXXZBXXBBZCTTMA3D3XXXXXXAX

DO-160F ENV. CAT.	SECTION	CATEGORY	DESCRIPTION
Alt	4.0	C4	Equipment tested to Category C4 (35,000ft, non-pressurized, non-controlled temperature)
Low Temperature	4.0	D1	Operating Temp:-20℃. Short-Time Operating:-40℃. Ground Survival:-55℃
High Temperature	4.0	D1	Operating Temp: +55℃. Short-Time Operating: +70℃. Ground Survival: +85℃
Loss of Cooling	4.5.4	Z	No Cooling Required
Temp. Variation	5.0	B	5℃ minimum per minute
Humidity	6.0	A	Equipment tested to Category A
Shock	7.0	A	6G in any direction
Vibration	8.0	U2	Equipment tested to Category U2 (Robust Vibration Test)
Mag Effect	15.0	Z	Less than 0.3m
Power Input	16.0	B	Equipment tested to Category B
Voltage Spike	17.0	B	Equipment tested to Category B
Conducted Audio	18.0	B	Equipment tested to Category B
Induced Signal Susceptibility	19.0	ZC	Equipment tested to Category ZC
RF Susceptibility	20.0	TT	Equipment tested to Category TT
RF Emissions	21.0	M	Equipment tested to Category M
Lightning Induced	22.0	A3D3	Equipment tested to Category A3D3
ESD	25.0	A	Equipment tested to Category A

System Specifications

ELECTRICAL CHARACTERISTICS

Max. Input Voltage		32	VDC
Min. Input Voltage		14	VDC
Max. Input Current		4	A
Min. Input Current		1.2	A
Gnet Voltage	Supplied by G13000	24	VDC
Max. Gnet Current	Per Gnet bus	0.5	A
Max. Dimmer voltage	DC, AC or PWM input	28	V
Dimmer Buses (Independent)		2	EACH

AUDIO CHARACTERISTICS

Max. Microphone Input	MIC GAIN set to minimum	4.5	dBV
Microphone Input Impedance		500	Ω
Max. Earphone Output	EAR GAIN at maximum	13.5	dBV
Expected Earphone Impedance		150 or 600	Ω
Max. Receive Input	RX GAIN set to minimum	14.0	dBV
Receive Input Impedance		600	Ω
Max. Transmit Output	TX GAIN at maximum	6.0	dBV
Expected Transmit Impedance		150	Ω

KEYLINE CHARACTERISTICS

Headset PTT Key Voltage	Keyline must be pulled below this value to key	0.5	V
Max. Radio Keyline Voltage	Pull-up voltage provided by radio	28	V
Max. Radio Keyline Current		1	A
Max. Separate ICS Zones	No separate router required	9	EACH

Certification

CERTIFICATION	
FAA STC SR00521SE	AS350 B, BA, B1, B2, B3, C, D, D1 AS355 E, F, F1, F2, N Bell 206 A, A1, B, L, L1, L3, L4, 407 EC 135, P1, T1, P2, T2, P2+, T2+
TCCA STC SH09-17	EC135 P1, T1, P2, T2, P2+, T2+ AS350 B, BA, B1, B2, B3, D AS355 E, F, F1, F2, N Bell 206 A, A1, B, L, L1, L3, L4, 407
EASA STC 10036806	AS350 B, BA, B1, B2, B3, D AS355 E, F, F1, F2 EC135 P1, T1, P2, T2, P2+, T2+ Bell 206 A, B, L, L1, L3, L4, 407
ANAC STC 2007506-30	AS350 B, BA, B1, B2, B3 AS355 F, F1, F2, N Bell 206 A, B, L1, L3, L4, 407 EC135 P1, T1, P2, T2, P2+, T2+
FAA STC SR02270SE	MBB BK 117 A-1, A-3, A-4, B-1, B-2, C-1, C-2, D-2 Bell 204 B, 205 A, 205 A-1, 205 B, 212, 412, 412 EP, 412 CF Bell 214 B, B1, ST
TCCA STC SH14-33	MBB BK 117 A-1, A-3, A-4, B-1, B-2, C-1, C-2 Bell 204 B, 205 A, 205 A-1, 205 B, 212, 412, 412 EP, 412 CF Bell 214 B, B1, ST
EASA STC 10056456	MBB BK 117 A-1, A-3, A-4, B-1, C-1, C-2 Bell 204 B, 205 A-1, 212, 412, 412 SP, 214 ST
ANAC STC 2014511-01	MBB BK 117 A-3, A-4, B-1, B-2, C-1, C-2 Bell 212, 412, 412 EP, 204 B, 205 A, 205 A-1, 214 B, 214 B-1
JCAB STC STC-460-TYO	Bell 412EP

Non-STC Airframe Installations

ROTARY WING	FIXED WING
Bell 429	Airvan
Bell 505	Cessna Caravan
Bell UH-1	Cessna Citation
Eagle Single	Challenger
EC130	E-9A
H155	King Air
Hughes 369FF	PC12
K-MAX	Q200
MD500	Q300
R44	
S-76	
Super Puma	
UH-60	

VISIT PRODUCT WEBPAGE